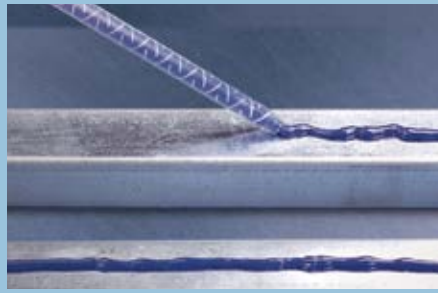


# Bonding



|           |   |
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Henkel Adhesive and Sealant Product Specialists are available to assist you with new product designs, or to help you re-engineer an existing application for improved performance and cost savings. They can also set up testing of your parts at the Henkel Customer Engineering Center. For application assistance, call **1-800-LOCTITE (562-8483)**; *within Canada, call 1-800-263-5043*; or, contact us through the web at [www.henkelna.com/loctite](http://www.henkelna.com/loctite).

**STRAIGHT FROM** *The Source*

## WHY BOND ASSEMBLIES?

The use of adhesives can provide a great alternative to many of the industry failures we see today. For successful bonding, knowledge of adhesive methodology is essential. The most frequent causes for adhesive failure do not involve adhesive strength. Rather, they are attributed to inadequate preparation of the substrates and improper adhesive selection. The most important factor in proper adhesive selection is assessing the environment the adhesive must withstand. Once the environmental factors have been recognized, adhesive selection becomes more easily defined because other factors – such as joint design, substrates, load and stress cycles – can often be varied or altered with minor design changes.

## BONDING

Adhesive bonding is a process in which two similar or dissimilar materials are united permanently. Adhesives build “bridges” between the surfaces of substrates to be joined.

## ADVANTAGES OF ADHESIVE BONDING COMPARED TO CONVENTIONAL JOINING METHODS:

- **More uniform stress distribution over the entire bond face:** This has a very positive effect on the static and dynamic strength achieved. Where welding and riveting result in localized stress peaks, adhesive bonding achieves uniform distribution and absorption of stress loads.
- **No change in surface and texture of the joined materials:** Welding temperatures may change the texture and, therefore, the mechanical properties of materials. In addition, welding, riveting and bolting all affect the visual appearance of the parts.
- **Weight saving:** Adhesives are particularly popular for light-weight constructions, where thin-walled parts (wall thickness < 0.5 mm) must be joined.
- **Sealed joints:** Adhesives also act as sealants, preventing loss of pressure or liquids, blocking the penetration of condensation water and protecting against corrosion.
- **Joins dissimilar materials and reduces the risk of corrosion:** The adhesive forms an insulating film to prevent contact corrosion when different types of metals are joined. It also acts as electrical and thermal insulator.

| PERFORMANCE CONSIDERATIONS   | ADHESIVE CATEGORY                               |                                |                                      |   |                                  |                                     |                                  |                                     |                                 |
|--|---|--------------------------------|--------------------------------------|---|----------------------------------|-------------------------------------|----------------------------------|-------------------------------------|---------------------------------|
|  | CYANOACRYLATES                                  | EPOXIES                        | HOT MELTS                            | LIGHT CURE                                      | SILICONES                        | ELASTOMERS                          | URETHANES                        | 2-PART ACRYLICS                     | 2-STEP ACRYLICS                 |
| <b>BENEFITS</b>  | Wide range of bonding applications/ ease of use | Wide range of formulations     | Versatile, fast, large gap filling   | Rapid cure/ adhesion to plastics/bond on demand | Excellent temperature resistance | Flexible, paintable, bonder/sealant | Excellent toughness/ flexibility | Good impact resistance/ flexibility | Good impact resistance/ no-mix  |
| <b>LIMITATIONS</b>   | Low polar solvent resistance                    | Mixing required                | Limited heat resistance              | Light cure required                             | Low adhesion resistance          | High temperature resistance         | Sensitive to moisture            | Mixing required                     | Primer required                 |
| <b>TEMPERATURE RESISTANCE</b>  |   |                                |                                      |   |                                  |                                     |                                  |                                     |                                 |
| Typical for the category   | -65°F to 210°F (-54°C to 99°C)                  | -65°F to 180°F (-54°C to 82°C) | -65°F to 250°F (-54°C to 121°C)      | -65°F to 300°F (-54°C to 149°C)                 | -65°F to 400°F (-54°C to 204°C)  | -65°F to 200°F (-54°C to 93°C)      | -65°F to 250°F (-54°C to 121°C)  | -65°F to 250°F (-54°C to 121°C)     | -65°F to 300°F (-54°C to 149°C) |
| Highest rated product  | 250°F (121°C)                                   | 400°F (204°C)                  | 330°F (166°C)                        | 356°F (180°C)                                   | 725°F (385°C)                    | 200°F (93°C)                        | 300°F (149°C)                    | 250°F (121°C)                       | 400°F (204°C)                   |
| <b>ENVIRONMENTAL RESISTANCE</b>  |   |                                |                                      |   |                                  |                                     |                                  |                                     |                                 |
| Polar Solvents<br>(EX.: H <sub>2</sub> O, ETHYLENE GLYCOL, ISOPROPYL ALCOHOL (IPA), ACETONE) | Poor <sup>1</sup>                               | Very Good                      | Good                                 | Good  | Good                             | Good                                | Good                             | Good                                | Good                            |
| Nonpolar Solvents<br>(EX. MOTOR OIL, TOLUENE, GASOLINE, ATF)                                 | Good  | Excellent                      | Good                                 | Very Good                                       | Poor to Fair                     | Poor                                | Good                             | Very Good                           | Very Good                       |
| <b>ADHESION TO SUBSTRATES</b>  |   |                                |                                      |   |                                  |                                     |                                  |                                     |                                 |
| Metals   | Very Good                                       | Excellent                      | Good                                 | Good  | Good                             | Very Good                           | Good                             | Excellent                           | Excellent                       |
| Plastics <sup>2</sup>  | Excellent                                       | Fair                           | Very Good                            | Excellent                                       | Fair                             | Good                                | Very Good                        | Excellent                           | Fair                            |
| Glass  | Poor  | Excellent                      | Good                                 | Excellent                                       | Very Good                        | Good                                | Good                             | Good                                | Excellent                       |
| Rubber   | Very Good                                       | Fair                           | Fair                                 | Fair  | Good                             | Poor                                | Good                             | Poor                                | Poor                            |
| Wood   | Good  | Very Good                      | Excellent                            | Poor  | Fair                             | Very Good                           | Fair                             | Good                                | Good                            |
| <b>OVERLAPPING SHEAR STRENGTH</b>  | High  | High                           | Low                                  | High  | Low                              | Medium                              | Medium                           | High                                | High                            |
| <b>PEEL STRENGTH</b>   | Low <sup>3</sup>                                | Medium                         | Medium                               | Medium  | Medium                           | Medium                              | Medium                           | High                                | Medium                          |
| <b>TENSILE STRENGTH</b>  | High  | High                           | Low                                  | High  | Medium                           | Medium                              | Medium                           | High                                | High                            |
| <b>ELONGATION/FLEXIBILITY</b>  | Low   | Low                            | High                                 | Medium  | High                             | High                                | High                             | Medium                              | Medium                          |
| <b>HARDNESS</b>  | Rigid   | Rigid                          | Semisoft                             | Semirigid                                       | Soft                             | Soft                                | Soft                             | Semirigid                           | Semirigid                       |
| PROCESS CONSIDERATIONS   | ADHESIVE CATEGORY                               |                                |                                      |   |                                  |                                     |                                  |                                     |                                 |
|  | CYANOACRYLATES                                  | EPOXIES                        | HOT MELTS                            | LIGHT CURE                                      | SILICONES                        | ELASTOMERS                          | URETHANES                        | 2-PART ACRYLICS                     | 2-STEP ACRYLICS                 |
| <b>NUMBER OF COMPONENTS</b>  | 1 or 2  | 2                              | 1                                    | 1   | 1 or 2                           | 1 or 2                              | 1 or 2                           | 2                                   | 2                               |
| <b>CURE TEMPERATURE</b>  | Room Temperature                                | Room Temperature               | Room Temperature <sup>4</sup>        | UV/Visible                                      | Room Temperature                 | Room Temperature                    | Room Temperature                 | Room Temperature                    | Room Temperature                |
| <b>FIXTURE TIME</b>  |   |                                |                                      |   |                                  |                                     |                                  |                                     |                                 |
| Average  | 30 seconds                                      | 20 minutes                     | 70 seconds                           | 30 seconds                                      | 25 minutes                       | 25 minutes                          | 25 minutes                       | 20 minutes                          | 5 minutes                       |
| Fastest  | <5 seconds                                      | 3 to 5 minutes                 | 20 seconds                           | <5 seconds                                      | 2 minutes                        | 10 minutes                          | 5 minutes                        | 3 to 5 minutes                      | 30 seconds                      |
| <b>FULL CURE TIME</b>  | 24 hours  | 12 to 24 hours                 | 1 hour (or when cooled) <sup>5</sup> | 30 to 60 seconds                                | 1 to 7 days                      | 1 to 7 days                         | 24 hours                         | 24 hours                            | 24 hours                        |
| <b>GAP FILL</b>  |   |                                |                                      |   |                                  |                                     |                                  |                                     |                                 |
| Ideal (in inches)  | 0.001 to 0.010                                  | 0.004 to 0.006                 | 0.002 to 0.005                       | 0.002 to 0.010                                  | 0.001 to 0.006                   | 0.001 to 0.006                      | 0.004 to 0.006                   | 0.010 to 0.040                      | 0.002 to 0.004                  |
| Maximum (in inches)  | 0.200   | 0.125                          | 0.240                                | 0.25  | 0.25                             | 0.24                                | 0.125                            | 0.5                                 | 0.040                           |
| <b>DISPENSING/MIXING EQUIPMENT REQUIRED</b>  | NO  | YES                            | YES                                  | NO  | NO                               | NO                                  | YES                              | YES                                 | NO                              |
| <b>LIGHT CURE VERSIONS AVAILABLE</b>   | YES   | YES                            | NO                                   | YES   | YES                              | NO                                  | NO                               | NO                                  | YES                             |

<sup>1</sup> Cyanoacrylates have very good moisture resistance on plastics.

<sup>2</sup> Uncured liquid adhesives may cause stress cracking of certain thermoplastics, e.g., polycarbonate, acrylic and polysulfone. Special products and process techniques are available. Consult the LOCTITE Design Guide to Bonding Plastics (LT-2197) or contact 1-800-LOCTITE (562-8483) for more information.

<sup>3</sup> Exception: Toughened cyanoacrylates have HIGH peel strength.

<sup>4</sup> Elevated temperatures are required to dispense liquid Hot Melt Adhesives.

<sup>5</sup> Urethane Hot Melts require 24 hours for full cure.

**PLEASE NOTE:** This chart should not be used to specify products without specific testing. It is recommended that you conduct on-part testing to ensure product performance before specifying any adhesive.

## FREE BONDING GUIDES

LOCTITE Design Guides help you select the proper LOCTITE® adhesive for bonding Metals, Plastics, Rubbers and Thermoplastic Elastomers. Visit [www.henkelna.com/loctite](http://www.henkelna.com/loctite) and click on Literature, then select Bonding to view the guides or request copies.



**ADDITIONAL RESOURCES**

# Cyanoacrylate Adhesives

- One-component, no-mix products that cure rapidly at room temperature without heat or light – exceptionally easy to use
- Excellent bond strengths to the widest range of plastics, rubbers and metals
- Widest selection of products, including specialty grades suitable for applications where impact resistance, flexibility, gap filling, low odor or extremely fast curing is required



7

Instant Bonding

## Your Application

### WHAT TYPE OF MATERIAL ARE YOU BONDING?

Low Surface Energy Plastics (PP, PE, Acetal, PTFE, etc.)

All Other Materials (Except Glass)

Highly Flexible CA (for flexing bond lines)

Premium/Surface Insensitive CAs (Bond very well to most materials)

Low Odor/Low Bloom CAs (For cosmetic & odor sensitive applications)

Use Primer with Premium CAs

Low Viscosity

Low Viscosity

Non-Sag Gel

Medium Viscosity

Non-Sag Gel

## Solution

770™

**NEW** 4902™

401™

454™

403™

455™

|                       | 770™  | 4902™                         | 401™                           | 454™                           | 403™                           | 455™                           |
|-----------------------|-------|-------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|
| Color                 | Clear | Clear                         | Clear                          | Clear                          | Clear/Light Straw              | Clear/Light Straw              |
| Gap Fill (in.)        | N/A   | 0.005                         | 0.005                          | 0.01                           | 0.008                          | 0.01                           |
| Viscosity (cP)        | 1.25  | 200                           | 90                             | Gel                            | 1,200                          | Gel                            |
| Shear Strength* (psi) | N/A   | 1,745                         | 2,900                          | 3,030                          | 2,940                          | 1,405                          |
| Temperature Range     | N/A   | -65°F (-54°C) to 180°F (82°C) | -65°F (-54°C) to 250°F (121°C) | -65°F (-54°C) to 250°F (121°C) | -65°F (-54°C) to 212°F (100°C) | -65°F (-54°C) to 212°F (100°C) |
| Fix Time (sec.)       | N/A   | 20                            | 5                              | 15                             | 20                             | 60                             |

## Product Description

### LOCTITE® 770™ Primer

A heptane-based adhesion promoter formulated for use with polyolefins and other low surface energy plastics. Use with LOCTITE® Premium Surface Insensitive CAs. Fast dry time and good on part life.

| P/N   | Package Size        |
|-------|---------------------|
| 18396 | 1.75 fl. oz. bottle |
| 18397 | 16 fl. oz. can      |

### LOCTITE® 4902™ Instant Adhesive

Highly flexible CA with elongations over 100%, designed for highly flexing bond lines.

| P/N     | Package Size |
|---------|--------------|
| 1875841 | 20 g bottle  |
| 1875842 | 1 lb. bottle |

### LOCTITE® 401™ Instant Adhesive

Low viscosity surface insensitive CA provides excellent bond strengths to most materials including plastics, elastomers, metals and platings. Excellent for dry or acidic conditions.

| P/N   | Package Size |
|-------|--------------|
| 40104 | 3 g tube     |
| 40140 | 20 g bottle  |
| 40161 | 1 lb. bottle |

### LOCTITE® 454™ Instant Adhesive

Surface insensitive CA providing excellent bond strengths to many materials including plastics, elastomers, metals and platings. Excellent for dry or acidic conditions. Non sag gel prevents drips.

| P/N     | Package Size    |
|---------|-----------------|
| 45404   | 3 g tube        |
| 21925   | 10 g syringe    |
| 45440   | 20 g tube       |
| 1337712 | 30 g syringe    |
| 45474   | 200 g tube      |
| 45478   | 300 g cartridge |

### LOCTITE® 403™ Instant Adhesive

Low odor, low blooming CA well suited for cosmetic applications or where vapor ventilation is difficult. Surface insensitive, providing excellent bond strengths to most materials.

| P/N   | Package Size |
|-------|--------------|
| 40340 | 20 g bottle  |
| 40361 | 1 lb. bottle |

### LOCTITE® 455™ Instant Adhesive

Low odor, low blooming CA well suited for cosmetic applications or where vapor ventilation is difficult. Surface insensitive, providing excellent bond strengths to most materials. Non sag gel prevents drips.

| P/N   | Package Size |
|-------|--------------|
| 22309 | 10 g syringe |
| 17421 | 200 g tube   |

#### ADDITIONAL PRODUCT AVAILABLE

|       |                      |
|-------|----------------------|
| 7951™ | Non-Flammable Primer |
|-------|----------------------|

#### ADDITIONAL PRODUCT AVAILABLE

|       |                   |
|-------|-------------------|
| 4903™ | Increased Modulus |
|-------|-------------------|

#### ADDITIONAL PRODUCT AVAILABLE

|      |                   |
|------|-------------------|
| 431™ | Medium Viscosity  |
| 406™ | Wicking Viscosity |

#### ADDITIONAL PRODUCTS AVAILABLE

|      |                   |
|------|-------------------|
| 408™ | Wicking Viscosity |
| 460™ | Low Viscosity     |

\* Grit-blasted steel.  
 \*\* Polycarbonate to polycarbonate.  
 † Full cure = 24 hours without UV exposure.  
 ‡ At 0.002 in. gap.  
 †† At 0.200 in. gap.



| Light Cure CAs – Rapid Cure<br>(Provide extremely fast cure speeds) |                               | Toughened/Impact Resistant CAs<br>(For applications with vibration & shock) |                                | 2-Part CA<br>(For high gap applications) | Rubber Bonding CA             | CA Accelerators<br>(Speeds cure of exposed CAs) |
|---|-------------------------------|---|--------------------------------|--|-------------------------------|---|
| Low Viscosity   | Medium Viscosity              | 1-Part  | 2-Part                         | Non-Sag Gel                              | Low Viscosity                 | Use Accelerator with Premium CAs                |
| 4310™   | 4311™                         | 435™  | <b>NEW</b> 4090™               | 3092™                                    | 404® Quick Set™               | 7452™   |
| Clear/Pale Green  | Clear/Pale Green              | Clear   | Clear/Light Yellow             | Clear                                    | Clear                         | Clear/Amber                                     |
| 0.004   | 0.008                         | 0.006   | 0.2                            | 0.2                                      | 0.005                         | N/A   |
| 175   | 1,050                         | 175   | Gel                            | Gel                                      | 80                            | 0.4   |
| 3,190**   | 3,760**                       | 2,700   | 2,400                          | 3,200                                    | 3,500                         | N/A   |
| -65°F (-54°C) to 200°F (93°C)                                       | -65°F (-54°C) to 200°F (93°C) | -65°F (-54°C) to 225°F (107°C)  | -40°F (-40°C) to 300°F (150°C) | -4°F (-20°C) to 176°F (80°C)             | -65°F (-54°C) to 180°F (82°C) | N/A   |
| <5†   | <5†                           | 30  | 90                             | 15 sec.‡<br>3.5 min.‡                    | 30                            | N/A   |

**LOCTITE® 4310™ Flashcure® Light Cure Adhesive**

Light cure CA cures where light reaches and also in shadowed areas via surface moisture. Toughened, fluorescent adhesive that cures tack-free in 2-5 seconds. Lower viscosity for tighter bond lines.

| P/N     | Package Size |
|---------|--------------|
| 1401792 | 1 oz. bottle |
| 1401790 | 1 lb. bottle |

**LOCTITE® 4311™ Flashcure® Light Cure Adhesive**

Light cure CA cures where light reaches and also in shadowed areas via surface moisture. Toughened, fluorescent adhesive that cures tack-free in 2-5 seconds. Higher viscosity to minimize dripping.

| P/N     | Package Size |
|---------|--------------|
| 1401791 | 1 oz. bottle |
| 1401789 | 1 lb. bottle |

**LOCTITE® 435™ Instant Adhesive**

Low viscosity toughened CA with increased flexibility, peel strength and resistance to shock. Surface insensitive, providing excellent bond strengths to most materials.

**CFIA Listed.**

| P/N   | Package Size |
|-------|--------------|
| 40994 | 20 g bottle  |
| 40995 | 1 lb. bottle |

**LOCTITE® 4090™ Instant Adhesive**

This innovative hybrid adhesive combines the bond strength and speed needed to solve your design and assembly challenges. With the speed of an instant adhesive and the strength of a structural adhesive, LOCTITE® 4090™ delivers both performance and versatility.

| P/N     | Package Size  |
|---------|---------------|
| 1915601 | 50 ml syringe |

**LOCTITE® 3092™ Instant Adhesive**

Fast two-part CA bonds gaps up to 0.2 in. (2 mm). Particularly suited for bonding plastics, rubbers, wood, paper and metals. High precision dispensing tips.

| P/N     | Package Size                    |
|---------|---------------------------------|
| 1807961 | 10 g syringe with 3 mix nozzles |

**LOCTITE® 404® Quick Set™ Instant Adhesive**

Excellent for bonding rubbers where very fast fixturing is required. For general maintenance and repair.

| P/N   | Package Size   |
|-------|----------------|
| 46551 | 1/3 oz. bottle |
| 46548 | 4 oz. bottle   |
| 46561 | 1 lb. bottle   |

**LOCTITE® 7452™ Tak Pak® Accelerator**

Used where increased cure speed of LOCTITE® CAs is required. Can either be pre- or post-applied.

| P/N   | Package Size                  |
|-------|-------------------------------|
| 18490 | 1.75 fl. oz. brush-top bottle |
| 18580 | 1.75 fl. oz. spray-cap bottle |
| 18637 | 0.7 fl. oz. metered mist      |
| 18575 | 1 quart can                   |
| 18576 | 1 gallon can                  |

| ADDITIONAL PRODUCTS AVAILABLE |                   |
|-------------------------------|-------------------|
| 4306™                         | Wicking Viscosity |

**LOCTITE® 4090™ opens the door to new applications and new solutions. These are just some of the benefits of LOCTITE® 4090™.**

- Strong – strength of a structural adhesive
- Fast – speed of an instant adhesive
- High impact and vibration resistance – 3x more than instant adhesives
- Temperature resistance to 300°F
- Fills gaps up to 0.2"
- Bonds multiple substrates – metals, plastics, rubbers, etc.

| ADDITIONAL PRODUCTS AVAILABLE |                      |
|-------------------------------|----------------------|
| 7113™                         | Longer On Part Life  |
| 382™                          | Tak Pak® Kit with CA |

# Cyanoacrylate Adhesives

## LOCTITE® Cyanoacrylate Adhesive Properties Chart

| LOCTITE® PRODUCT                            |                     | ITEM NUMBER  | PACKAGE TYPE/SIZE  | TYPICAL USE                           | COLOR              | GAP FILL (INCHES) | CATEGORY | VISCOSITY (cP) | SHEAR STRENGTH* (psi) | TEMPERATURE RANGE                 | CURE SPEED**   | SPECIFIC GRAVITY                    | AGENCY APPROVALS                         |                          |
|---|---------------------|--|--|---------------------------------------|--------------------|-------------------|----------|----------------|-----------------------|-----------------------------------|--|-------------------------------------|--|--------------------------|
| GENERAL-PURPOSE<br>SURFACE INSENSITIVE      | 401™                | 40104<br>40140<br>40161                              | 3 g tube<br>20 g bottle<br>1 lb. bottle  | General-purpose                       | Clear              | 0.005             | Ethyl    | 90             | 2,900                 | -65°F (-54°C)<br>to 250°F (121°C) | Fixture – 5 sec.<br>Full – 24 hrs.   | 1.05                                | CFIA Listed                              |                          |
|   | 406™                | 40604<br>40640<br>40661                              | 3 g tube<br>20 g bottle<br>1 lb. bottle  | Wicking grade                         | Clear              | 0.004             | Ethyl    | 20             | 2,250                 | -65°F (-54°C)<br>to 250°F (121°C) | Fixture – 10 sec.<br>Full – 24 hrs.  | 1.05                                | Commercial item std. A-A-3097            |                          |
|   | 431™                | 41254<br>41255<br>41256                              | 3 g tube<br>20 g bottle<br>1 lb. bottle  | Gap filling                           | Clear              | 0.008             | Ethyl    | 900            | 2,300                 | -65°F (-54°C)<br>to 180°F (82°C)  | Fixture – 15 sec.<br>Full – 24 hrs.  | 1.10                                | ISO 10993                                |                          |
|   | 454™                | 45404<br>21925<br>45440<br>1337712<br>45474<br>45478 | 3 g tube<br>10 g syringe<br>20 g tube<br>30 g syringe<br>200 g tube<br>300 g cartridge | Porous surfaces                       | Clear              | 0.010             | Ethyl    | Gel            | 3,030                 | -65°F (-54°C)<br>to 250°F (121°C) | Fixture – 15 sec.<br>Full – 24 hrs.  | 1.05                                | CFIA, ABS, Commercial item std. A-A-3097 |                          |
| LOW ODOR / LOW BLOOM<br>SURFACE INSENSITIVE | 455™                | 22309<br>17421                                       | 10 g syringe<br>200 g tube   | Porous surfaces                       | Clear/Light Straw  | 0.010             | Alkoxy   | Gel            | 1,405                 | -65°F (-54°C)<br>to 212°F (100°C) | Fixture – 60 sec.<br>Full – 24 hrs.  | 1.10                                | N/A                                      |                          |
|   | 403™                | 40340<br>40361                                       | 20 g bottle<br>1 lb. bottle  | Gap filling                           | Clear/Light Straw  | 0.008             | Alkoxy   | 1,200          | 2,940                 | -65°F (-54°C)<br>to 212°F (100°C) | Fixture – 20 sec.<br>Full – 24 hrs.  | 1.10                                | N/A                                      |                          |
|   | 408™                | 40840<br>40861                                       | 20 g bottle<br>1 lb. bottle  | Wicking grade                         | Clear/Light Straw  | 0.002             | Alkoxy   | 5              | 3,020                 | -65°F (-54°C)<br>to 212°F (100°C) | Fixture – 20 sec.<br>Full – 24 hrs.  | 1.05                                | N/A                                      |                          |
|   | 460™                | 46040<br>46061                                       | 20 g bottle<br>1 lb. bottle  | Close-fitting parts                   | Clear/Light Straw  | 0.004             | Alkoxy   | 45             | 3,060                 | -65°F (-54°C)<br>to 212°F (100°C) | Fixture – 15 sec.<br>Full – 24 hrs.  | 1.10                                | N/A                                      |                          |
| LIGHT CURE<br>TOUGHENED                     | 4306™ FLASHCURE®    | 37439<br>37442*                                      | 1 oz. bottle<br>1 lb. bottle   | Close-fitting parts                   | Clear/Pale Green   | 0.004             | Ethyl    | 20             | 2,000†                | -65°F (-54°C)<br>to 180°F (82°C)  | Fixture <5 sec.‡   | 1.10                                | ISO 10993                                |                          |
|   | 4310™ FLASHCURE®    | 1401792<br>1401790                                   | 1 oz. bottle<br>1 lb. bottle   | Close-fitting parts                   | Clear/Pale Green   | 0.005             | Ethyl    | 175            | 3,190‡                | -65°F (-54°C)<br>to 240°F (116°C) | Fixture <5 sec.‡   | 1.05                                | ISO 10993                                |                          |
|   | 4311™ FLASHCURE®    | 1401791<br>1401789                                   | 1 oz. bottle<br>1 lb. bottle   | Gap filling                           | Clear/Pale Green   | 0.008             | Ethyl    | 1,050          | 3,260‡                | -65°F (-54°C)<br>to 200°F (93°C)  | Fixture <5 sec.‡   | 1.15                                | ISO 10993                                |                          |
| FLEXIBLE                                    | 4902™               | 1875841<br>1875842                                   | 20 g bottle<br>1 lb. bottle  | Flexing bond lines                    | Clear              | 0.004             | Ethyl    | 200            | 1,745                 | -65°F (-54°C)<br>to 180°F (82°C)  | Fixture – 15 sec.<br>Full – 24 hrs.  | 1                                   | ISO 10993                                |                          |
|   | 4903™               | 1875847<br>1875840                                   | 20 g bottle<br>1 lb. bottle  | Flexing bond lines, increased modulus | Clear              | 0.004             | Ethyl    | 200            | 1,670                 | -65°F (-54°C)<br>to 180°F (82°C)  | Fixture – 15 sec.<br>Full – 24 hrs.  | 1                                   | ISO 10993                                |                          |
| TOUGHENED                                   | 4090™               | 1915601  | 50 ml syringe  | General-purpose                       | Clear/Light Yellow | 0.2               | Ethyl    | Gel            | 2,400                 | -40°F (-40°C)<br>to 300°F (148°C) | Fixture – No Gap 60 to 90 sec.<br>Fixture – Gap 3 to 5 min.<br>Full – 7 days | Part A – 1.01<br>Part B – 1.06      | N/A                                      |                          |
|   | 380™ BLACK MAX®     | 38004<br>38050<br>38061                              | 3 g tube<br>1 oz. bottle<br>1 lb. bottle   | Close-fitting parts                   | Black              | 0.006             | Ethyl    | 300            | 3,750                 | -65°F (-54°C)<br>to 225°F (107°C) | Fixture – 90 sec.<br>Full – 24 hrs.  | 1.10                                | CFIA Listed                              |                          |
|   | 410™                | 41004<br>41045<br>41061                              | 3 g tube<br>20 g bottle<br>1 lb. bottle  | Gap filling                           | Black              | 0.008             | Ethyl    | 3,500          | 3,200                 | -65°F (-54°C)<br>to 225°F (107°C) | Fixture – 90 sec.<br>Full – 24 hrs.  | 1.07                                | CFIA Listed                              |                          |
|   | 426™                | 21921<br>18398<br>17529                              | 10 g syringe<br>20 g tube<br>300 g cartridge   | Porous surfaces                       | Black              | 0.010             | Ethyl    | Gel            | 3,000                 | -65°F (-54°C)<br>to 210°F (99°C)  | Fixture – 20 sec.<br>Full – 24 hrs.  | 1.10                                | N/A                                      |                          |
|   | 480™                | 48040<br>48061                                       | 20 g bottle<br>1 lb. bottle  | Close-fitting parts                   | Black              | 0.006             | Ethyl    | 200            | 3,800                 | -65°F (-54°C)<br>to 180°F (82°C)  | Fixture – 90 sec.<br>Full – 24 hrs.  | 1.10                                | NSF/ANSI 61                              |                          |
|   | 411™                | 41104<br>41145<br>41161                              | 3 g tube<br>20 g bottle<br>1 lb. bottle  | Gap filling                           | Clear              | 0.008             | Ethyl    | 5,000          | 3,200                 | -65°F (-54°C)<br>to 210°F (99°C)  | Fixture – 30 sec.<br>Full – 24 hrs.  | 1.07                                | N/A                                      |                          |
|   | SURFACE INSENSITIVE | 435™   | 40994<br>40995   | 20 g bottle<br>1 lb. bottle           | General-purpose    | Clear             | 0.006    | Ethyl          | 175                   | 2,700                             | -65°F (-54°C)<br>to 225°F (107°C)  | Fixture – 30 sec.<br>Full – 24 hrs. | 1.10                                     | ISO 10993<br>CFIA Listed |
|   |                     | 438™   | 40997  | 20 g bottle                           | General-purpose    | Black             | 0.006    | Ethyl          | 200                   | 2,800                             | -65°F (-54°C)<br>to 225°F (107°C)  | Fixture – 30 sec.<br>Full – 24 hrs. | 1.10                                     | N/A                      |
| 2-PART GAP FILL                             | 3092™               | 1807961  | 10 g syringe with 3 mix nozzles  | High gap filling plastic bonder       | Clear              | 0.2               | Ethyl    | Gel            | 3,200                 | -4°F (-20°C)<br>to 176°F (80°C)   | Fixture 0.002" gap – 15 sec.<br>0.200" gap – 3.5 min.<br>Full – 24 hrs.      | 1.05                                | N/A                                      |                          |

ITEMS IN RED = Source's PICK or NEW

☉ = Indicates Worldwide Availability

\* Grit-blasted steel.

\*\* Varies with substrates.

‡ Data generated using polycarbonate.

¥ Full Cure = 24 hours without UV exposure. (With UV exposure, see Technical Data Sheets.)

† Contains LOCTITE® 382™ Tak Pak® Instant Adhesive (20 g bottle), LOCTITE® 7452™ Tak Pak® Accelerator (0.7 oz. net wt. aerosol can).

‡ Contains LOCTITE® 444™ Tak Pak® Instant Adhesive (20 g bottle), LOCTITE® 7452™ Tak Pak® Accelerator (1.75 fl. oz. liquid brush-top bottle).

## LOCTITE® Cyanoacrylate Adhesive Properties Chart

|                               | LOCTITE® PRODUCT   | ITEM NUMBER                      | PACKAGE TYPE/SIZE                                      | TYPICAL USE                                     | COLOR | GAP FILL (INCHES) | CATEGORY | VISCOSITY (cP) | SHEAR STRENGTH* (psi) | TEMPERATURE RANGE                 | CURE SPEED**                        | SPECIFIC GRAVITY | AGENCY APPROVALS                                |
|-------------------------------|--------------------|----------------------------------|--|---|-------|-------------------|----------|----------------|-----------------------|-----------------------------------|-------------------------------------|------------------|---|
| TOUGHENED THERMALLY RESISTANT | 4203™              | 1376970<br>28027                 | 20 g bottle<br>1 lb. bottle                            | Close-fitting parts                             | Clear | 0.005             | Ethyl    | 375            | 2,200                 | -65°F (-54°C)<br>to 250°F (121°C) | Fixture – 40 sec.<br>Full – 24 hrs. | 1.10             | N/A   |
|                               | 4204™              | 1376969<br>26325                 | 20 g bottle<br>1 lb. bottle                            | Gap filling                                     | Clear | 0.008             | Ethyl    | 4,000          | 2,400                 | -65°F (-54°C)<br>to 250°F (121°C) | Fixture – 75 sec.<br>Full – 24 hrs. | 1.10             | N/A   |
|                               | 4205™              | 28028<br>28029                   | 20 g tube<br>200 g tube                                | Porous surfaces                                 | Clear | 0.010             | Ethyl    | Gel            | 2,300                 | -65°F (-54°C)<br>to 250°F (121°C) | Fixture – 90 sec.<br>Full – 24 hrs. | 1.10             | N/A   |
| GENERAL-PURPOSE               | 382™<br>TAK PAK®   | 20420<br>38240<br>38261          | 20 g kit/<br>20 g bottle<br>1 lb. bottle               | Gap filling and ultra-performance wire tracking | Clear | 0.008             | Ethyl    | 5,000          | 3,200                 | -65°F (-54°C)<br>to 210°F (99°C)  | Fixture – 30 sec.<br>Full – 24 hrs. | 1.05             | N/A   |
|                               | 404™<br>QUICK SET™ | 46551<br>46548<br>46561          | 1/3 oz. bottle<br>4 oz. bottle<br>1 lb. bottle         | Rubber O-ring bonder                            | Clear | 0.005             | Ethyl    | 80             | 3,500                 | -65°F (-54°C)<br>to 180°F (82°C)  | Fixture – 30 sec.<br>Full – 24 hrs. | 1.09             | ABS, CFIA Listed, Commercial item std. A-A-3097 |
|                               | 409™               | 40904<br>40945<br>40974<br>18030 | 3 g tube<br>20 g tube<br>200 g tube<br>300 g cartridge | General-purpose gel                             | Clear | 0.010             | Ethyl    | Gel            | 3,200                 | -65°F (-54°C)<br>to 180°F (82°C)  | Fixture – 75 sec.<br>Full – 24 hrs. | 1.10             | N/A   |
|                               | 414™               | 41404<br>41450<br>41461          | 3 g tube<br>1 oz. bottle<br>1 lb. bottle               | Plastic bonder                                  | Clear | 0.006             | Ethyl    | 110            | 3,200                 | -65°F (-54°C)<br>to 180°F (82°C)  | Fixture – 20 sec.<br>Full – 24 hrs. | 1.05             | CFIA Listed, Commercial item std. A-A-3097      |
|                               | 415™               | 41550<br>41561                   | 1 oz. bottle<br>1 lb. bottle                           | Gap filling metal bonder                        | Clear | 0.008             | Methyl   | 1,500          | 3,600                 | -65°F (-54°C)<br>to 180°F (82°C)  | Fixture – 30 sec.<br>Full – 24 hrs. | 1.09             | Commercial item std. A-A-3097                   |
|                               | 416™               | 41650<br>41661                   | 1 oz. bottle<br>1 lb. bottle                           | Gap filling plastic bonder                      | Clear | 0.008             | Ethyl    | 1,500          | 3,200                 | -65°F (-54°C)<br>to 180°F (82°C)  | Fixture – 30 sec.<br>Full – 24 hrs. | 1.05             | CFIA Listed, Commercial item std. A-A-3097      |
|                               | 420™               | 42050<br>42061                   | 1 oz. bottle<br>1 lb. bottle                           | Wicking type plastic bonder                     | Clear | 0.002             | Ethyl    | 2              | 2,900                 | -65°F (-54°C)<br>to 180°F (82°C)  | Fixture – 20 sec.<br>Full – 24 hrs. | 1.05             | Commercial item std. A-A-3097                   |
|                               | 422™               | 42250<br>42261                   | 1 oz. bottle<br>1 lb. bottle                           | Gap filling plastic bonder                      | Clear | 0.008             | Ethyl    | 2,500          | 3,200                 | -65°F (-54°C)<br>to 180°F (82°C)  | Fixture – 30 sec.<br>Full – 24 hrs. | 1.09             | CFIA Listed, Commercial item std. A-A-3097      |
|                               | 430™               | 43004<br>43050<br>43061          | 3 g tube<br>1 oz. bottle<br>1 lb. bottle               | Metal bonder for close-fitting parts            | Clear | 0.005             | Methyl   | 80             | 3,600                 | -65°F (-54°C)<br>to 180°F (82°C)  | Fixture – 30 sec.<br>Full – 24 hrs. | 1.09             | Commercial item std. A-A-3097                   |
|                               | 444™<br>TAK PAK®   | 12292<br>20419<br>12294          | 20 g bottle<br>20 g kit/<br>1 lb. bottle               | Tak Pak® wire tacking                           | Clear | 0.007             | Ethyl    | 700            | 3,200                 | -65°F (-54°C)<br>to 180°F (82°C)  | Fixture – 30 sec.<br>Full – 24 hrs. | 1.05             | Commercial item std. A-A-3097                   |
|                               | 495™               | 49504<br>49550<br>49561          | 3 g tube<br>1 oz. bottle<br>1 lb. bottle               | General-purpose                                 | Clear | 0.004             | Ethyl    | 45             | 2,060                 | -65°F (-54°C)<br>to 250°F (121°C) | Fixture – 5 sec.<br>Full – 24 hrs.  | 1.05             | Commercial item std. A-A-3097                   |
|                               | 496™               | 49650<br>49661                   | 1 oz. bottle<br>1 lb. bottle                           | General-purpose rubber bonder                   | Clear | 0.005             | Methyl   | 125            | 3,600                 | -65°F (-54°C)<br>to 180°F (82°C)  | Fixture – 30 sec.<br>Full – 24 hrs. | 1.09             | Commercial item std. A-A-3097                   |
|                               | 498™               | 49850<br>49861                   | 1 oz. bottle<br>1 lb. bottle                           | Thermal cycling                                 | Clear | 0.007             | Ethyl    | 500            | 3,000                 | -65°F (-54°C)<br>to 180°F (82°C)  | Fixture – 50 sec.<br>Full – 24 hrs. | 1.10             | N/A   |
|                               | QUICKTITE®         | 39202                            | 0.14 oz. bottle  | General gel                                     | Clear | 0.010             | Ethyl    | Gel            | 3,200                 | -65°F (-54°C)<br>to 250°F (121°C) | Fixture – 15 sec.<br>Full – 24 hrs. | 1.05             | N/A   |

## LOCTITE® Primer & Accelerator Properties Chart

|                     | LOCTITE® PRODUCT | ITEM                 | PACKAGE TYPE & SIZE                       | COLOR   | VISCOSITY (cP)              | BASE  | ON-PART LIFE    | DRY TIME   | APPLICATION               | AGENCY APPROVALS   |
|---------------------|------------------|----------------------|---|---|-----------------------------|---|-----------------|------------|---------------------------|--|
| SURFACE PREPARATION | ACCELERATORS     | 712™<br>TAK PAK®     | 20352<br>18636<br>18390                   | 1.75 fl. oz. bottle<br>0.7 fl. oz. metered mist<br>1 gallon can   | Clear/Amber                 | 1   | Isopropanol     | 1 minute   | <30 seconds               | All cyanoacrylates<br>MIL-46050C for existing designs, CFIA Listed |
|                     |                  | 7109™<br>TAK PAK® II | 22440<br>23034                            | 1.75 fl. oz. bottle<br>1 quart can  | Clear/Amber                 | 3   | Perfluorocarbon | 1 minute   | <5 seconds                | All cyanoacrylates<br>N/A  |
|                     |                  | 7113™                | 19605<br>19606                            | 1.75 fl. oz. bottle<br>1 gallon can   | Clear                       | 0.4   | Heptane         | 24 hours   | <1 minute                 | All cyanoacrylates<br>N/A  |
|                     |                  | 7452™<br>TAK PAK®    | 18490<br>18580<br>18637<br>18575<br>18576 | 1.75 fl. oz. brush-top bottle<br>1.75 fl. oz. spray-cap bottle<br>0.7 fl. oz. metered mist<br>1 quart can<br>1 gallon can | Clear/Amber                 | 0.4   | Acetone         | 1 minute   | <30 seconds               | All cyanoacrylates<br>MIL-46050C for existing designs              |
|                     | PRIMERS          | 770™                 | 18396<br>18397                            | 1.75 fl. oz. bottle<br>16 fl. oz. can   | Colorless,<br>Slightly Hazy | 1.25  | Heptane         | 8 hours    | 30 seconds                | All cyanoacrylates<br>CFIA Listed                                  |
|                     | 7951™            | 27858                | 1.75 fl. oz. bottle                       | Colorless,<br>Slightly Hazy   | 0.7                         | Perfluorocarbon and<br>Chlorobenzotrifluoride | 8 hours         | 30 seconds | All cyanoacrylates<br>N/A |  |





PLEASE NOTE: A complete line of surface primers, accelerators and cleaners is available to further enhance the performance of LOCTITE® Instant Adhesives. Refer to the Surface Cleaning section on page 131.



# Cyanoacrylate Adhesive Equipment





## YOUR EQUIPMENT Source




For more details, see the *LOCTITE® Equipment Sourcebook, LT-3669*, or visit us on the web for additional information, diagrams, products and our full line of equipment at [www.equipment.loctite.com](http://www.equipment.loctite.com).










| LOCTITE® PRODUCT  |   | ITEM NUMBER             | USED TO DISPENSE                                       | PACKAGE TYPES & SIZES | VISCOSITY RANGE          | CONSUMABLES – DISPENSE ACCESSORIES            |   |
|---|---|-------------------------|--|-----------------------|--------------------------|---|---|
| HANDHELD APPLICATORS  | <b>BOTTLE DISPENSING</b>  |                         |  |                       |                          |   |   |
|   |  | CA VOLUMETRIC HAND PUMP | 1506477  | Cyanoacrylates        | 20 g or 1 fl. oz. bottle | 0.009 – 0.002 grams                           | Dispense Tips and Accessories – Pages 176-177 |
|   |  | SOFT SQUEEZE BOTTLES    | 98345  | All Fluids            | 2 fl. oz. packages       | Low to Medium                                 | Dispense Tips and Accessories – Pages 176-177 |
|   |   |                         | 98346  | All Fluids            | 4 fl. oz. packages       |   |   |
|   |   |                         | 98347  | All Fluids            | 8 fl. oz. packages       |   |   |
| <b>SYRINGE DISPENSING</b>   |   |                         |  |                       |                          |   |   |
|  | 10 ML GEL CA SYRINGE DISPENSER  | 1233800                 | Any fluid in a 10 ml syringe                           | 10 ml syringe         | Low to High              | Dispense Tips and Accessories – Pages 176-177 |   |
|  | 30 ML MANUAL SYRINGE APPLICATOR   | 1544934                 | Any fluid in a 30 ml syringe, including 25 ml syringes | 30 ml syringe         | Low to High              | Dispense Tips and Accessories – Pages 176-177 |   |





| LOCTITE® PRODUCT  |   | ITEM NUMBER             | TYPE       | VISCOSITY RANGE | DISPENSE PATTERNS | USED TO DISPENSE                                      | STROKE ADJUSTMENT                                     | ACTUATION | CONSUMABLES – DISPENSE ACCESSORIES            |   |
|---|---|-------------------------|------------|-----------------|-------------------|---|---|-----------|---|---|
| HANDHELD VALVES   | <b>LOW VISCOSITY CYANOACRYLATE APPLICATOR</b>                                       |                         |            |                 |                   |   |   |           |   |   |
|   |  | LV HAND-HELD APPLICATOR | 97130      | Pneumatic       | Low               | Drop, Dot, Bead                                       | Instant Adhesives, Retaining Compounds, Threadlockers | Yes       | Foot  | Dispense Tips and Accessories – Pages 176-177 |
|   | <b>PINCH TUBE APPLICATORS</b>   |                         |            |                 |                   |   |   |           |   |   |
|  | VARI-DROP™ APPLICATORS  | 97131                   | Pinch Tube | Low to Medium   | Drop, Dot, Bead   | Instant Adhesives, Retaining Compounds, Threadlockers | Yes   | Finger    | Dispense Tips and Accessories – Pages 176-177 |   |
|   |   | 97132                   |            |                 |                   |   |   |           |   |   |

| LOCTITE® PRODUCT  |   | ITEM NUMBER                 | TYPE                       | VISCOSITY RANGE            | DISPENSE PATTERNS | USED TO DISPENSE                                      | STROKE ADJUSTMENT  | SUCK-BACK | CONSUMABLES – DISPENSE ACCESSORIES |   |
|---|---|-----------------------------|----------------------------|----------------------------|-------------------|---|--|-----------|------------------------------------|---|
| VALVES  | <b>HIGH PRECISION VALVES</b>  |                             |                            |                            |                   |   |  |           |                                    |   |
|   |  | STATIONARY APPLICATOR VALVE | 97113                      | High Precision             | Low to Medium     | Drop, Dot, Bead                                       | Gel Instant Adhesives, Instant Adhesives, Retaining Compounds, Threadlockers | Yes       | Yes                                | Dispense Tips and Accessories – Pages 176-177 |
|   |   |                             | 97114                      |                            |                   |   |  |           |                                    |   |
|   | <b>HIGH PERFORMANCE DIAPHRAGM VALVES</b>  |                             |                            |                            |                   |   |  |           |                                    |   |
|   |  | VA10 MICRO DIAPHRAGM VALVE  | 1611449                    | High Performance Diaphragm | Low to Medium     | Drop, Dot, Bead, Microdot                             | Instant Adhesives  | Yes       | No                                 | Dispense Tips and Accessories – Pages 176-177 |
|   |  | VA15 DIAPHRAGM VALVE        | 1730181                    | High Performance Diaphragm | Low to Medium     | Drop, Dot, Bead                                       | Silicone and Other Moisture Sensitive Adhesives                              | Yes       | No                                 |   |
|  | CYANOACRYLATE DISPENSE VALVE  | 98013                       | High Performance Diaphragm | Low to Medium              | Drop, Dot, Bead   | Instant Adhesives, Retaining Compounds, Threadlockers | Yes  | No        |                                    |   |
|   | LIGHT CURE DISPENSE VALVE   | 98009                       |                            |                            |                   |   |  |           | Light Cure                         |   |




| LOCTITE® PRODUCT  |   | ITEM NUMBER                                    | PRESSURE REGULATION | USED TO DISPENSE  | PACKAGE TYPES & SIZES   | VISCOSITY RANGE                   | LOW LEVEL SENSING | CONSUMABLES – DISPENSE ACCESSORIES |                                  |
|---|---|--|---------------------|---|---|-----------------------------------|-------------------|------------------------------------|----------------------------------|
| CARTRIDGE DISPENSING  | <b>PNEUMATIC CARTRIDGE DISPENSING</b>   |  |                     |   |   |                                   |                   |                                    |                                  |
|   |  | 300 ML PNEUMATIC CARTRIDGE DISPENSING RETAINER | 98319A              | 0 to 60 psi   | Gel Cyanoacrylates, Anaerobic Gasketing, Light Cure/Acrylics, Silicones | 300 ml cartridges                 | Low to Medium     | No                                 | Cartridge Accessories – Page 177 |
|   |  | HD10 300 ML PNEUMATIC CARTRIDGE DISPENSER      | 1714379             | 0 to 60 psi   | Gel Cyanoacrylates, Anaerobic Gasketing, Light Cure/Acrylics, Silicones | 300 ml cartridges<br>250 ml tubes | Medium to High    | No                                 |                                  |
|  | 300 ML CARTRIDGE PUSHER   | 98022  | 0 to 50 psi         | Gel Cyanoacrylates, Anaerobic Gasketing, Light Cure/Acrylics, Low Viscosity Silicones | 300 ml cartridges<br>250 ml tubes                                       | Medium                            | Yes               |                                    |                                  |

| LOCTITE® PRODUCT  |   | ITEM NUMBER                            | DISPENSE PATTERNS | USED TO DISPENSE | PACKAGE TYPES & SIZES   | VISCOSITY RANGE  | VACUUM SUCK-BACK          | CONSUMABLES – DISPENSE ACCESSORIES |   |
|---|---|--|-------------------|------------------|---|--|---------------------------|------------------------------------|---|
| DISPENSE SYSTEMS  | <b>VOLUMETRIC BOTTLE DISPENSING</b>   |  |                   |                  |   |  |                           |                                    |   |
|   |  | BENCHTOP PERISTALTIC DISPENSER         | 98548             | Dot, Drop, Bead  | Instant Adhesives, Light Cure/Acrylics, Retaining Compounds, Threadlockers                | Any Bottle   | 0 to 5,000 cP             | Programmable                       | Dispense Tips and Accessories – Pages 176-177 |
|   | <b>COMPLETE PRESSURE-TIME BOTTLE DISPENSE SYSTEM</b>                              |  |                   |                  |   |  |                           |                                    |   |
|   |  | BOND-A-MATIC® 3000 DISPENSER 0-15 psi  | 982719            | Dot, Drop, Bead  | Gel Adhesives, Instant Adhesives, Light Cure/Acrylics, Retaining Compounds, Threadlockers | 200 ml bottle<br>1 lb. bottle<br>1 liter bottle<br>2 kg bottle<br>200 g squeeze tube | Low<br><br>Medium to High | N/A                                | Dispense Tips and Accessories – Pages 176-177 |
|   |   | BOND-A-MATIC® 3000 DISPENSER 0-100 psi | 982722            |                  |   |  |                           |                                    |   |
|   | <b>SYRINGE DISPENSING SYSTEMS</b>   |  |                   |                  |   |  |                           |                                    |   |
|   |  | POSI-LINK™ DISPENSE SYSTEM             | See Page 169      | Dot, Drop, Bead  | Gel Adhesives, Instant Adhesives, Light Cure/Acrylics, Epoxies                            | Prepackaged<br>5 ml syringe<br>10 ml syringe<br>25 ml syringe                        | Low to Paste              | Yes                                | Dispense Tips and Accessories – Pages 176-177 |
|   |  | PRECISION SYRINGE DISPENSING SYSTEM    | 97006*            | Dot, Drop, Bead  | Gel Adhesives, Instant Adhesives, Light Cure/Acrylics                                     | 3 ml syringe<br>5 ml syringe<br>10 ml syringe<br>30 ml syringe<br>55 ml syringe      | Low to Paste              | Yes                                | Syringes – Pages 181-182                      |
|   |  | DIGITAL SYRINGE DISPENSING SYSTEM      | 883976            |                  |   |  |                           |                                    |   |
|   |  | SD10 DIGITAL SYRINGE DISPENSER         | 1514629           |                  |   |  |                           |                                    |   |
|  | FOOT PEDAL DISPENSER  | 98050*                                 |                   |                  |   |  |                           |                                    |   |

\* Syringe Airline Adapter sold separately. Visit [www.equipment.loctite.com](http://www.equipment.loctite.com) for all available accessories.

| LOCTITE® PRODUCT            |   | ITEM NUMBER                        | CONTROLLED OUTPUTS | NUMBER OF DISPENSE VALVES | ADVANCING SLIDE | ROTOSPRAY™     | ACCESSORIES   |
|-----------------------------|---|------------------------------------|--------------------|---------------------------|-----------------|----------------|---|
| MULTIFUNCTION CONTROLLERS   |  | DUAL CHANNEL AUTOMATIC CONTROLLER  | 97152              | 2                         | 2 (Independent) | 97119 – 100 mm | 97115   |
|                             |  | SPRAY VALVE DIGITAL CONTROLLER     | 1406023            | 1                         | 1               | N/A            | N/A   |
|                             |  | DIGITAL MULTIFUNCTIONAL CONTROLLER | 1022006            | 3                         | 3 (Independent) | N/A            | In conjunction with Positive Displacement Pump – 983330 |
| SINGLE FUNCTION CONTROLLERS |  | DIGITAL DISPENSE CONTROLLER        | 97101              | 1                         | 1               | N/A            | N/A   |

Visit [www.equipment.loctite.com](http://www.equipment.loctite.com) for more information on additional accessories.

| LOCTITE® PRODUCT         |   | ITEM NUMBER                         | PRESSURE REGULATION | USED TO DISPENSE | PACKAGE TYPES & SIZES   | VISCOSITY RANGE  | LOW LEVEL SENSING                   | CONSUMABLES – DISPENSE ACCESSORIES |   |
|--------------------------|---|-------------------------------------|---------------------|------------------|---|--|-------------------------------------|------------------------------------|---|
| CONTROLLERS & RESERVOIRS | <b>INTEGRATED RESERVOIR CONTROLLERS</b>   |                                     |                     |                  |   |  |                                     |                                    |   |
|                          |  | INTEGRATED SEMI-AUTOMATIC DISPENSER | 1390322             | 0 to 15 psi      | Gel Adhesives, Instant Adhesives, Light Cure/Acrylics, Retaining Compounds, Threadlockers | 250 ml bottle<br>1 lb. bottle<br>1 liter bottle<br>2 kg bottle<br>200 g squeeze tube | Low to Medium<br><br>Medium to High | Yes                                | Dispense Tips and Accessories – Pages 176-177 |
|                          |   |                                     | 1390321             | 0 to 100 psi     |   |  |                                     |                                    |   |
|                          | <b>RESERVOIRS</b>   |                                     |                     |                  |   |  |                                     |                                    |   |
|                          |  | BOND-A-MATIC® 3000 RESERVOIR        | 982720              | 0 to 15 psi      | Gel Adhesives, Instant Adhesives, Light Cure/Acrylics, Retaining Compounds, Threadlockers | 250 ml bottle<br>1 lb. bottle<br>1 liter bottle<br>2 kg bottle<br>200 g squeeze tube | Low to Medium<br><br>Medium to High | Yes                                | Dispense Tips and Accessories – Pages 176-177 |
|                          |   |                                     | 982726              | 0 to 100 psi     |   |  |                                     | No                                 |   |
|                          |   |                                     | 982723              |                  |   |  |                                     | Yes                                |   |
|                          |   |                                     | 982727              | No               |   |  |                                     |                                    |   |
|                          |  | SHOT MISER™ RESERVOIR               | 98090               | 0 to 100 psi     | Instant Adhesives, Light Cure/Acrylics, Retaining Compounds, Threadlockers                | 250 ml bottle<br>1 lb. bottle<br>200 g squeeze tube                                  | Low to High                         | No                                 |   |

Your Source for Motion Control Robot Dispense Systems. See page 171.



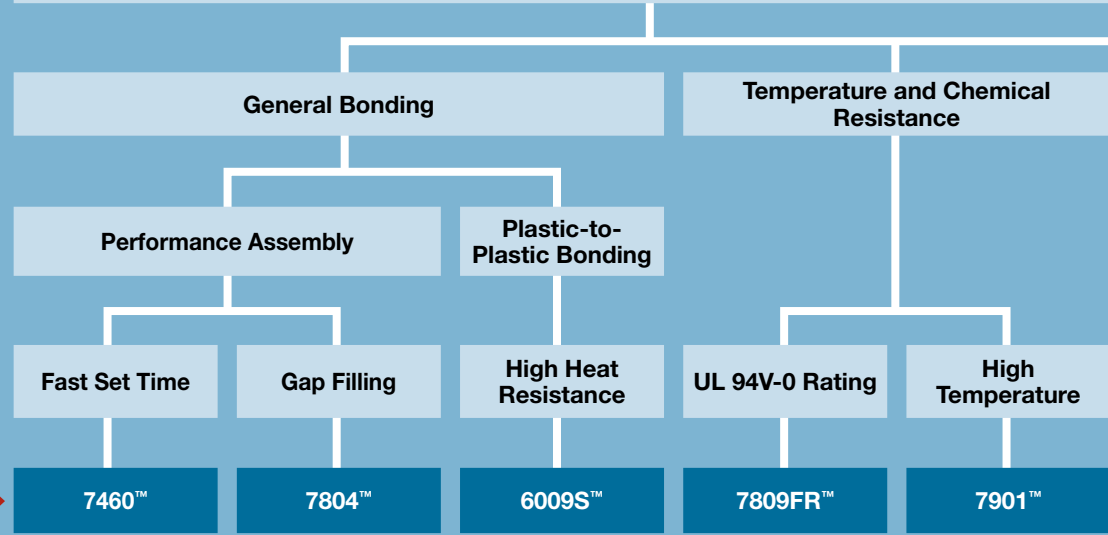
# Hot Melt Adhesives

- Bond a variety of substrates, including difficult-to-bond plastics
- Can handle today's toughest applications in a broad range of industries
- Ideal for applications that require high speed manufacturing, bonding versatility, very large gap filling, fast green strength and minimal shrinkage
- Solvent-free and contain environmentally responsible materials with no harmful VOCs



## Your Application

### WHAT TYPE OF HOT MELT ADHESIVE DO YOU NEED?



## Solution

|   | 7460™        | 7804™         | 6009S™          | 7809FR™       | 7901™         |
|---|--------------|---------------|-----------------|---------------|---------------|
| <b>Color</b>                            | Amber        | Amber         | Natural         | Amber         | Amber         |
| <b>Viscosity (cP) at Dispense Temp.</b> | 6,700        | 7,500         | 8,100           | 7,000         | 750           |
| <b>Open Time (Sec.)</b>                 | 30           | 35            | 25              | 35            | 35            |
| <b>Heat Resistance</b>                  | 210°F (99°C) | 220°F (104°C) | >310°F (>152°C) | 240°F (115°C) | 300°F (149°C) |
| <b>Shore Hardness</b>                   | N/A          | A 74          | N/A             | A 85          | A 84          |

## Product Description

**LOCTITE® 7460™ Hysol® SprayPac™ Polyshot Hot Melt Adhesive**

**Sprayable**

Formulated for spray applications. High heat resistance and fast set time. Suitable for bonding foams, fabric and wood.

**P/N Package Size**  
83308 Polyshot 25 lb. pail

**LOCTITE® 7804™ Hysol® Hot Melt Adhesive**

**Impact Resistant**

Tough, elastomeric, high performance adhesive with excellent impact resistance at low temperatures.

**P/N Package Size**  
1863185 32 lb. carton pellets  
83328 Superstick (10 in.) 32 lb. carton  
83330 Polyshot 25 lb. pail

**LOCTITE® 6009S™ Hysol® Hot Melt Adhesive**

**Heat Resistant**

Low viscosity, high heat-resistant adhesive recommended for bonding polypropylene to itself and to various porous substrates.

**P/N Package Size**  
83372 40 lb. carton pellets

**LOCTITE® 7809FR™ Hysol® Hot Melt Adhesive**

**Fire Retardant**

Modified with fire retardant materials. It has a UL 94V-0 flammability rating.

**P/N Package Size**  
83675 Superstick 32 lb. carton  
83676 Polyshot 25 lb. pail

**LOCTITE® 7901™ Hysol® Hot Melt Adhesive**

**Potting**

Low viscosity polyamide used extensively for potting and encapsulating.

**P/N Package Size**  
83342 40 lb. carton pellets



| Porous Substrates |                    |                  |                  |                        |               | Structural Bonding |
|-------------------|--------------------|------------------|------------------|------------------------|---------------|--------------------|
| Foam Bonding      |                    | General Assembly |                  | Packaging Applications |               |                    |
| Medium Open Time  | Extended Open Time | General-Purpose  | Medium Open Time | Fast Setting           | High Strength |                    |
| <b>0430™</b>      | <b>0450™</b>       | <b>1942™</b>     | <b>232™</b>      | <b>1X™</b>             | <b>740™</b>   | <b>3631™</b>       |
| Cream             | Natural            | Tan              | Clear            | Yellow                 | Yellow        | Off White          |
| 6,000             | 4,500              | 5,000            | 11,000           | 2,000                  | 9,000         | 12,000             |
| 3.5 min. Sprayed  | 5 to 8 min.        | 30               | 15               | 15                     | 10            | 60                 |
| 170°F (77°C)      | 170°F (77°C)       | 142°F (61°C)     | 153°F (67°C)     | 150°F (65°C)           | 168°F (75°C)  | 250°F (121°C)      |
| A 75              | A 75               | N/A              | N/A              | N/A                    | N/A           | N/A                |

**LOCTITE® 0430™  
Hysol® SprayPac™  
Polyshot Hot Melt  
Adhesive**

**Medium Open Time**

Suitable for bonding expanded polystyrene, polyethylene and urethane foams. Can be used in applications where solvent-based aerosols are used.

| P/N   | Package Size           |
|-------|------------------------|
| 83349 | Polyshot 35 lb. carton |

**LOCTITE® 0450™  
Hysol® SprayPac™  
Polyshot Hot Melt  
Adhesive**

**Extended Open Time**

Formulated for spray applications, this adhesive is well-suited for use on expanded polystyrene or urethane foams.

| P/N   | Package Size                 |
|-------|------------------------------|
| 83354 | Polyshot 35 lb. carton       |
| 83356 | Polyshot 35 lb. carton (RED) |

**LOCTITE® 1942™  
Hysol® Hot Melt  
Adhesive**

**General-Purpose**

Medium setting, general-purpose hot melt adhesive. Excellent adhesion to wood and many plastics.

| P/N   | Package Size                    |
|-------|---------------------------------|
| 83267 | 40 lb. carton pellets           |
| 83269 | Maxistick 35 lb. carton         |
| 83274 | Superstick 10 in. 25 lb. carton |
| 83277 | Polyshot 35 lb. carton          |

**LOCTITE® 232™  
Hysol® Hot Melt  
Adhesive**

**Medium Open Time**

A medium setting adhesive with an open time of 15 seconds.

| P/N   | Package Size                    |
|-------|---------------------------------|
| 83239 | 40 lb. carton pellets           |
| 83245 | Superstick 10 in. 25 lb. carton |
| 83247 | Polyshot 35 lb. carton          |

**LOCTITE® 1X™ Hysol®  
Hot Melt Adhesive**

**Fast Setting**

Medium to fast setting; recommended for bonding paper, wood, fabric and foam.

| P/N   | Package Size                    |
|-------|---------------------------------|
| 83358 | 40 lb. carton pellets           |
| 83360 | Maxistick 35 lb. carton         |
| 83365 | Superstick 10 in. 25 lb. carton |
| 83368 | Polyshot 35 lb. carton          |

**LOCTITE® 740™  
Hysol® Hot Melt  
Adhesive**

**High Strength**

Fast setting adhesive recommended for packaging applications.

| P/N   | Package Size           |
|-------|------------------------|
| 83264 | Polyshot 35 lb. carton |

**LOCTITE® 3631™  
Hysol® Hot Melt  
Adhesive**

**High Strength**

A toughened, high strength adhesive for use on plastics. Flexible bond with an open time of 60 seconds.

| P/N   | Package Size     |
|-------|------------------|
| 31291 | 300 ml cartridge |
| 31279 | 40 lb. pail      |

# Hot Melt Adhesives



## LOCTITE® Hysol® Hot Melt Adhesive Properties Chart

|                  | LOCTITE® PRODUCT              | ITEM NUMBER               | PACKAGE TYPE/SIZE   | COLOR      | ATTRIBUTES         | VISCOSITY (cP) AT DISPENSE TEMPERATURE | TENSILE STRENGTH (psi) | OPEN TIME           | TEMPERATURE RESISTANCE | % ELONGATION | SHORE HARDNESS | AGENCY APPROVALS |
|------------------|-------------------------------|---------------------------|---|------------|--------------------|--|------------------------|---------------------|------------------------|--------------|----------------|------------------|
| POLYOLEFIN-BASED | <b>0430™ HYSOL® SPRAYPAC™</b> | 83349                     | Polyshot 35 lb. carton  | Cream      | Medium open time   | 5,000                                  | 280                    | 3.5 minutes sprayed | 170°F (77°C)           | N/A          | A 75           | N/A              |
|                  | <b>0450™ HYSOL® SPRAYPAC™</b> | 83354<br>83356            | Polyshot 35 lb. carton<br>Polyshot 35 lb. carton (RED)                                | Natural    | Extended open time | 4,500                                  | N/A                    | 5 to 8 minutes      | 156°F (69°C)           | N/A          | N/A            | N/A              |
|                  | <b>6009S™ HYSOL®</b>          | 83372                     | 40 lb. carton pellets   | Natural    | Fast set           | 8,100                                  | 210                    | 25 seconds          | 300°F (149°C)          | 50           | N/A            | N/A              |
| URETHANE-BASED   | <b>3631™ HYSOL®</b>           | 31291<br>31279            | 300 ml cartridge<br>40 lb. pail   | Off-White  | High strength      | 12,000                                 | 1,800                  | 60 seconds          | 250°F (121°C)          | 940          | A 91           | N/A              |
| POLYAMIDE-BASED  | <b>7460™ HYSOL® SPRAYPAC™</b> | 83308                     | Polyshot 25 lb. pail  | Pale Amber | Sprayable          | 6,700                                  | N/A                    | 30 seconds          | 210°F (99°C)           | N/A          | N/A            | N/A              |
|                  | <b>7802™ HYSOL®</b>           | 83316<br>83319<br>83321   | 40 lb. carton pellets<br>Superstick (10 in.)<br>32 lb. carton<br>Polyshot 25 lb. pail | Amber      | PVC bonder         | 14,000                                 | 600                    | 20 seconds          | 240°F (115°C)          | 450          | N/A            | N/A              |
|                  | <b>7804™ HYSOL®</b>           | 1863185<br>83328<br>83330 | 32 lb. carton pellets<br>Superstick (10 in.)<br>32 lb. carton<br>Polyshot 25 lb. pail | Amber      | High viscosity     | 7,500                                  | 340                    | 35 seconds          | 220°F (104°C)          | 900          | A 74           | N/A              |
|                  | <b>7805™ HYSOL®</b>           | 1863184                   | 32 lb. carton pellets   | Amber      | Flexible           | 7,500                                  | 340                    | 35 seconds          | 220°F (104°C)          | 800          | A 70           | N/A              |
|                  | <b>7809FR™ HYSOL®</b>         | 83675<br>83676            | Superstick 10 in. 32 lb. carton<br>Polyshot 25 lb. pail                               | Amber      | Fire retardant     | 7,000                                  | 363                    | 35 seconds          | 240°F (115°C)          | 373          | A 85           | UL 94V-0         |
|                  | <b>7901™ HYSOL®</b>           | 83342                     | 40 lb. carton pellets   | Amber      | Potting            | 750                                    | 260                    | 35 seconds          | 300°F (149°C)          | 80           | A 84           | N/A              |

ITEMS IN RED = Source's PICK or NEW

## LOCTITE® Hysol® Hot Melt Adhesive Properties Chart

| LOCTITE® PRODUCT | ITEM NUMBER             | PACKAGE TYPE/SIZE                | COLOR  | ATTRIBUTES   | VISCOSITY (cP) AT DISPENSE TEMPERATURE | TENSILE STRENGTH (psi) | OPEN TIME (SECONDS) | TEMPERATURE RESISTANCE | % ELONGATION | SHORE HARDNESS | AGENCY APPROVALS |     |
|------------------|-------------------------|----------------------------------|--|--------------|--|------------------------|---------------------|------------------------|--------------|----------------|------------------|-----|
| EVA-BASED        | <b>1X™ HYSOL®</b>       | 83358<br>83360<br>83365<br>83368 | 40 lb. carton pellets<br>Maxistick 35 lb. carton<br>Superstick 10 in.<br>25 lb. carton<br>Polyshot 35 lb. carton | Light Yellow | Fast setting                           | 2,000                  | 370                 | 15                     | 150°F (65°C) | 90             | N/A              | N/A |
|                  | <b>232™ HYSOL®</b>      | 83239<br>83245<br>83247          | 40 lb. carton pellets<br>Superstick 10 in.<br>25 lb. carton<br>Polyshot 35 lb. carton                            | Clear        | Medium open time                       | 11,000                 | N/A                 | 15                     | 153°F (67°C) | N/A            | N/A              | N/A |
|                  | <b>236™ HYSOL®</b>      | 83248                            | Superstick 10 in.<br>25 lb. carton   | Clear        | Medium viscosity                       | 8,500                  | 213                 | 25                     | 140°F (60°C) | 450            | N/A              | N/A |
|                  | <b>740™ HYSOL®</b>      | 83264                            | Polyshot 35 lb. carton   | Light Yellow | High strength                          | 9,000                  | 750                 | 10                     | 168°F (75°C) | 75             | N/A              | N/A |
|                  | <b>740LV™ HYSOL®</b>    | 83374                            | 35 lb. polyshot  | Light Yellow | High temperature                       | 3,500                  | 700                 | 10                     | 155°F (68°C) | 80             | N/A              | N/A |
|                  | <b>1942™ HYSOL®</b>     | 83267<br>83269<br>83274<br>83277 | 40 lb. carton pellets<br>Maxistick 35 lb. carton<br>Superstick 10 in.<br>25 lb. carton<br>Polyshot 35 lb. carton | Tan          | General-purpose                        | 5,000                  | 250                 | 30                     | 142°F (61°C) | 500            | N/A              | N/A |
|                  | <b>4046™ HYSOL®</b>     | 83279                            | Polyshot 35 lb. carton   | Tan          | Extended open time                     | 19,000                 | 120                 | 60                     | 120°F (48°C) | 1,400          | A 22             | N/A |
|                  | <b>COOLMELT™ HYSOL®</b> | 83394                            | CoolMelt™ Maxistick<br>35 lb. carton   | Off-White    | Low temperature application            | 7,200                  | 195                 | 15                     | 140°F (60°C) | 800            | N/A              | N/A |
|                  | <b>QUIKPAC™ HYSOL®</b>  | 83398<br>83400                   | Maxistick 35 lb. carton<br>Polyshot 35 lb. carton  | Light Yellow | Low viscosity                          | 4,645                  | N/A                 | 15                     | 174°F (79°C) | N/A            | N/A              | N/A |

ITEMS IN RED = Source's PICK or NEW

## LOCTITE® Hysol® Hot Melt Stick Chart








| DESCRIPTION | DIAMETER | LENGTH       | LOCTITE® APPLICATORS BY ITEM NUMBER |
|-------------|----------|--------------|-------------------------------------|
| SUPERSTICK  | 0.50 in. | 4 in./10 in. | 916282, 1597635                     |
| MAXISTICK   | 0.75 in. | 2.4 in.      | 98033, 98034                        |
| POLYSHOT    | 1.75 in. | 1.5 in.      | 98035, 98036, 98040, 98037, 98041   |

# Hot Melt Adhesive Equipment

## YOUR EQUIPMENT Source

For more details, see the *LOCTITE® Equipment Sourcebook, LT-3669*, or visit us on the web for additional information, diagrams, products and our full line of equipment at [www.equipment.loctite.com](http://www.equipment.loctite.com).























| LOCTITE® PRODUCT  |  | ITEM NUMBER | STICK DIAMETER            | DISPENSE MELT RATE | DISPENSE POWER | DISPENSE TEMPERATURE             | HOT MELT CHEMISTRY           | HOT MELT NOZZLES & ACCESSORIES             |
|---|--|-------------|---------------------------|--------------------|----------------|----------------------------------|------------------------------|--|
| <b>1/2 INCH SUPERSTICK DISPENSERS</b>   |  |             |                           |                    |                |                                  |                              |  |
|    | HYSOL® 050A                                  | 916282      | 1/2 in. Superstick Sticks | 4 lbs./hr.         | Manual         | 383°F (195°C)                    | EVA/Polyolefin               | Hot Melt Nozzles and Accessories – Page 18 |
|    | HYSOL® 050A-HT                               | 1597635     | 1/2 in. Superstick Sticks | 4 lbs./hr.         | Manual         | 419°F (215°C)                    | Polyamide                    |  |
| <b>3/4 INCH MAXISTICK DISPENSERS</b>  |  |             |                           |                    |                |                                  |                              |  |
|   | HYSOL® 075                                   | 98033       | 3/4 in. Maxistick Sticks  | 9 lbs./hr.         | Manual         | 360°F (182°C)                    | EVA                          | Hot Melt Nozzles and Accessories – Page 18 |
|   | HYSOL® 075-LT                                | 98034       | 3/4 in. Maxistick Sticks  | 5 lbs./hr.         | Manual         | 249°F (121°C)                    | CoolMelt™                    |  |
| <b>1 3/4 INCH SPRAYPAC™ &amp; POLYSHOT DISPENSERS</b>                               |  |             |                           |                    |                |                                  |                              |  |
|  | HYSOL® 175-AIR                               | 98036       | 1 3/4 in. Polyshot Sticks | 8 lbs./hr.         | Electric       | 383°F (195°C)                    | EVA/Polyolefin               | Hot Melt Nozzles and Accessories – Page 18 |
|   | HYSOL® 175-AIR-HT                            | 98040       | 1 3/4 in. Polyshot Sticks | 8 lbs./hr.         | Electric       | 419°F (215°C)                    | Polyamide                    |  |
|  | HYSOL® 175-SPRAY                             | 98037       | 1 3/4 in. Polyshot Sticks | 8 lbs./hr.         | Electric       | 383°F (195°C)                    | EVA/Polyolefin               |  |
|   | HYSOL® 175-SPRAY-HT                          | 98041       | 1 3/4 in. Polyshot Sticks | 8 lbs./hr.         | Electric       | 419°F (215°C)                    | Polyamide                    |  |
|  | HYSOL® 175                                   | 98035       | 1 3/4 in. Polyshot Sticks | 6.6 lbs./hr.       | Manual         | 383°F (195°C) and 419°F (215°C)* | EVA/Polyolefin and Polyamide |  |
| <b>URETHANE DISPENSER</b>   |  |             |                           |                    |                |                                  |                              |  |
|  | HYSOL® REACTIVE URETHANE CARTRIDGE DISPENSER | 98011       | N/A                       | 3 lbs./hr.         | Air            | 249°F (121°C)                    | Reactive Urethane            | Hot Melt Nozzles and Accessories – Page 18 |

\* The LOCTITE® Hysol® 175 Dispenser (manual electric) is supplied with both temperature modules.

For custom hot melt dispense nozzles, contact the Special Equipment Group of Henkel at 1-800-LOCTITE (562-8483).

**STRAIGHT FROM** *The Source*

| LOCTITE® PRODUCT  | ITEM NUMBER             | DESCRIPTION  | USED WITH  |
|---|-------------------------|--|--|
|    | 1611450                 | Replacement Nozzle/Check Valve   | 1597635  |
|    | 419115<br>(SINGLE PACK) | Adapter/Check Valves for Nozzles   | 98035, 98036, 98040                                |
|   | 916050<br>(5 PACK)      |  | 916282   |
|    | ANZ023N01               | Standard Nozzle Adapter with Check Valve and Jam Nut   | 98033, 98034                                       |
|    | 985225<br>(5 PACK)      | 1-Hole Nozzle<br>0.08" diameter cone tip (5 pack)  | 98033, 98034, 98035,<br>98036, 98040               |
|    | 985110                  | 2-Hole Nozzle<br>0.06" diameter x 0.39" spacing  | 98033, 98034, 98035, 98036,<br>98040, 98544, 98545 |
|    | 985111                  | 3-Hole Nozzle<br>0.06" diameter x 0.20" spacing  | 98033, 98034, 98035, 98036,<br>98040, 98544, 98545 |
|    | 985112                  | Diagonal Extension Nozzle<br>Tip = 0.14" diameter x 1.23" long   | 98033, 98034, 98035, 98036,<br>98040, 98544, 98545 |
|    | 985113                  | Needle Extension Nozzle<br>Tip = 0.05" diameter x 1.32" long   | 98033, 98034, 98035, 98036,<br>98040, 98544, 98545 |
|    | 985114                  | Spreader Extension Nozzle<br>Tip = (0.09" x 0.25") x 1.32" long  | 98033, 98034, 98035, 98036,<br>98040, 98544, 98545 |
|   | 985115                  | L-Nozzle<br>0.06" diameter x 0.85" offset  | 98033, 98034, 98035, 98036,<br>98040, 98544, 98545 |
|  | 985122                  | Standard Medium Spray Nozzle 1.25" to 5" diameter pattern  | 98037, 98041                                       |
|  | 985211                  | Narrow Spray Nozzle<br>0.05" to 1.25" diameter pattern   | 98037, 98041                                       |
|  | 985216                  | Ultra-Wide Spray Nozzle<br>1.5" to 6.0" diameter pattern   | 98037, 98041                                       |
|  | 984261                  | Standard Adapter for<br>300 ml Cartridges  | 98011  |
|  | 984262                  | Standard 1-Hole Nozzle 0.098" diameter<br>cone tip, with integral check valve<br>(includes protective cap) | 98011  |
|  | 984263                  | Adapter/Check Valve for<br>Specialty Nozzles   | 98011  |
|  | 984264                  | Needle Jet Nozzle Tip = 0.051" diameter x 1.26" long<br>(requires 984263 adapter)                          | 98011  |
|  | 984268                  | 3-Hole Nozzle<br>0.06" diameter x 0.20" spacing (requires 984263 adapter)                                  | 98011  |
|  | 984272                  | Injection Needle Nozzle with Integral Check<br>Valve Tip = 0.059" diameter x 0.197" long                   | 98011  |
|  | 985397                  | Air Line Filter, Regulator, 5 Micron Filter Gauge<br>0 to 150 psi  | All Pneumatic Applicators                          |

HOT MELT NOZZLES &amp; ACCESSORIES

# Light Cure Adhesives

- One-component, no-mix products that cure extremely fast for immediate QC in high volume assembly operations
- Excellent bond strengths to plastics and glass
- Bond-on-demand capability for unlimited repositioning
- Dual cure formulations for curing where light cannot reach



## Your Application

**CAN LIGHT REACH THE ENTIRE BOND-LINE THROUGH A TRANSPARENT SUBSTRATE?**

Yes

**What type of substrates are you using?**

**Highly Flexible Substrates**

**Transparent Glass Substrates**

**Bonding to Plasticized PVC**

**Bonding to Plastic**

**Bonding to Silicone**

**Bonded to Glass**

**Bonded to Metal**

**Low Viscosity**

**Medium Viscosity**

**Flowable**

**Paste**

**Medium Viscosity**

**High Viscosity**

## Solution

**3107™**

**3974™**

**5056™**

**5050™**

**3494™**

**3525™**

|                                |                         |                       |                  |             |                    |                              |
|--------------------------------|-------------------------|-----------------------|------------------|-------------|--------------------|------------------------------|
| <b>Chemistry</b>               | Acrylic                 | Acrylic               | Silicone         | Silicone    | Acrylic            | Acrylic                      |
| <b>Viscosity (cP)</b>          | 500                     | 2,400                 | 2,200            | 325 g/min.  | 5,500              | 15,000                       |
| <b>Color</b>                   | Clear/Straw/Translucent | Translucent/Colorless | Translucent      | Translucent | Clear/Pale Straw   | Clear/Pale Straw/Translucent |
| <b>Cure Type</b>               | UV, Visible             | UV, Visible           | UV, Visible      | UV          | UV, Visible        | UV, Visible                  |
| <b>Fluorescent</b>             | Yes                     | Yes                   | No               | No          | No                 | Yes                          |
| <b>Shear Strength (psi)</b>    | 900 <sup>1</sup>        | 1,910 <sup>2</sup>    | 440 <sup>1</sup> | N/A         | 2,440 <sup>3</sup> | 1,480 <sup>3</sup>           |
| <b>Elongation at Break (%)</b> | 220                     | 100                   | 170              | 125         | 190                | 260                          |

## Product Description

**LOCTITE® 3107™ Light Cure Adhesive**

A low viscosity UV/visible light cure adhesive designed primarily for bonding heavily plasticized PVC. Flexible and fluorescent.

**P/N Package Size**  
28466 1 liter bottle

**LOCTITE® 3974™ Light Cure Adhesive**

A medium viscosity highly flexible UV/visible light cure adhesive. Very soft when cured to accommodate varying material CTE's. Excellent resistance to thermal cycling and environmental exposure.

**P/N Package Size**  
1135733 25 ml syringe  
1135732 1 liter bottle

**LOCTITE® 5056™ Silicone Adhesive Sealant**

A self-leveling UV/visible light cure adhesive/sealant designed for bonding and sealing applications with highly flexible bond lines. Provides high adhesion to silicone substrates.

**P/N Package Size**  
1214249 25 ml syringe  
1214250 1 liter bottle  
1214248\* 15 liter pail

**LOCTITE® 5050™ Fastgasket® Silicone Adhesive Sealant**

A highly viscous cure-in-place UV light cure adhesive/sealant designed for gasketing, sealing and bonding applications with highly flexible bond lines. Provides high adhesion to silicone substrates.

**P/N Package Size**  
1212166 300 ml cartridge  
1212165 40 lb. pail

**LOCTITE® 3494™ Light Cure Adhesive**

A medium viscosity UV/visible light cure adhesive designed for bonding glass and other materials where resistance to humidity and water immersion is required.

**P/N Package Size**  
30765 25 ml syringe  
29487 1 liter bottle

**LOCTITE® 3525™ Light Cure Adhesive**

A high viscosity UV/visible light cure adhesive designed for bonding glass, metals and plastics with excellent flexibility, toughness and durability to moisture exposure.

**P/N Package Size**  
30220 25 ml syringe  
30221 1 liter bottle

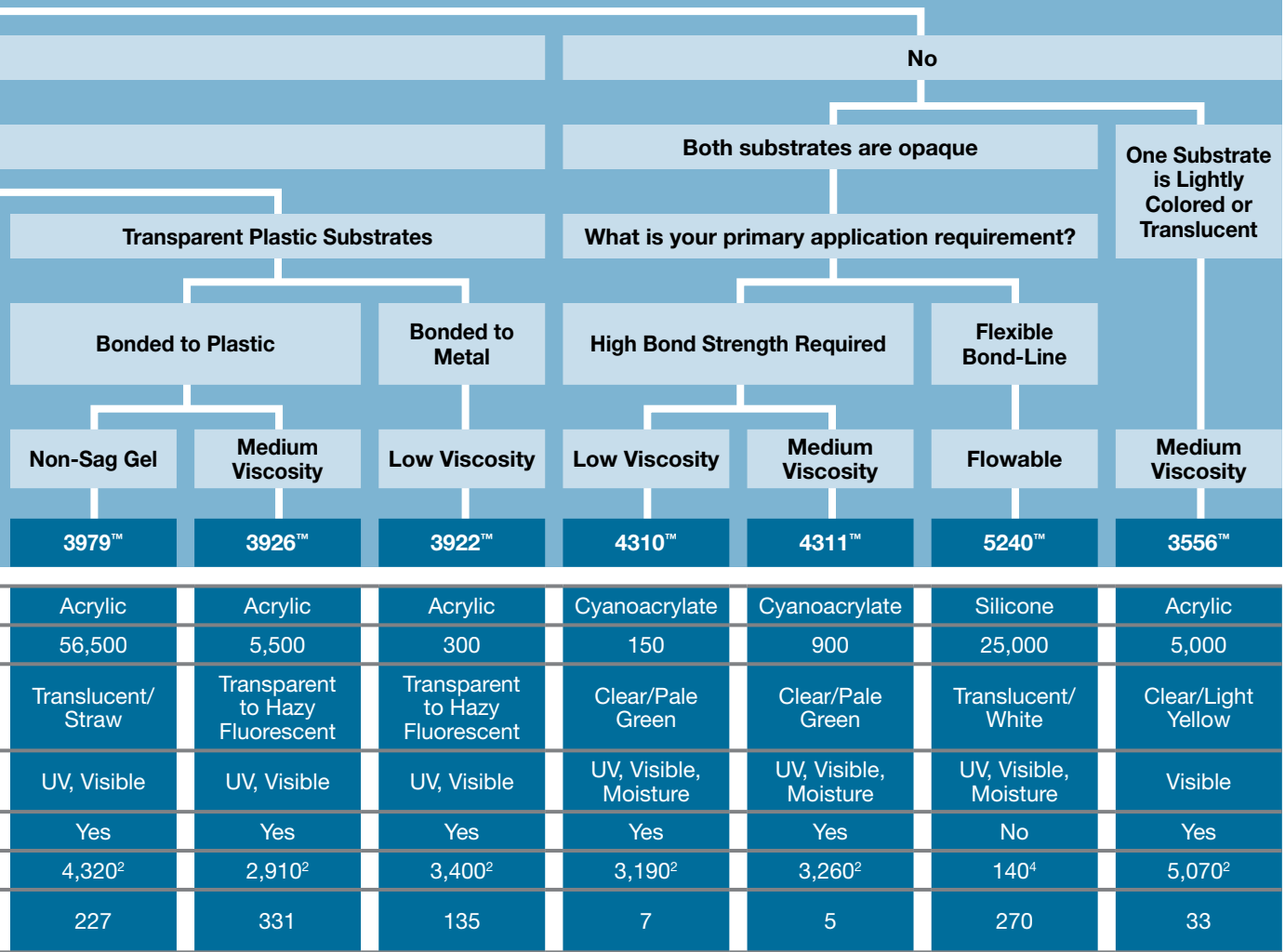
\* Made-to-order item.

1 Polycarbonate to PVC.

2 Polycarbonate to polycarbonate.

3 Glass to steel.

4 PVC to glass.



**LOCTITE® 3979™ Light Cure Adhesive**

**Gel, Fluoresces Red**

A UV/visible light cure adhesive designed for bonding plastics and other materials that fluoresces red to distinguish it from blue fluorescing substrates. Non-sag gel eliminates dripping.

**P/N      Package Size**  
1402562 25 ml syringe  
1402563 300 g cartridge

**LOCTITE® 3926™ Light Cure Adhesive**

A medium viscosity UV/visible light cure adhesive designed for bonding plastics, metals and glass with superior sterilization resistance and flexibility.

**P/N      Package Size**  
36492 25 ml syringe  
36493 1 liter bottle

**LOCTITE® 3922™ Light Cure Adhesive**

A low viscosity UV/visible light cure adhesive designed for bonding plastics, metals and glass with superior sterilization resistance. Excellent adhesion to polycarbonate.

**P/N      Package Size**  
32083 25 ml syringe  
32047\* 1 liter bottle

**LOCTITE® 4310™ Flashcure® Light Cure Adhesives**

**Dual Cure Instant Adhesive**

A low viscosity UV/visible light and moisture cure adhesive designed for rapid curing of exposed adhesive as well as curing in shadowed areas where light does not reach.

**P/N      Package Size**  
1401792 1 oz. bottle  
1401790 1 lb. bottle

**LOCTITE® 4311™ Flashcure® Light Cure Adhesives**

**Dual Cure Instant Adhesive**

A medium viscosity UV/visible light and moisture cure adhesive designed for rapid curing of exposed adhesive as well as curing in shadowed areas where light does not reach.

**P/N      Package Size**  
1401791 1 oz. bottle  
1401789 1 lb. bottle

**LOCTITE® 5240™ Nuva-Sil® Medical Device Sealant**

**Self-Leveling/Noncorrosive**

A flowable UV/visible light and moisture curing adhesive designed for bonding and sealing applications with highly flexible bond lines. Forms a medium strength, flexible rubber sealant.

**P/N      Package Size**  
1010341 30 ml syringe  
1010320 300 ml cartridge  
1010343 40 lb. pail

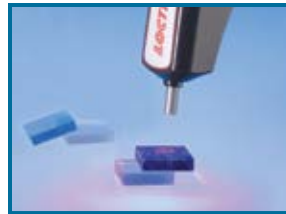
**LOCTITE® 3556™ Indigo® Visible Light Cure Adhesive**

A medium viscosity UV/visible light cure adhesive designed for bonding lightly colored or translucent substrates with a large depth of cure. Suitable for bonding polycarbonate and other materials.

**P/N      Package Size**  
1072223 25 ml syringe  
1072222 1 liter bottle



# Light Cure Adhesives



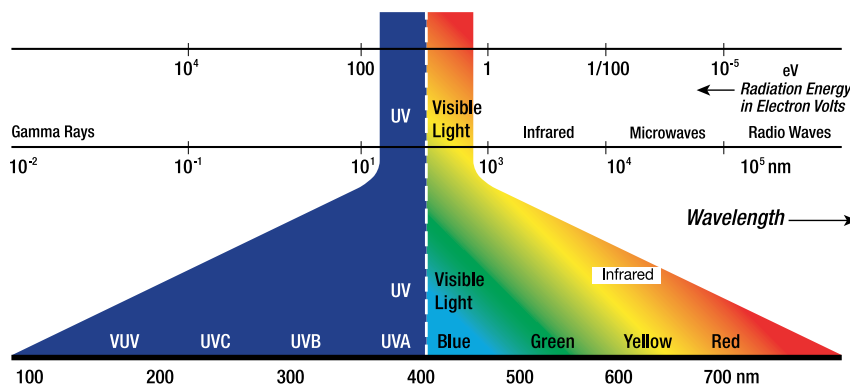
## LOCTITE® Light Cure Adhesive Properties Chart

| LOCTITE® PRODUCT         |                               | ITEM NUMBER                                      | PACKAGE TYPE/SIZE                                | APPEARANCE, CLARITY & COLOR               | CURE TYPE                               | KEY SUBSTRATES                                 | VISCOSITY (cP), BROOKFIELD, 25°C | ELONGATION AT BREAK (%) | SHORE HARDNESS                 | TEMPERATURE RANGE              | AGENCY APPROVALS       |
|--------------------------|-------------------------------|--|--|---|---|--|----------------------------------|-------------------------|--------------------------------|--------------------------------|------------------------|
| EPOXY ADHESIVES          | 3336™                         | 31064<br>31065                                   | 42 ml dual syringe<br>400 ml dual syringe        | Clear/<br>Light Amber                     | Ultraviolet, room temperature, heat     | Metal, thermoplastic                           | 14,500                           | 6                       | D 79                           | -65°F (-54°C) to 350°F (176°C) | N/A                    |
|                          | 3355™                         | 40792  | 25 ml syringe                                    | Hazy White                                | Ultraviolet, delay cure                 | Metal, plastic, glass, ceramic                 | 5,000                            | 11.5                    | D 77                           | -65°F (-54°C) to 350°F (176°C) | N/A                    |
| CYANOACRYLATES ADHESIVES | <b>4306™ FLASHCURE®</b>       | 37439<br>37442*                                  | 1 oz. bottle<br>1 lb. bottle                     | Clear/<br>Pale Green                      | Ultraviolet, visible, moisture          | Elastomer, metal, polycarbonate, thermoplastic | 20                               | 9                       | D 72                           | -65°F (-54°C) to 180°F (82°C)  | ISO 10993 Compliant    |
|                          | <b>4310™ FLASHCURE®</b>       | 1401792<br>1401790                               | 1 oz. bottle<br>1 lb. bottle                     | Clear/<br>Pale Green                      | Ultraviolet, visible, moisture          | Elastomer, metal, polycarbonate, thermoplastic | 150                              | 7                       | D 84                           | -65°F (-54°C) to 200°F (93°C)  | ISO 10993 Compliant    |
|                          | <b>4311™ FLASHCURE®</b>       | 1401791<br>1401789                               | 1 oz. bottle<br>1 lb. bottle                     | Clear/<br>Pale Green                      | Ultraviolet, visible, moisture          | Elastomer, metal, polycarbonate, thermoplastic | 900                              | 5                       | D 84                           | -65°F (-54°C) to 200°F (93°C)  | ISO 10993 Compliant    |
| SILICONE ADHESIVES       | 5031™ NUVA-SIL®               | 40086<br>40087                                   | 300 ml cartridge<br>40 lb. pail                  | Translucent                               | Visible, ultraviolet, moisture, acetoxy | Glass, metal, ceramic                          | 5,500                            | 100                     | A 34                           | -65°F (-54°C) to 350°F (177°C) | N/A                    |
|                          | <b>5033™ NUVA-SIL®</b>        | 40088<br>40089                                   | 300 ml cartridge<br>40 lb. pail                  | Translucent/<br>Colorless/<br>Fluorescent | Visible, ultraviolet, moisture, acetoxy | Glass, metal, ceramic                          | 145 g/min. <sup>†</sup>          | 170                     | A 55                           | -65°F (-54°C) to 350°F (177°C) | N/A                    |
|                          | 5039™ NUVA-SIL®               | 40438<br>40439                                   | 300 ml cartridge<br>40 lb. pail                  | Translucent/<br>Colorless/<br>Fluorescent | Visible, ultraviolet, moisture, acetoxy | Glass, metal, ceramic                          | 220 g/min. <sup>†</sup>          | 210                     | A 37                           | -65°F (-54°C) to 350°F (177°C) | N/A                    |
|                          | <b>5050™ FASTGASKET®</b>      | 1212166<br>1212165                               | 300 ml cartridge<br>40 lb. pail                  | Translucent                               | Ultraviolet                             | Glass, metal, ceramic                          | 325 g/min. <sup>†</sup>          | 125                     | A 45                           | -65°F (-54°C) to 350°F (177°C) | N/A                    |
|                          | 5056™                         | 1214249<br>1214250<br>1214248                    | 25 ml syringe<br>1 liter bottle<br>15 liter pail | Translucent                               | Visible, ultraviolet                    | Glass, metal, ceramic, polycarbonate           | 2,200                            | 170                     | A 43                           | -65°F (-54°C) to 200°F (93°C)  | ISO 10993 Compliant    |
|                          | <b>5083™ NUVA-SIL®</b>        | 17528<br>17635                                   | 300 ml cartridge<br>40 lb. pail                  | Translucent/<br>Colorless                 | Ultraviolet, moisture, acetoxy          | Glass, metal, ceramic                          | 145 g/min. <sup>†</sup>          | 170                     | A 55                           | -65°F (-54°C) to 350°F (177°C) | N/A                    |
|                          | 5091™ NUVA-SIL®               | 17412<br>18074                                   | 300 ml cartridge<br>40 lb. pail                  | Translucent/<br>Colorless                 | Ultraviolet, moisture, acetoxy          | Glass, metal, ceramic                          | 5,500                            | 100                     | A 34                           | -65°F (-54°C) to 350°F (177°C) | UL Classified for U.S. |
| <b>5240™ NUVA-SIL®</b>   | 1010341<br>1010320<br>1010343 | 30 ml syringe<br>300 ml cartridge<br>40 lb. pail | Translucent/<br>White                            | Visible, ultraviolet, moisture            | Glass, metal, ceramic                   | 18,000   | 270                              | A 45                    | -65°F (-54°C) to 350°F (177°C) | ISO 10993 Compliant            |                        |

ITEMS IN RED = Source's PICK or NEW

⊕ = Indicates Worldwide Availability

### The Electromagnetic Spectrum



Light curing adhesives must be exposed to light of the proper wavelength and intensity to cure. The UV and visible light wavelengths used to cure adhesives comprises a small portion of the complete electromagnetic spectrum shown. For the most effective cure, the spectral output of the light source used must match the adhesive pattern of light absorption. For more details, see Henkel's *Light Cure Technology Guide* (LT-2730/LT-2013).

# LOCTITE® Light Cure Adhesive Properties Chart

| LOCTITE® PRODUCT           | ITEM NUMBER           | PACKAGE TYPE/SIZE  | APPEARANCE, CLARITY & COLOR      | CURE TYPE                              | KEY SUBSTRATES                  | VISCOSITY (cP), BROOKFIELD, 25°C                                  | ELONGATION AT BREAK (%) | SHORE HARDNESS | TEMPERATURE RANGE | SHEAR STRENGTH (psi)              |                    |
|----------------------------|-----------------------|--------------------|----------------------------------|--|---------------------------------|---|-------------------------|----------------|-------------------|-----------------------------------|--------------------|
| <b>VISIBLE</b>             | <b>3554™ INDIGO®</b>  | 1072199<br>1072198 | 25 ml syringe<br>1 liter bottle  | Clear/<br>Light Yellow                 | Visible                         | Polycarbonate, thermoplastic,<br>polyvinyl chloride               | 300                     | 7              | D 77              | -65°F (-54°C)<br>to 300°F (149°C) | 3,350 <sup>3</sup> |
|                            | <b>3555™ INDIGO®</b>  | 1072221<br>1072220 | 25 ml syringe<br>1 liter bottle  | Clear/<br>Light Yellow                 | Visible                         | Polycarbonate, thermoplastic,<br>polyvinyl chloride               | 1,000                   | 10             | D 76              | -65°F (-54°C)<br>to 300°F (149°C) | 2,350 <sup>3</sup> |
|                            | <b>3556™ INDIGO®</b>  | 1072223<br>1072222 | 25 ml syringe<br>1 liter bottle  | Clear/<br>Light Yellow                 | Visible                         | Polycarbonate, thermoplastic,<br>polyvinyl chloride               | 5,000                   | 29             | D 70              | -65°F (-54°C)<br>to 300°F (149°C) | 2,900 <sup>3</sup> |
| <b>ULTRAVIOLET/VISIBLE</b> | <b>3100™</b>          | 19862              | 25 ml syringe                    | Slightly Hazy/<br>Straw                | Ultraviolet,<br>visible         | Glass, metal,<br>thermoset plastic                                | 6,000                   | 210            | D 66              | -65°F (-54°C)<br>to 300°F (149°C) | 1,670 <sup>2</sup> |
|                            | <b>3103™</b>          | 23691<br>23692     | 25 ml syringe<br>1 liter bottle  | Clear/<br>Pale Straw                   | Ultraviolet,<br>visible         | Polycarbonate, thermoplastic                                      | 10,000<br>Thixotropic   | 260            | D 51              | -65°F (-54°C)<br>to 300°F (149°C) | 2,849 <sup>3</sup> |
|                            | <b>3104™</b>          | 23694              | 25 ml syringe                    | Clear/<br>Pale Straw                   | Ultraviolet,<br>visible         | Polycarbonate, thermoplastic,<br>polyvinyl chloride               | 160                     | 50             | D 69              | -65°F (-54°C)<br>to 300°F (149°C) | 3,155 <sup>3</sup> |
|                            | <b>3105™</b>          | 23695<br>23696     | 25 ml syringe<br>1 liter bottle  | Clear/<br>Pale Straw                   | Ultraviolet,<br>visible         | Polycarbonate, thermoplastic,<br>polyvinyl chloride               | 300                     | 265            | D 64              | -65°F (-54°C)<br>to 300°F (149°C) | 3,640 <sup>3</sup> |
|                            | <b>3106™</b>          | 23697<br>23698     | 25 ml syringe<br>1 liter bottle  | Clear/<br>Pale Straw                   | Ultraviolet,<br>visible         | Polycarbonate, thermoplastic,<br>polyvinyl chloride               | 5,000                   | 250            | D 53              | -65°F (-54°C)<br>to 300°F (149°C) | 3,392 <sup>3</sup> |
|                            | <b>3107™</b>          | 28466              | 1 liter bottle                   | Clear/Straw/<br>Fluorescent            | Ultraviolet,<br>visible         | Plasticized PVC, thermoplastic                                    | 500                     | 220            | D 27              | -65°F (-54°C)<br>to 300°F (149°C) | 783 <sup>4</sup>   |
|                            | <b>3494™</b>          | 30765<br>29487     | 25 ml syringe<br>1 liter bottle  | Clear/<br>Pale Straw                   | Ultraviolet,<br>visible         | Glass, metal  | 5,500                   | 190            | D 65              | -65°F (-54°C)<br>to 300°F (149°C) | 2,440 <sup>1</sup> |
|                            | <b>3525™</b>          | 30220<br>30221     | 25 ml syringe<br>1 liter bottle  | Clear/<br>Pale Straw/<br>Fluorescent   | Ultraviolet,<br>visible         | Glass, metal,<br>thermoset plastic                                | 15,000                  | 260            | D 60              | -65°F (-54°C)<br>to 300°F (149°C) | 1,480 <sup>1</sup> |
|                            | <b>3526™</b>          | 30756<br>30764     | 25 ml syringe<br>1 liter bottle  | Clear/<br>Pale Straw/<br>Fluorescent   | Ultraviolet,<br>visible, heat   | Glass, metal,<br>thermoset plastic                                | 17,500                  | 185            | D 62              | -65°F (-54°C)<br>to 300°F (149°C) | 1,530 <sup>1</sup> |
|                            | <b>3922™</b>          | 32083<br>32047     | 25 ml syringe<br>1 liter bottle  | Transparent<br>to Hazy/<br>Fluorescent | Ultraviolet,<br>visible         | Glass, metal, thermoplastic,<br>polycarbonate, polyvinyl chloride | 300                     | 135            | D 66              | -65°F (-54°C)<br>to 300°F (149°C) | 3,400 <sup>3</sup> |
|                            | <b>3926™</b>          | 36492<br>36493     | 25 ml syringe<br>1 liter bottle  | Transparent<br>to Hazy/<br>Fluorescent | Ultraviolet,<br>visible         | Glass, metal, thermoplastic,<br>polycarbonate                     | 5,500                   | 331            | D 57              | -65°F (-54°C)<br>to 300°F (149°C) | 2,910 <sup>3</sup> |
|                            | <b>3974™</b>          | 1135733<br>1135732 | 25 ml syringe<br>1 liter bottle  | Translucent/<br>Colorless              | UV/Visible                      | Thermoplastic,<br>thermoset plastic                               | 2,400                   | 100            | A 77              | -65°F (-54°C)<br>to 300°F (149°C) | 1,800 <sup>3</sup> |
|                            | <b>3979™</b>          | 1402562<br>1402563 | 25 ml syringe<br>300 g cartridge | Translucent/<br>Straw                  | UV/Visible                      | Polycarbonate, polyvinyl chloride                                 | 56,500                  | 227            | D 56              | -65°F (-54°C)<br>to 300°F (149°C) | 3,500 <sup>3</sup> |
| <b>ULTRAVIOLET</b>         | <b>349™ IMPRUV®</b>   | 34931<br>34990     | 50 ml bottle<br>1 liter bottle   | Clear/Straw                            | Ultraviolet                     | Glass, metal  | 9,500                   | 300            | D 70              | -65°F (-54°C)<br>to 266°F (130°C) | 1,600 <sup>1</sup> |
|                            | <b>363™ IMPRUV®</b>   | 36331<br>36390     | 50 ml bottle<br>1 liter bottle   | Clear/<br>Pale Straw                   | Ultraviolet                     | Metal,<br>thermoset plastic                                       | 250                     | 88             | D 50              | -65°F (-54°C)<br>to 356°F (180°C) | 1,740 <sup>1</sup> |
|                            | <b>3108™</b>          | 28400<br>28465     | 25 ml syringe<br>1 liter bottle  | Translucent/<br>Colorless              | Ultraviolet                     | Thermoplastic,<br>thermoset plastic                               | 5,100                   | 330            | A 72              | -65°F (-54°C)<br>to 300°F (149°C) | 2,090 <sup>3</sup> |
|                            | <b>3491™</b>          | 28366<br>17944     | 25 ml syringe<br>1 liter bottle  | Clear/<br>Pale Straw                   | Ultraviolet                     | Glass, metal  | 1,100                   | 27             | D 75              | -65°F (-54°C)<br>to 300°F (149°C) | 1,450 <sup>1</sup> |
|                            | <b>3751™ LITETAK®</b> | 21362<br>21363     | 25 ml syringe<br>1 liter bottle  | Clear/<br>Colorless                    | Ultraviolet                     | Various   | 10,000                  | 50             | D 73              | -65°F (-54°C)<br>to 275°F (135°C) | 700 <sup>3</sup>   |
|                            | <b>352™</b>           | 35241<br>35286     | 50 ml bottle<br>1 liter bottle   | Clear/<br>Light Amber                  | Ultraviolet,<br>heat, activator | Glass, metal  | 19,500                  | 290            | D 60              | -65°F (-54°C)<br>to 275°F (135°C) | 2,400 <sup>1</sup> |
|                            | <b>366™</b>           | 36631<br>12224     | 50 ml bottle<br>1 liter bottle   | Clear/<br>Light Amber                  | Ultraviolet,<br>activator       | Glass, metal  | 7,500                   | 240            | D 45              | -65°F (-54°C)<br>to 230°F (110°C) | 1,450 <sup>1</sup> |

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\* Grit-blasted steel.

<sup>1</sup> Grit-blasted steel to glass.

<sup>3</sup> Polycarbonate to polycarbonate.

<sup>1</sup> Extrusion rate, gram/minute, 1/8 in. orifice at 90 psi.

<sup>2</sup> Etched aluminum.


<sup>4</sup> Polycarbonate to PVC.




# Light Cure Adhesive Equipment





## YOUR EQUIPMENT Source

For more details, see the *LOCTITE® Equipment Sourcebook, LT-3669*, or visit us on the web for additional information, diagrams, products and our full line of equipment at [www.equipment.loctite.com](http://www.equipment.loctite.com).



| LOCTITE® PRODUCT     |   | ITEM NUMBER                     | USED TO DISPENSE | PACKAGE TYPE AND SIZES                              | MIX RATIOS    | VISCOSITY RANGE | TYPE        | CONSUMABLES – DISPENSE ACCESSORIES |
|----------------------|---|---------------------------------|------------------|---|---------------|-----------------|-------------|------------------------------------|
| HANDHELD APPLICATORS | SYRINGE DISPENSING  |                                 |                  |   |               |                 |             |                                    |
|                      |  | 30 ML MANUAL SYRINGE APPLICATOR | 1544934          | Any fluid in 30 ml syringe including 25 ml syringes | 30 ml syringe | N/A             | Low to High | Manual                             |








| LOCTITE® PRODUCT  |   | ITEM NUMBER                    | TYPE      | VISCOSITY RANGE | DISPENSE PATTERNS | USED TO DISPENSE  | STROKE ADJUSTMENT                                       | ACTION | CONSUMABLES – DISPENSE ACCESSORIES |   |
|---|---|--------------------------------|-----------|-----------------|-------------------|---|---|--------|------------------------------------|---|
| HANDHELD VALVES   | GENERAL-PURPOSE APPLICATORS   |                                |           |                 |                   |   |   |        |                                    |   |
|   |   | MANUAL HAND-HELD APPLICATOR    | 97111     | Manual          | Low to Medium     | Drop, Dot, Bead   | Light Cure/Acrylics, Retaining Compounds, Threadlockers | Yes    | Finger                             | Dispense Tips and Accessories – Pages 176-177 |
|   |  | PNEUMATIC HAND-HELD APPLICATOR | 97112     | Pneumatic       | Low to Medium     | Drop, Dot, Bead   | Light Cure/Acrylics, Retaining Compounds, Threadlockers | Yes    | Foot                               |   |
|  | PNEUMATIC HAND-HELD APPLICATOR  | 97116                          | Pneumatic | Low to Medium   | Drop, Dot, Bead   | Light Cure/Acrylics, Retaining Compounds, Threadlockers | Yes   | Finger |                                    |   |

| LOCTITE® PRODUCT  |   | ITEM NUMBER        | TYPE                       | VISCOSITY RANGE                          | DISPENSE PATTERNS         | USED TO DISPENSE          | STROKE ADJUSTMENT    | SUCK-BACK | CONSUMABLES – DISPENSE ACCESSORIES            |   |
|---|---|--------------------|----------------------------|--|---------------------------|---------------------------|----------------------|-----------|---|---|
| VALVES  | HIGH PRECISION VALVES   |                    |                            |  |                           |                           |                      |           |   |   |
|   |  | MICRO NEEDLE VALVE | 98084                      | High Precision                           | Low to Medium             | Drop, Dot, Bead, Microdot | Light Cure/Acrylics  | Yes       | No  | Dispense Tips and Accessories – Pages 176-177 |
|   |  | EQ VA30 JET VALVE  | 1850212                    | Non-Contact High Precision Jetting Valve | Low to High               | Drop, Dot, Bead, Microdot | Light Cure Adhesives | No        | No  |   |
|   | HIGH PERFORMANCE DIAPHRAGM VALVES   |                    |                            |  |                           |                           |                      |           |   |   |
|  | VA10 MICRO DIAPHRAGM VALVE  | 1611449            | High Performance Diaphragm | Low to Medium                            | Drop, Dot, Bead, Microdot | Instant Adhesives         | Yes                  | No        | Dispense Tips and Accessories – Pages 176-177 |   |
|  | LIGHT CURE DISPENSE VALVE   | 98009              | High Performance Diaphragm | Low to Medium                            | Drop, Dot, Bead           | Light Cure                | Yes                  | No        |   |   |




**EQUIPMENT** – Henkel is a full-service supplier of LOCTITE® branded equipment and offers a wide variety of equipment services to its customers. **For more LOCTITE® branded equipment, go to page 165.**





Can't find what you're looking for? Visit [www.equipment.loctite.com](http://www.equipment.loctite.com) or call 1-800-LOCTITE (562-8483).

**STRAIGHT FROM The Source**

| LOCTITE® PRODUCT  |   | ITEM NUMBER                            | DISPENSE PATTERNS | USED TO DISPENSE | PACKAGE TYPES & SIZES   | VISCOSITY RANGE  | VACUUM SUCK-BACK          | CONSUMABLES – DISPENSE ACCESSORIES |   |
|---|---|--|-------------------|------------------|---|--|---------------------------|------------------------------------|---|
| DISPENSE SYSTEMS  | <b>VOLUMETRIC BOTTLE DISPENSING</b>   |  |                   |                  |   |  |                           |                                    |   |
|   |  | BENCHTOP PERISTALTIC DISPENSER         | 98548             | Dot, Drop, Bead  | Instant Adhesives, Light Cure/Acrylics, Retaining Compounds, Threadlockers                | Any Bottle   | 0 to 5,000 cP             | Programmable                       | Dispense Tips and Accessories – Pages 176-177 |
|   | <b>COMPLETE PRESSURE-TIME BOTTLE DISPENSE SYSTEM</b>                              |  |                   |                  |   |  |                           |                                    |   |
|   |  | BOND-A-MATIC® 3000 DISPENSER 0-15 psi  | 982719            | Dot, Drop, Bead  | Gel Adhesives, Instant Adhesives, Light Cure/Acrylics, Retaining Compounds, Threadlockers | 200 ml bottle<br>1 lb. bottle<br>1 liter bottle<br>2 kg bottle<br>200 g squeeze tube | Low<br><br>Medium to High | N/A                                | Dispense Tips and Accessories – Pages 176-177 |
|   |   | BOND-A-MATIC® 3000 DISPENSER 0-100 psi | 982722            |                  |   |  |                           |                                    |   |
|   | <b>SYRINGE DISPENSING SYSTEMS</b>   |  |                   |                  |   |  |                           |                                    |   |
|   |  | POSI-LINK™ DISPENSE SYSTEM             | See Page 169      | Dot, Drop, Bead  | Gel Adhesives, Instant Adhesives, Light Cure/Acrylics, Epoxies                            | Prepackaged<br>5 ml syringe<br>10 ml syringe<br>25 ml syringe                        | Low to Paste              | Yes                                | Dispense Tips and Accessories – Pages 176-177 |
|   |  | PRECISION SYRINGE DISPENSING SYSTEM    | 97006*            | Dot, Drop, Bead  | Gel Adhesives, Instant Adhesives, Light Cure/Acrylics                                     | 3 ml syringe<br>5 ml syringe<br>10 ml syringe<br>30 ml syringe<br>55 ml syringe      | Low to Paste              | Yes                                | Syringes – Pages 181-182                      |
|   |  | DIGITAL SYRINGE DISPENSING SYSTEM      | 883976            |                  |   |  |                           |                                    |   |
|   |  | SD10 DIGITAL SYRINGE DISPENSER         | 1514629           |                  |   |  |                           |                                    |   |
|  | FOOT PEDAL DISPENSER  | 98050*                                 |                   |                  |   |  |                           |                                    |   |

\* Syringe Airline Adapter sold separately. Visit [www.equipment.loctite.com](http://www.equipment.loctite.com) for all available accessories.

| LOCTITE® PRODUCT  |   | ITEM NUMBER                                    | PRESSURE REGULATION | USED TO DISPENSE  | PACKAGE TYPE & SIZES  | VISCOSITY RANGE                   | LOW LEVEL SENSING | CONSUMABLES – DISPENSE ACCESSORIES |                                  |
|---|---|--|---------------------|---|---|-----------------------------------|-------------------|------------------------------------|----------------------------------|
| DISPENSE SYSTEMS  | <b>PNEUMATIC CARTRIDGE DISPENSING</b>   |  |                     |   |   |                                   |                   |                                    |                                  |
|   |  | 300 ML PNEUMATIC CARTRIDGE DISPENSING RETAINER | 98319A              | 0 to 60 psi   | Gel Cyanoacrylates, Anaerobic Gasketing, Light Cure/Acrylics, Silicones | 300 ml cartridges                 | Low to Medium     | No                                 | Cartridge Accessories – Page 177 |
|   |  | HD10 300 ML PNEUMATIC CARTRIDGE DISPENSER      | 1714379             | 0 to 60 psi   | Gel Cyanoacrylates, Anaerobic Gasketing, Light Cure Acrylics, Silicones | 300 ml cartridges<br>250 ml tubes | Medium to High    | No                                 |                                  |
|  | 300 ML CARTRIDGE PUSHER   | 98022  | 0 to 50 psi         | Gel Cyanoacrylates, Anaerobic Gasketing, Light Cure/Acrylics, Low Viscosity Silicones | 300 ml cartridges<br>250 ml tubes                                       | Medium                            | Yes               |                                    |                                  |

| LOCTITE® PRODUCT         |   | ITEM NUMBER                         | PRESSURE REGULATION | USED TO DISPENSE | PACKAGE TYPES & SIZES   | VISCOSITY RANGE  | LOW LEVEL SENSING | CONSUMABLES – DISPENSE ACCESSORIES |   |
|--------------------------|---|-------------------------------------|---------------------|------------------|---|--|-------------------|------------------------------------|---|
| CONTROLLERS & RESERVOIRS | <b>INTEGRATED RESERVOIR CONTROLLERS</b>   |                                     |                     |                  |   |  |                   |                                    |   |
|                          |  | INTEGRATED SEMI-AUTOMATIC DISPENSER | 1390322             | 0 to 15 psi      | Gel Adhesives, Instant Adhesives, Light Cure/Acrylics, Retaining Compounds, Threadlockers | 250 ml bottle<br>1 lb. bottle<br>1 liter bottle<br>2 kg bottle<br>200 g squeeze tube | Low to Medium     | No                                 | Dispense Tips and Accessories – Pages 176-177 |
|                          |   |                                     | 1390321             | 0 to 100 psi     |   |  |                   |                                    |   |
|                          | <b>RESERVOIRS</b>   |                                     |                     |                  |   |  |                   |                                    |   |
|                          |  | BOND-A-MATIC® 3000 RESERVOIR        | 982720              | 0 to 15 psi      | Gel Adhesives, Instant Adhesives, Light Cure/Acrylics, Retaining Compounds, Threadlockers | 250 ml bottle<br>1 lb. bottle<br>1 liter bottle<br>2 kg bottle<br>200 g squeeze tube | Low to Medium     | Yes                                | Dispense Tips and Accessories – Pages 176-177 |
|                          |   |                                     | 982726              | 0 to 100 psi     |   |  |                   | No                                 |   |
|                          |   |                                     | 982723              |                  |   |  |                   | Yes                                |   |
|                          |   |                                     | 982727              |                  |   |  |                   | No                                 |   |
|                          |  | SHOT MISER™ RESERVOIR               | 98090               | 0 to 100 psi     | Instant Adhesives, Light Cure/Acrylics, Retaining Compounds, Threadlockers                | 250 ml bottle<br>1 lb. bottle<br>200 g squeeze tube                                  | Low to High       | No                                 |   |
|                          |  | EQ VA30 JET CONTROLLER              | 1850211             | 0 to 100 psi     | Light Cure Adhesives  | 10, 30, 55 ml Syringes   | Low to High       | No                                 | Use with LOCTITE® VA 30 Jet Valve – 1850212   |

ITEMS IN RED = Source's PICK or NEW




Your Source for Motion Control Robot Dispense Systems. See page 171.




# Light Cure Adhesive Equipment





## YOUR EQUIPMENT *Source*




For more details, see the *LOCTITE® Equipment Sourcebook, LT-3669*, or visit us on the web for additional information, diagrams, products and our full line of equipment at [www.equipment.loctite.com](http://www.equipment.loctite.com).



| LOCTITE® PRODUCT            |  | ITEM NUMBER | CONTROLLED OUTPUTS | NUMBER OF DISPENSE VALVES | ADVANCING SLIDE | ROTOSPRAY™  | ACCESSORIES  |
|-----------------------------|--|-------------|--------------------|---------------------------|-----------------|---|--|
| MULTIFUNCTION CONTROLLERS   |  DUAL CHANNEL AUTOMATIC CONTROLLER  | 97152       | 2                  | 2 (Independent)           | 97119 – 100 mm  | 97115   | Visit <a href="http://www.equipment.loctite.com">www.equipment.loctite.com</a> for more information on additional accessories. |
|                             |  DIGITAL MULTIFUNCTIONAL CONTROLLER | 1022006     | 3                  | 3 (Independent)           | N/A             | In conjunction with Positive Displacement Pump – 983330 |  |
| SINGLE FUNCTION CONTROLLERS |  DIGITAL DISPENSE CONTROLLER        | 97101       | 1                  | 1                         | N/A             | N/A   |  |

| LOCTITE® PRODUCT                   |  | ITEM NUMBER | LAMP TYPE             |
|------------------------------------|--|-------------|-----------------------|
| ENCLOSED CHAMBER AND FLOOD SYSTEMS |  |             |                       |
| LIGHT CURE UV BULB SYSTEMS         |  ZETA® 7401 UV CHAMBER           | 98039       | 400-watt Metal Halide |
|                                    |  ZETA® 7411-S UV FLOOD SYSTEM   | 98413       | 400-watt Metal Halide |
|                                    |  FOCUSED UV FLOOD CURING SYSTEM | 1113131     | 400-watt Metal Halide |

| LOCTITE® PRODUCT   |  | ITEM NUMBER                        | LAMP TYPE                                  |
|--------------------|--|------------------------------------|--|
| CURE CONVEYORS     |  |                                    |  |
| LIGHT CURE SYSTEMS |  ZETA® 7415 UV BENCHTOP CONVEYOR               | 98003                              | 300 W/in Electrodeless (sold separately)   |
|                    |  UV CURING CONVEYOR                           | 1241543                            | 1800-watt Medium Pressure Mercury Arc Lamp |
| LIGHT SOURCES      |  |                                    |  |
| LIGHT CURE SYSTEMS |  ELECTRODELESS LAMP ASSEMBLY AND POWER SUPPLY | 98004 (208 VAC)<br>98005 (240 VAC) | 300 W/in Electrodeless                     |
|                    |  HIGH INTENSITY ULTRAVIOLET SOURCES           | 980160                             | 1500-watt Medium Pressure Mercury Arc Lamp |

| LOCTITE® PRODUCT |   | ITEM NUMBER | WAVELENGTH       | OPTIONS/ACCESSORIES                |
|------------------|---|-------------|------------------|------------------------------------|
| LIGHT METERS     |   |             |                  |                                    |
| LIGHT METERS     |  RADIOMETER DOSIMETER FOR VISIBLE LED AND UV LIGHT | 1265282     | 350 nm to 500 nm | Calibration services are available |
|                  |  RADIOMETER DOSIMETER FOR UV LED AND UV A/B LIGHT  | 1390323     | 320 nm to 400 nm | Calibration services are available |
|                  |  7020 UV SPOT RADIOMETER                           | 1406024     | 280 nm to 400 nm | Calibration services are available |

**EQUIPMENT** – Henkel is a full-service supplier of LOCTITE® branded equipment and offers a wide variety of equipment services to its customers. **For more LOCTITE® branded equipment, go to page 165.**

**Can't find what you're looking for?**  
Visit [www.equipment.loctite.com](http://www.equipment.loctite.com) or call 1-800-LOCTITE (562-8483).

**STRAIGHT FROM** *The Source*

**WEAR EYE PROTECTION**

For proper eye protection, use LOCTITE® brand ultraviolet safety glasses.



Item No. 98452

**ADDITIONAL RESOURCES**



| LOCTITE® PRODUCT  |   | ITEM NUMBER                          | WAVELENGTH                  | OPTIONS/ACCESSORIES  |   |
|-------------------|---|--------------------------------------|-----------------------------|--|---|
| SPOT/WAND SYSTEMS | <b>LED CURING DEVICES</b>               |                                      |                             |  |   |
|                   |   | <b>CUREJET™ 375 LED</b>              | 1369539                     | LED – 375 nm   | Used with 1364033 or 1180632  |
|                   |   | <b>CUREJET™ 405 LED</b>              | 1369538                     | LED - 405 nm   | Used with 1364033 or 1180632  |
|                   |   | <b>CUREJET™ INDIGO® LED</b>          | 1369537                     | LED - Proprietary Indigo Wavelength  | Used with 1364033 or 1180632  |
|                   |   | <b>LED CONTROLLER</b>                | 1364033                     | N/A  | Used with all CUREJET™ LEDs   |
|                   |   | <b>CUREJET™ QUAD CONTROLLER</b>      | 1180632                     | N/A  | Used with all CUREJET™ LEDs   |
|                   |   | <b>7700 LED LIGHT SOURCE</b>         | 1427231                     | LED - 405 nm   | OPTIONAL:<br>Foot Switch – 98440;<br>Holder – 98522;<br>Radiometer Dosimeter for Visible LED and UV Light – 1265282;<br>Dosimeter Adapter – 1403405         |
|                   |   | <b>7700-HD LED LIGHT SOURCE</b>      | 1427232                     |  |   |
|                   |   | <b>7703 LED LIGHT SOURCE</b>         | 806038                      | LED - Proprietary Indigo Wavelength  | ONE OF THE FOLLOWING IS REQUIRED:<br>Timer – 960356;<br>PLC Cable – 8900550;<br>Foot Switch – 97201;<br>Pistol Grip Timer – 1003327                         |
|                   |   | <b>7703-HD LED LIGHT SOURCE</b>      | 883979                      |  |   |
|                   |   | <b>EQ CL10 SINGLE LED CONTROLLER</b> | 1514636                     | N/A  | ONE OF THE FOLLOWING IS REQUIRED – sold separately:<br>6 mm Spot Dia. 365 nm. 2.7 meter cable – 1538499<br>6 mm Spot Dia. 405 nm. 2.7 meter cable – 1746633 |
|                   |   | <b>EQ CL10 QUAD LED CONTROLLER</b>   | 1514634                     | N/A  |   |
|                   |   | <b>EQ CL15 UV WAND SYSTEM</b>        | 1661548                     | N/A  | REQUIRES Light Guide 983677, 983684 or 951681 – sold separately   |
|                   | FLOOD/LINE SYSTEMS                      |                                      | <b>LED FLOOD CONTROLLER</b> | 1359255  | N/A   |
|                   |   | <b>LED FLOOD CURE, 375</b>           | 1167582                     | LED – 375 nm   | Used with 1359255 in conjunction with cable 13333333  |
|                   |   | <b>LED FLOOD CURE, INDIGO®</b>       | 1167589                     | LED – Indigo Wavelength  | Used with 1359255 in conjunction with cable 13333333  |
|                   |   | <b>LED FLOOD CURE, 405</b>           | 1167593                     | LED – 405 nm   | Used with 1359255 in conjunction with cable 13333333  |
|                   | <b>LED SINGLE LINE ARRAY CONTROLLER</b> | 1447728                              | N/A                         | Requires Line Array cable (1483245) and one of the following – sold separately<br>LED Line Array 405 nm Light Source – 1449336<br>LED Line Array 365 nm Light Source – 1449337 |   |

ITEMS IN RED = Source's PICK or NEW

Your Source for Motion Control Robot Dispense Systems. See page 171.

# Solvent-Based & Specialty Adhesives



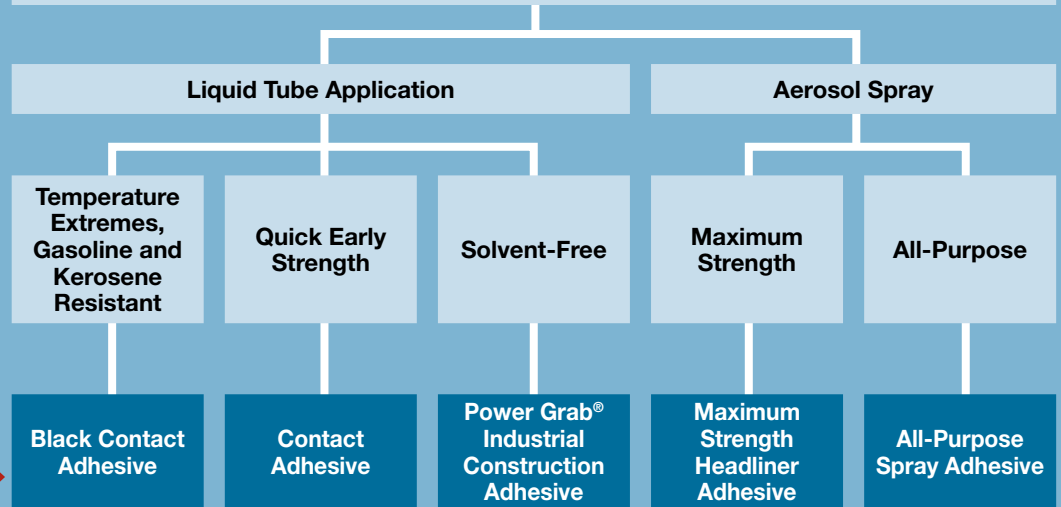
## Your Application

To meet tough on-the-job requirements, LOCTITE® solvent-based aerosol and liquid adhesives provide a combination of:

- Cure speed
- Impact resistance
- Strength
- Temperature range
- Solvent and moisture resistance

## Solution

### WHAT TYPE OF APPLICATION PROCESS WOULD YOU PREFER?



|                            | Black              | Yellow             | Clear              | Clear              | Clear              |
|----------------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| <b>Color</b>               | Black              | Yellow             | Clear              | Clear              | Clear              |
| <b>Temperature Range</b>   | Up to 180°F (82°C) | Up to 180°F (82°C) | Up to 120°F (49°C) | Up to 170°F (77°C) | Up to 120°F (49°C) |
| <b>Fixture Time (min.)</b> | 2 to 3             | 2 to 3             | 20                 | 15 to 20           | 15 to 20           |
| <b>Agency Approvals</b>    | CFIA Listed        | CFIA Listed        | N/A                | N/A                | N/A                |

## Product Description

### LOCTITE® Black Contact Adhesive

A professional, solvent-based adhesive with neoprene that blends in with black-colored fabrics, rubbers, weather stripping and other porous materials. Withstands temperature extremes and is resistant to gasoline, kerosene and other solvents. Fast drying and waterproof. Allows repositioning of the parts after initial contact.

**P/N Package Size**  
30540 5 fl. oz. tube - Black

### LOCTITE® Contact Adhesive

A fast drying, solvent-based adhesive with neoprene that bonds rubber, insulation, weather stripping and other porous materials. Sets to a tack-free surface in 3-4 minutes, and the early strength is enough to hold most parts together. Allows repositioning of the parts after initial contact.

**P/N Package Size**  
30537 5 fl. oz. tube - Yellow

### LOCTITE® Power Grab® Industrial Construction Adhesive

Single-component, off-white, heavy duty, high strength, construction grade adhesive for interior and exterior repairs or building projects.

**P/N Package Size**  
1804373 300 ml cartridge

### LOCTITE® Maximum Strength Headliner Adhesive

A high strength, aerosol product designed for bonding foam, carpet, fabrics, plastics, rubber, etc. LOCTITE® Maximum Strength Headliner Adhesive is resistant to extreme seasonal temperatures, is water resistant and sprays on clear.

**P/N Package Size**  
37312 16.75 oz. net wt. aerosol

### LOCTITE® All-Purpose Spray Adhesive

Bonds lightweight, porous and nonporous surfaces. Allows for repositionable and permanent bonds. Fast drying; won't shrink or bleed. Resists water and humidity. Contains no ozone-depleting compounds.

**P/N Package Size**  
30544 10.5 oz. net wt. aerosol



## LOCTITE® Solvent-Based Adhesive Properties Chart

|                 | LOCTITE® PRODUCT                    | ITEM NUMBER | PACKAGE TYPE/SIZE         | COLOR/APPEARANCE                   | TEMPERATURE RANGE  | FIXTURE/BOND TIME  | FULL CURE                       | COMMON SURFACES ADHESIVE WILL BOND               | AGENCY APPROVALS |
|-----------------|-------------------------------------|-------------|---------------------------|------------------------------------|--------------------|--|---------------------------------|--|------------------|
| SOLVENT-BASED   | BLACK CONTACT ADHESIVE              | 30540       | 5 fl. oz. tube            | Black Gel                          | Up to 180°F (82°C) | Let breathe 2-3 minutes; sets up in 5-15 minutes.  | 24 hours at ambient temperature | Weather stripping, vinyl, rubber, wood and metal | CFIA Listed      |
|                 | CONTACT ADHESIVE                    | 30537       | 5 fl. oz. tube            | Yellow Gel                         | Up to 180°F (82°C) |  |                                 |  | CFIA Listed      |
| SPRAY ADHESIVES | MAXIMUM STRENGTH HEADLINER ADHESIVE | 37312       | 16.75 oz. net wt. aerosol | Clear Drying, Semitranslucent Foam | Up to 170°F (77°C) | Let dry 15-20 minutes before assembly. Spray both sides to be bonded for maximum strength. | 24 hours at ambient temperature | Foam, carpet, fabrics, plastics and rubber       | N/A              |
|                 | ALL-PURPOSE SPRAY ADHESIVE          | 30544       | 10.5 oz. net wt. aerosol  | Clear Drying, Semitranslucent Foam | Up to 120°F (49°C) |  |                                 |  | N/A              |

## LOCTITE® Specialty Adhesive Properties Chart

|                    | LOCTITE® PRODUCT       | ITEM NUMBER | PACKAGE TYPE/SIZE | FEATURES                              | COLOR | VISCOSITY | SHEAR STRENGTH (psi) | WORKING TIME (min.) | FIXTURE TIME (min.) | FULL CURE (hrs.) | MAXIMUM TEMPERATURE |
|--------------------|------------------------|-------------|-------------------|---------------------------------------|-------|-----------|----------------------|---------------------|---------------------|------------------|---------------------|
| SPECIALTY PRODUCTS | POWER GRAB® INDUSTRIAL | 1804373     | 300 ml cartridge  | General-purpose construction adhesive | Clear | Paste     | 800*                 | 15                  | 20                  | 24               | 120°F (49°C)        |

\* Pine (wet).

Visit the web for an all-access pass to locate your nearest LOCTITE® distributor, obtain MSDSs and Technical Data Sheets, literature, and product application assistance. Or call us:  
 In U.S., please call 1-800-LOCTITE (562-8483);  
 In Canada, please call 1-800-263-5043.

[www.henkelna.com/loctite](http://www.henkelna.com/loctite)

**STRAIGHT FROM** *The Source*

### THE BOND WILL BE INSTANT

For faster fixturing of these solvent-based contact adhesives, apply the adhesive to one side of both parts, and allow to breathe for one to two minutes. When the surface starts to appear dry, apply a small additional amount of adhesive to one side and assemble the sides together.

**HELPFUL HINTS**

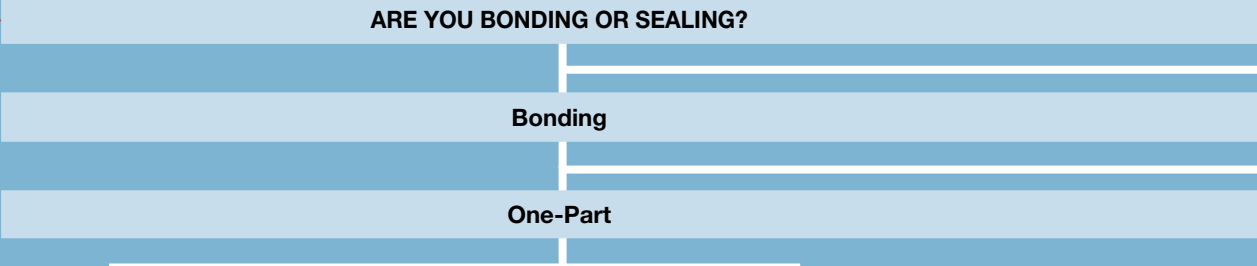




# Elastomeric Adhesives for Bonding & Sealing



## Your Application



## Solution

|                               | TEROSON® MS 930™              | LOCTITE® 5570™                | LOCTITE® 5572™                | TEROSON 9380™                  | LOCTITE® 5512™                |
|-------------------------------|-------------------------------|-------------------------------|-------------------------------|--------------------------------|-------------------------------|
| <b>Color</b>                  | White, Grey, Black            | White                         | Black                         | White                          | Black                         |
| <b>Temperature Range</b>      | -58°F (-50°C) to 176°F (80°C) | -40°F (-40°C) to 200°F (93°C) | -40°F (-40°C) to 200°F (93°C) | -40°F (-40°C) to 212°F (100°C) | -40°F (-40°C) to 200°F (93°C) |
| <b>Cure Method</b>            | Moisture                      | Moisture                      | Moisture                      | Moisture                       | Moisture                      |
| <b>Tensile Strength (psi)</b> | 1.0                           | 250 to 380                    | 475                           | 580 (b)                        | 450                           |

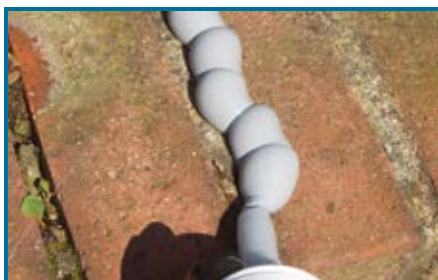
## Product Description

|   |  |  |   |  |
|---|--|--|---|--|
| <p><b>TEROSON® MS 930™</b><br/>Designed for elastic seam and joint sealing, and bonding and coating of most metals and plastics. It is primerless, offers good UV and weather resistance, is paintable after applied and is solvent and isocyanate-free.</p> <p><b>P/N      Package Size*</b></p> <p>261896 310 ml cartridge, black<br/>264872 310 ml cartridge, white<br/>100139 310 ml cartridge, grey<br/>877629 20 kg pail, black<br/>237971 250 kg drum, black<br/>1469604 250 kg drum, white<br/>1806598 570 ml sausage, black<br/>1806594 570 ml sausage, white<br/>1806587 570 ml sausage, grey</p> | <p><b>LOCTITE® 5570™ Adhesive</b><br/>A strong bonding adhesive based on Flextec® Technology with elastic properties for bonding dissimilar substrates. High initial tack and fast setting make it ideal for high productivity applications.</p> <p><b>P/N      Package Size*</b></p> <p>1565679 300 ml cartridge, white</p> | <p><b>LOCTITE® 5572™ Adhesive</b><br/>This product exhibits the highest shear strength on a majority of substrates versus the other products in this line.</p> <p><b>P/N      Package Size</b></p> <p>877568 300 ml cartridge, black<br/>877630 5 gallon pail, black</p> | <p><b>TEROSON 9380™</b><br/>Designed for elastic bonding and sealing. High strength, elastomeric adhesive with fast skin time and excellent UV resistance.</p> <p><b>P/N      Package Size</b></p> <p>1845176 290 ml cartridge, white<br/>1340740 25 kg pail, white</p> | <p><b>LOCTITE® 5512™ Sealant</b><br/>A heavy bodied modified silane, non-isocyanate sealant that exhibits high elongation and tensile strength. With primerless adhesion to most substrates, this product has universal application.</p> <p><b>P/N      Package Size</b></p> <p>877569 300 ml cartridge, black<br/>877641 50 lb. pail, black</p> |
|---|--|--|---|--|

- Exhibit high resiliency while maintaining high tensile strength and good adhesion to many substrates – all without the use of a primer
- Ideal for bonding and sealing a multitude of substrates
- Silicones exhibit the highest temperature resistance compared to other products in this section
- Use Elastomeric Adhesives when joint flexibility – coefficient of thermal expansion (CTE) – is required

| ADDITIONAL PRODUCTS AVAILABLE |   |
|-------------------------------|---|
| Terostat® MS 9371™ B          | B-component (hardener) for 2-component curing. Tersostat MS 9371™ B is an accelerator paste for Terostat MS adhesives and sealants. |
| Terostat® 450™                | Alcohol solution designed for cleaning and to improve adhesion (thin fluid, colorless).   |

\* Pail and drums available made-to-order.  
\*\* Uncarded tubes, sold as full cases of 100 pieces.



| Sealing                       |                               |                                |                               |                                |                                |                                 |
|-------------------------------|-------------------------------|--------------------------------|-------------------------------|--------------------------------|--------------------------------|---------------------------------|
| Two-Part                      |                               |                                | One-Part                      |                                |                                |                                 |
|                               | Unlimited Depth of Cure       | Noncorrosive                   | Primerless Adhesion           | RTV                            | Mildew Resistant               | Super Fast                      |
| <b>TEROSON® MS 939™</b>       | <b>LOCTITE® 5590™</b>         | <b>LOCTITE® 5600™</b>          | <b>LOCTITE® 5510™</b>         | <b>LOCTITE® Superflex®</b>     | <b>LOCTITE® SpeedSeal™</b>     | <b>TEROSON® 9320™ SuperFast</b> |
| White, Grey, Black            | White, Black                  | Black, Grey, Almond            | White, Grey, Black, Clear     | White, Black, Clear            | Clear, White                   | Grey                            |
| -40°F (-40°C) to 200°F (93°C) | -40°F (-40°C) to 200°F (93°C) | -40°F (-40°C) to 450°F (232°C) | -40°F (-40°C) to 200°F (93°C) | -65°F (-54°C) to 450°F (232°C) | -40°F (-40°C) to 250°F (121°C) | -22°F (-30°C) to 194°F (90°C)   |
| Moisture                      | 2-Component Mix               | 2-Component Mix                | Moisture                      | Moisture                       | Moisture                       | Moisture                        |
| 450                           | 435                           | 250                            | 250                           | 115                            | 115                            | 260 (b)                         |

**TEROSON® MS 939™**

Designed for elastic seam and joint sealing, and bonding and coating of most metals and plastics. It is primerless, offers good UV and weather resistance, is paintable after applied and is solvent and isocyanate-free.

**P/N Package Size**

|         |                         |
|---------|-------------------------|
| 1874234 | 290 ml cartridge, black |
| 1874221 | 290 ml cartridge, white |
| 1872620 | 290 ml cartridge, grey  |
| 388927  | 25 kg pail, black       |
| 504842  | 250 kg drum, black      |
| 1802819 | 570 ml sausage, black   |
| 212653  | 570 ml sausage, white   |
| 1806588 | 570 ml sausage, grey    |

**LOCTITE® 5590™ Adhesive**

A two-component adhesive for elastic bonding where the curing rate of one-component adhesives is too slow. The mixed adhesive is non-sag, has high tack and fast set time. The cured product provides durable bonding to a wide variety of substrates.

**P/N Package Size**

|         |                              |
|---------|------------------------------|
| 1091896 | 400 ml dual cartridge, black |
| 1684604 | 400 ml dual cartridge, white |
| 1306969 | 29 kg pail, part A, black    |
| 1306968 | 29 kg pail, part B, black    |

**LOCTITE® 5600™ Silicone Sealant****Two-Part, Noncorrosive**

Fast, 5-minute fixture, high adhesion, flexible adhesive/sealant. Available in Black, Grey and Almond.

**P/N Package Size**

|        |                              |
|--------|------------------------------|
| 41327  | 440 lb. drum, A, black       |
| 41732  | 575 lb. drum, B, white       |
| 922122 | 4.5 gallon pail, A, black    |
| 922089 | 3.5 gallon pail, B, white    |
| 922546 | 400 ml dual cartridge, black |
| 922129 | 440 lb. drum, A, grey        |
| 41732  | 575 lb. drum, B, white       |
| 922128 | 4.5 gallon pail, A, grey     |
| 922089 | 3.5 gallon pail, B, white    |
| 922544 | 400 ml dual cartridge, grey  |
| 924107 | 4.5 gallon pail, A, almond   |
| 922089 | 3.5 gallon pail, B, white    |

**LOCTITE® 5510™ Adhesive/Sealant**

A multipurpose product based on Flextec® Technology suitable for many adhesive and sealant applications. It offers a fast skin time and cures to a tack-free surface. Its outstanding adhesion and toughness make it ideal for bonding and sealing between dissimilar substrates that are subjected to joint movement or impact.

**P/N Package Size\***

|         |                         |
|---------|-------------------------|
| 1562042 | 300 ml cartridge, white |
| 1562040 | 300 ml cartridge, clear |
| 1560557 | 300 ml cartridge, black |
| 1562044 | 300 ml cartridge, grey  |
| 1567698 | 40 lb. pail, clear      |
| 1567697 | 50 lb. pail, white      |
| 1567506 | 50 lb. pail, grey       |
| 1567663 | 50 lb. pail, black      |
| 1578971 | 190 kg drum, clear      |
| 1579070 | 250 kg drum, grey       |
| 1579002 | 250 kg drum, black      |
| 1578972 | 250 kg drum, white      |

**LOCTITE® Superflex® RTV Silicone Adhesive Sealant**

This silicone product has excellent adhesion to most substrates. Key features are resistances to extreme thermal and UV cycling without hardening, shrinking or cracking.

**P/N Package Size**

|         |                         |
|---------|-------------------------|
| 193996  | 80 ml tube, black       |
| 193997  | 300 ml cartridge, black |
| 743519  | 190 ml can, black       |
| 1266142 | 0.5 oz. tube**, clear   |
| 160809  | 80 ml tube, clear       |
| 193999  | 300 ml cartridge, clear |
| 743915  | 190 ml can, clear       |
| 135506  | 80 ml tube, white       |
| 193998  | 300 ml cartridge, white |
| 743541  | 190 ml can, white       |

**LOCTITE® SpeedSeal™ Silicone Sealant****Mold- and Mildew-Resistant, Fast Waterproof Seal**

Creates a tough, watertight, mildew-resistant seal on a wide range of substrates. Withstands water contact just two hours after application.

**P/N Package Size**

|         |                         |
|---------|-------------------------|
| 1311327 | 300 ml cartridge, clear |
| 1312042 | 300 ml cartridge, white |

**TEROSON® 9320™ SuperFast**

Sealing system with super fast curing and excellent overpaintability. No cracks, no rust penetration. Unique application system (patent applied).

**P/N Package Size**

|         |                        |
|---------|------------------------|
| 1899447 | 300 ml cartridge, grey |
|---------|------------------------|



# LOCTITE® Elastomeric Adhesive & Sealant Properties Charts

| LOCTITE® PRODUCT                     | ITEM NUMBER                                       | PACKAGE TYPE/SIZE                                 | COLOR/MIX RATIO                     | TYPICAL USE  | GAP FILL                    | EXTRUSION RATE (g/min.) | TEMP. RANGE                     | CURE METHOD                     | CURE SPEED**        | SPECIFIC GRAVITY    | SHORE HARDNESS | % ELONGATION | TENSILE STRENGTH <sup>1</sup> (psi) | STATIC MIXER | AGENCY APPROVALS |                              |                                    |
|--------------------------------------|---|---|-------------------------------------|--|-----------------------------|-------------------------|---------------------------------|---------------------------------|---------------------|---------------------|----------------|--------------|-------------------------------------|--------------|------------------|------------------------------|------------------------------------|
| <b>NONCORROSIVE, 2-PART SILICONE</b> | <b>5600™</b>                                      | Part A - 41327<br>Part B - 41732                  | 440 lb. drum<br>575 lb. drum        | Black/ 2:1 A:B by volume   | High adhesion, fast fixture | Unlimited               | N/A                             | -40°F to 450°F (-40°C to 232°C) | Two-part            | Tack-Free – 10 min. | 1.40           | A 40         | 200                                 | 250          | 874905           | UL Listed for U.S.           |                                    |
|                                      |   | Part A - 922122<br>Part B - 922089                | 4.5 gallon pail<br>3.5 gallon pail  |  |                             |                         |                                 |                                 |                     |                     |                |              |                                     |              |                  |                              |                                    |
|                                      |   | 922546  | 400 ml dual cartridge               |  |                             |                         |                                 |                                 |                     |                     |                |              |                                     |              |                  |                              |                                    |
|                                      |   | Part A - 922129<br>Part B - 41732                 | 440 lb. drum<br>575 lb. drum        | Grey/ 2:1 A:B by volume  | High adhesion, fast fixture | Unlimited               | N/A                             | -40°F to 450°F (-40°C to 232°C) | Two-part            | Tack-Free – 10 min. | 1.40           | A 40         | 200                                 | 250          | 874905           | UL Listed for U.S.           |                                    |
|                                      |   |   | Part A - 922128<br>Part B - 922089  |  |                             |                         |                                 |                                 |                     |                     |                |              |                                     |              |                  |                              | 4.5 gallon pail<br>3.5 gallon pail |
|                                      |   |   | 922544                              |  |                             |                         |                                 |                                 |                     |                     |                |              |                                     |              |                  |                              | 400 ml dual cartridge              |
|                                      |   | Part A - 924107<br>Part B - 922089                | 4.5 gallon pail<br>3.5 gallon pail  | Almond/ 2:1 A:B by volume  | High adhesion, fast fixture | Unlimited               | N/A                             | -40°F to 450°F (-40°C to 232°C) | Two-part            | Tack-Free – 10 min. | 1.40           | A 40         | 200                                 | 250          | 874905           | UL Listed for U.S.           |                                    |
|                                      |   |   | Part A - 41327<br>Part B - 1112888  |  |                             |                         |                                 |                                 |                     |                     |                |              |                                     |              |                  |                              | 440 lb. drum<br>575 lb. drum       |
|                                      |   |   | 1138258                             |  |                             |                         |                                 |                                 |                     |                     |                |              |                                     |              |                  |                              | 400 ml dual cartridge              |
|                                      | <b>5604™</b>                                      | Part A - 922129<br>Part B - 1112888               | 440 lb. drum<br>575 lb. drum        | Grey/ 4:1 A:B by volume  | High adhesion, fast fixture | Unlimited               | N/A                             | -40°F to 450°F (-40°C to 232°C) | Two-part            | Tack-Free – 10 min. | 1.40           | A 40         | 200                                 | 250          | 874905           | N/A                          |                                    |
|                                      |   |   | Part A - 924107<br>Part B - 1112888 |  |                             |                         |                                 |                                 |                     |                     |                |              |                                     |              |                  |                              | 4.5 gal. pail<br>575 lb. drum      |
|                                      |   |   | 1250155                             |  |                             |                         |                                 |                                 |                     |                     |                |              |                                     |              |                  |                              | 400 ml dual cartridge              |
| <b>5605™</b>                         | Part A - 1253201 <sup>1</sup><br>Part B - 1251677 | 4.5 gallon pail<br>3.5 gallon pail                | Grey/ 4:1 A:B by volume             | General-purpose, high adhesion, fast fixture, noncorrosive, easy gunning | Unlimited                   | N/A                     | -40°F to 450°F (-40°C to 232°C) | Two-part                        | Tack-Free – 10 min. | 1.375               | A 40           | 240          | 270                                 | 874905       | N/A              |                              |                                    |
|                                      |   | Part A - 1253202 <sup>2</sup><br>Part B - 1250758 |                                     |  |                             |                         |                                 |                                 |                     |                     |                |              |                                     |              |                  | 440 lb. drum<br>575 lb. drum |                                    |
|                                      |   | 1250154   |                                     |  |                             |                         |                                 |                                 |                     |                     |                |              |                                     |              |                  | 400 ml dual cartridge        |                                    |
| <b>5606™</b>                         | Part A - 1253201 <sup>1</sup><br>Part B - 1250755 | 4.5 gallon pail<br>3.5 gallon pail                | Grey/ 4:1 A:B by volume             | General-purpose, high adhesion, fast fixture, noncorrosive, easy gunning | Unlimited                   | N/A                     | -40°F to 450°F (-40°C to 232°C) | Two-part                        | Tack-Free – 15 min. | 1.375               | A 38           | 170          | 260                                 | 874905       | UL 94 HB         |                              |                                    |
|                                      |   | Part A - 1253202 <sup>1</sup><br>Part B - 1250156 |                                     |  |                             |                         |                                 |                                 |                     |                     |                |              |                                     |              |                  | 440 lb. drum<br>575 lb. drum |                                    |
|                                      |   | 1252929   |                                     |  |                             |                         |                                 |                                 |                     |                     |                |              |                                     |              |                  | 400 ml dual cartridge        |                                    |
| <b>5607™</b>                         | Part A - 1253201 <sup>1</sup><br>Part B - 1250756 | 4.5 gallon pail<br>3.5 gallon pail                | Grey/ 2:1 A:B by volume             | General-purpose, high adhesion, fast fixture, noncorrosive, easy gunning | Unlimited                   | N/A                     | -40°F to 450°F (-40°C to 232°C) | Two-part                        | Tack-Free – 45 min. | 1.425               | A 43           | 150          | 225                                 | 874905       | N/A              |                              |                                    |
|                                      |   | Part A - 1253202 <sup>2</sup><br>Part B - 1250757 |                                     |  |                             |                         |                                 |                                 |                     |                     |                |              |                                     |              |                  | 440 lb. drum<br>575 lb. drum |                                    |

| LOCTITE® PRODUCT   | ITEM NUMBER                        | PACKAGE TYPE/SIZE  | COLOR  | CONSISTENCY                                    | OIL RESISTANCE | TEMPERATURE RANGE (INTERMITTENT)  | SEALING TIME                      | AGENCY APPROVALS               |             |
|--|------------------------------------|--------------------|--|--|----------------|-----------------------------------|-----------------------------------|--------------------------------|-------------|
| <b>SEALING / DRESSINGS FOR EXISTING GASKETS</b><br><b>NONCORROSIVE</b> | <b>SPEEDSEAL™ SILICONE SEALANT</b> | 1311327<br>1312042 | 300 ml cartridge<br>300 ml cartridge           | Clear<br>White                                 | Paste          | N/A                               | Watertight – 2 hrs.               | ISO 846                        |             |
|  |                                    | <b>5510™</b>       | 1562042<br>1567697*<br>1578972*                | 300 ml cartridge<br>50 lb. pail<br>250 kg drum | White          | Paste                             | Not recommended for oils of fuels | -40°F to 200°F (-40°C to 93°C) | 1 to 7 days |
|  | 1562040<br>1567698*<br>1578971*    |                    | 300 ml cartridge<br>40 lb. pail<br>190 kg drum | Clear  |                |                                   |                                   |                                |             |
|  | 1560557<br>1567663*<br>1579002*    |                    | 300 ml cartridge<br>50 lb. pail<br>250 kg drum | Black  |                |                                   |                                   |                                |             |
|  | 1562044<br>1567506*<br>1579070*    |                    | 300 ml cartridge<br>50 lb. pail<br>250 kg drum | Grey   |                |                                   |                                   |                                |             |
|  | <b>5512™</b>                       | 877569<br>877641   | 300 ml cartridge<br>50 lb. pail                | Black  | Paste          | Not recommended for oils of fuels | -40°F (-40°C) to 200°F (93°C)     | 1 to 7 days                    | N/A         |

| LOCTITE® PRODUCT                | ITEM NUMBER                                     | PACKAGE TYPE/SIZE                     | COLOR  | CONSISTENCY | OIL RESISTANCE | TEMPERATURE RANGE (INTERMITTENT) | SEALING TIME                                   | AGENCY APPROVALS                      |
|---------------------------------|---|---------------------------------------|--|-------------|----------------|----------------------------------|--|---------------------------------------|
| <b>SUPERFLEX® RTV SILICONES</b> | <b>SUPERFLEX® RTV SILICONE ADHESIVE SEALANT</b> | 193996<br>193997<br>743519            | 80 ml tube<br>300 ml cartridge<br>190 ml can                   | Black       | Paste          | N/A                              | Tack-Free – 30 min.<br>Full Strength – 24 hrs. | CFIA Listed                           |
|                                 |   | 1266142<br>160809<br>193999<br>743915 | 0.5 oz. tube**<br>80 ml tube<br>300 ml cartridge<br>190 ml can | Clear       |                |                                  |  | UL Listed for U.S., NSF/ANSI 51, CFIA |
|                                 |   | 135506<br>193998<br>743541            | 80 ml tube<br>300 ml cartridge<br>190 ml can                   | White       |                |                                  |  | CFIA Listed                           |

ITEMS IN RED = Source's PICK or NEW

\* Made-to-order item. \*\* Varies with substrates. <sup>1</sup> Extrusion rate at 73°F, 3.5 mm diameter, 3 bar, for 15 seconds. <sup>2</sup> Grit-blasted steel.

† 5600™ Series – Part A (1253201) can be used with 5605™, 5606™, 5607™ – Part B (3.5 gallon pail). ‡ 5600™ Series – Part A (1253202) can be used with 5605™, 5606™, 5607™ – Part B (575 lb. drum).

# LOCTITE® Elastomeric Adhesive & Sealant Properties Chart







| LOCTITE® PRODUCT      | ITEM NUMBER                     | PACKAGE TYPE/SIZE  | COLOR  | EXTRUSION RATE <sup>1</sup> (g min.)   | CURE METHOD | SKIN TIME (min.)            | TEMPERATURE RANGE | SHORE HARDNESS                    | TENSILE STRENGTH <sup>2</sup> (psi) | ELONGATION AT BREAK (%) | SHEAR STRENGTH ON STEEL (psi) |     |
|-----------------------|---------------------------------|--|--|--|-------------|-----------------------------|-------------------|-----------------------------------|-------------------------------------|-------------------------|-------------------------------|-----|
| ELASTOMERIC ADHESIVES | <b>5570™</b>                    | 1565679<br>1567505*<br>1578969*  | 300 ml cartridge<br>50 lb. pail<br>250 kg drum   | White  | 150         | Moisture                    | 30                | -40°F (-40°C)<br>to 200°F (93°C)  | A 55                                | 380                     | 230                           | 400 |
|                       | <b>5572™</b>                    | 877568<br>877630   | 300 ml cartridge<br>5 gallon pail  | Black  | 90          | Moisture                    | 12                | -40°F (-40°C)<br>to 200°F (93°C)  | A 55                                | 475                     | 225                           | 425 |
|                       | <b>5590™</b>                    | 1091896<br>1684604   | 400 ml dual cartridge<br>400 ml dual cartridge   | Black<br>White   | N/A         | Two-Component<br>Static Mix | 25                | -40°F (-40°C)<br>to 200°F (93°C)  | A 60                                | 435                     | 130                           | 290 |
|                       | <b>5590™ PART A</b>             | 1306969  | 29 kg pail   | Black  |             |                             |                   |                                   |                                     |                         |                               |     |
|                       | <b>5590™ PART B</b>             | 1306968  | 29 kg pail   | Black  |             |                             |                   |                                   |                                     |                         |                               |     |
|                       | <b>TEROSON® 9320™ SUPERFAST</b> | 1899447  | 300 ml cartridge   | Grey   | NA          | Moisture                    | 10 to 20          | -22°F (-30°C)<br>to 194°F (90°C)  | 30                                  | 260 (b)                 | 300                           | 200 |
|                       | <b>TEROSON® 9380™</b>           | 1845176<br>1340740   | 290 ml cartridge<br>25 kg pail   | White  | NA          | Moisture                    | 5 to 10           | -40°F (-40°C)<br>to 212°F (100°C) | 65                                  | 580 (b)                 | 120% (b)                      | 360 |
|                       | <b>TEROSON® MS 930™†</b>        | 261896<br>264872<br>100139<br>877629<br>237971<br>1469604<br>1806598<br>1806594<br>1806587 | 310 ml cartridge<br>310 ml cartridge<br>310 ml cartridge<br>20 kg pail<br>250 kg drum<br>250 kg drum<br>570 ml sausage<br>570 ml sausage<br>570 ml sausage | Black<br>White<br>Grey<br>Black<br>Black<br>White<br>Black<br>White<br>White<br>Grey | NA          | Moisture                    | 25 to 40          | -58°F (-50°C)<br>to 176°F (80°C)  | 30                                  | 1                       | 250                           | 120 |
|                       | <b>TEROSON® MS 939™†</b>        | 1874234<br>1874221<br>1872620<br>388927<br>504842<br>1802819<br>212653<br>1806588          | 290 ml cartridge<br>290 ml cartridge<br>290 ml cartridge<br>25 kg pail<br>250 kg drum<br>570 ml sausage<br>570 ml sausage<br>570 ml sausage                | Black<br>White<br>Grey<br>Black<br>Black<br>Black<br>White<br>White<br>Grey          | 90          | Moisture                    | 5                 | -40°F (-40°C)<br>to 200°F (93°C)  | A 55                                | 390                     | 500                           | 270 |



ITEMS IN RED = Source's PICK or NEW

\* Made-to-order item. \*\* Uncarded tubes, sold as full cases of 100 pieces.

† Agency approval: UL Classified/Listed for the U.S.

# Elastomeric Equipment

| LOCTITE® PRODUCT   | ITEM NUMBER | PRESSURE REGULATION | USED TO DISPENSE  | PACKAGE TYPE & SIZES  | VISCOSITY RANGE        | LOW LEVEL SENSING | CONSUMABLES – DISPENSE ACCESSORIES                                  |
|--|-------------|---------------------|---|---|------------------------|-------------------|---|
| <b>MANUAL CARTRIDGE DISPENSING</b>   |             |                     |   |   |                        |                   |   |
|  <b>MANUAL CARTRIDGE APPLICATOR 300 ML</b>                | 1093940     | N/A                 | Henkel Construction Adhesives, Caulking products in 10 oz. caulking tubes | 300 ml cartridges   | Medium to High         | N/A               | Cartridge Accessories – Page 177                                    |
| <b>PNEUMATIC CARTRIDGE DISPENSING</b>  |             |                     |   |   |                        |                   |   |
|  <b>HD10 300 ML PNEUMATIC CARTRIDGE DISPENSER</b>         | 1714379     | 0 to 60 psi         | Gel Cyanoacrylates, Anaerobic Gasketing, Light Cure/Acrylics, Silicones   | 300 ml cartridges<br>250 ml tubes                           | Medium to High         | No                | Cartridge Accessories – Page 177                                    |
|  <b>HIGH PRESSURE 300 ML BENCHTOP CARTRIDGE DISPENSER</b> | 1046901     | 0 to 725 psi        | Silicone, Polyurethane, MS Polymer Adhesives                              | 290 ml cartridges<br>300 ml cartridges<br>310 ml cartridges | 10,000 to 1,000,000 cP | Yes               | Use with High Pressure Dispense Valve (sold separately) – see below |
|  <b>SOFT PRESS HAND HELD PNEUMATIC APPLICATOR</b>         | 250052      | 0 to 125 psi        | Adhesive Packaged in Soft Packs   | Soft Pack   | Low to High            | N/A               | 582416 – Soft Press Pneumatic Applicator Nozzle (1)                 |
|  <b>TEROSON® MULTIPRESS TELESCOPIC DISPENSER</b>          | 142241      | 0 to 145 psi        | Sprayable SMP Adhesives   | 300 ml Cartridge  | Low to High            | N/A               | 547882 –Pneumatic Spray Applicator Nozzle Kit (12)                  |
|  <b>TEROSON® POWERLINE II 300 ML DISPENSER</b>            | 960304      | 0 to 100 psi        | MS Polymer Polyurethane   | 300/310 ml Cartridge  | Medium to Very High    | N/A               | Cartridge Accessories – Page 177                                    |

| LOCTITE® PRODUCT  | ITEM NUMBER | TYPE                                  | VISCOSITY RANGE         | DISPENSE PATTERNS | USED TO DISPENSE                  | STROKE ADJUSTMENT | SUCK-BACK | CONSUMABLES – DISPENSE ACCESSORIES            |
|---|-------------|---------------------------------------|-------------------------|-------------------|-----------------------------------|-------------------|-----------|---|
| <b>HIGH VISCOSITY FLUID &amp; PASTE VALVES</b>  |             |                                       |                         |                   |                                   |                   |           |   |
|  <b>VA 25 DISPENSE VALVE – 50 BAR</b>          | 1838885     | High Viscosity Fluid and Paste Valves | 10,000 to 1,000,000 cP  | Drop, Bead        | Silicones, MS Polymers, Urethanes | Yes               | Yes       | Dispense Tips and Accessories – Pages 176-177 |
|  <b>HIGH PRESSURE DISPENSE VALVE – 150 BAR</b> | 1153502     | High Viscosity Fluid and Paste Valves | 500,000 to 2,000,000 cP | Drop, Bead        | Silicones, MS Polymers, Urethanes | Yes               | No        | Dispense Tips and Accessories – Pages 176-177 |

# Two-Step Acrylic Adhesives



## Your Application

- Combine the benefits of fast process speeds with tough, durable and environmentally resistant bond strengths
- Ideal for bonding ferrite, alnico and neodymium permanent magnets used in electric motors, small engines, speakers, transformers and other devices

## ARE YOU BONDING MAGNETS?

Yes

Ultra-Fast Fixture

Gap Filling

High Toughness

High Temperature Resistance

## Solution

331™

A-671™

392™

334™

|   | 331™          | A-671™                | 392™          | 334™          |
|---|---------------|-----------------------|---------------|---------------|
| <b>Color</b>                            | Cream         | Green                 | Amber         | Yellow        |
| <b>Viscosity (cP)</b>                   | 20,000        | 30,000                | 6,500         | 80,000        |
| <b>Gap Fill (in.)</b>                   | 0.04          | 0.10                  | 0.025         | 0.02          |
| <b>Fixture Time</b>                     | 20 sec.       | 30 to 60 sec.         | 60 sec.       | 90 sec.       |
| <b>Cure Time (hours)</b>                | 24            | 24                    | 24            | 24            |
| <b>Shear Strength<sup>1</sup> (psi)</b> | 3,100         | 2,500                 | 2,500         | 2,800         |
| <b>Temperature Resistance</b>           | 350°F (177°C) | 311°F (155°C)         | 250°F (121°C) | 350°F (177°C) |
| <b>Recommended Activator</b>            | 7387™         | Two-Part External Mix | 7387™         | 7387™         |

## Product Description

### LOCTITE® 331™ Structural Adhesive *Ultra-Fast Fixture*

Toughened, activator-cure acrylic. Acid-free, noncorrosive to sensitive parts. Fixtures in 20 seconds and develops full strength in 30 minutes. Excellent high temperature resistance. Ideal for bonding close-fitting metals and magnets.

**P/N Package Size**  
1057673 25 ml syringe  
1057674\* 1 liter bottle  
1062124\* 10 liter pail

### LOCTITE® A-671™ Structural Adhesive *Gap Filling*

Two-component external mix acrylic requires no static mixing or activators. Excellent humidity resistance and gap filling capability. Fast fixturing.

**P/N Package Size**  
1256488 4,000 ml kit  
(adhesive/activator)  
1256501 19 liter pail, adhesive  
1255709 19 liter pail, activator

### LOCTITE® 392™ Structural Adhesive *Fast Fixture/Toughened*

One- or two-component, dual-cure acrylic. Provides fast fixture speed and tough, reliable bonds.

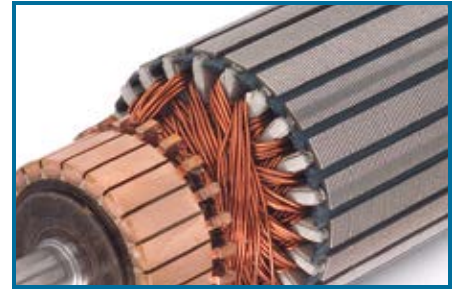
**P/N Package Size**  
39250 50 ml tube  
39275 300 ml cartridge  
39280 1 liter bottle

### LOCTITE® 334™ Structural Adhesive *High Temperature*

Two-component, dual-cure acrylic. Forms tough, flexible bonds on gaps up to 0.02 in. Resists temperatures up to 350°F.

**P/N Package Size**  
33403 25 ml syringe  
33470 300 ml cartridge

\* Made-to-order item.  
<sup>1</sup> Steel.



| No            |                    |                             |                 |
|---------------|--------------------|-----------------------------|-----------------|
| Fast Fixture  | Ultra-Fast Fixture | High Temperature Resistance | General-Purpose |
| 326™          | 331™               | 332™                        | 330™            |
| Light Amber   | Cream              | Amber                       | Pale Yellow     |
| 17,000        | 20,000             | 100,000                     | 67,500          |
| 0.02          | 0.04               | 0.02                        | 0.03            |
| 1 min.        | 20 sec.            | 3 min.                      | 5 min.          |
| 24            | 24                 | 24                          | 24              |
| 3,500         | 3,100              | 3,000                       | 3,300           |
| 250°F (121°C) | 350°F (177°C)      | 400°F (204°C)               | 250°F (121°C)   |
| 7649™         | 7387™              | 7387™                       | 7387™           |

**LOCTITE® 326™  
Structural Adhesive  
Fast Fixture**

An all-purpose bonder. Offers the strength of an epoxy and the speed of an instant adhesive. Solvent resistant. Cures in minutes. Ideal for applications requiring fast fixturing. Use with LOCTITE® 7649™.

| P/N   | Package Size   |
|-------|----------------|
| 32629 | 50 ml bottle   |
| 32685 | 1 liter bottle |

**LOCTITE® 331™  
Structural Adhesive  
Ultra-Fast Fixture**

Toughened, activator-cure acrylic. Acid-free, noncorrosive to sensitive parts. Fixtures in 20 seconds and develops full strength in 30 minutes. Excellent high temperature resistance. Ideal for bonding close-fitting metals and magnets.

| P/N      | Package Size   |
|----------|----------------|
| 1057673  | 25 ml syringe  |
| 1057674* | 1 liter bottle |
| 1062124* | 10 liter pail  |

**LOCTITE® 332™  
Structural Adhesive  
High Temperature**

An activator-cured, no-mix adhesive that provides high temperature capability with thermal durability up to 400°F (204°C).

| P/N   | Package Size     |
|-------|------------------|
| 33201 | 25 ml syringe    |
| 33275 | 300 ml cartridge |
| 33290 | 1 liter bottle   |

**LOCTITE® 330™  
Depend® Adhesive  
General Purpose**

A general-purpose, high viscosity adhesive for a wide range of materials, including metal, wood, ferrite, ceramic and plastic.

| P/N     | Package Size     |
|---------|------------------|
| 1691394 | 3 ml kit         |
| 1690727 | 25 ml kit        |
| 1691005 | 250 ml kit       |
| 1689700 | 250 ml tube      |
| 1689437 | 300 ml cartridge |
| 1689439 | 1 liter bottle   |

**ACCELERATORS,  
ACTIVATORS & PRIMERS**

Henkel has a complete line of LOCTITE® surface preparation accelerators, activators and primers, as well as a complete line of general-purpose LOCTITE® branded cleaners and degreasers, and specialized products to ensure the maximum performance of LOCTITE® adhesives and sealants.

LOCTITE® activators – including 7387™, 7075™, and 7649™ – are specially engineered curing agents for structural adhesives.



# Two-Step Acrylic Adhesives



## LOCTITE® Two-Step Acrylic Adhesive Properties Chart

| LOCTITE® PRODUCT | ITEM NUMBER | PACKAGE TYPE/SIZE  | FEATURES  | COLOR   | VISCOSITY (cP) | GAP FILL (in.) | FIXTURE TIME | CURE TIME (hrs.) | SHEAR STRENGTH <sup>1</sup> (psi) | TEMPERATURE RESISTANCE <sup>2</sup> | RECOMMENDED ACTIVATOR |                       |
|------------------|-------------|--|---|---|----------------|----------------|--------------|------------------|-----------------------------------|-------------------------------------|-----------------------|-----------------------|
| GENERAL PURPOSE  | 312™        | 03333<br>00144   | 10 ml kit <sup>3</sup><br>50 ml kit <sup>4</sup>  | General-Purpose,<br>Ultra-fast Fixture                              | Clear to Amber | 1,000          | 0.003        | 60 seconds       | 24                                | >2,490                              | 250°F (121°C)         | 736™                  |
|                  | 325™        | 32530<br>32586   | 50 ml bottle<br>1 liter bottle  | Severe Environment,<br>Chemical Resistant                           | Clear Brown    | 20,000         | 0.040        | 5 minutes        | 24                                | 1,600                               | 300°F (149°C)         | 7075™ or 7387™        |
|                  | 324™        | 32430<br>32490   | 50 ml bottle<br>1 liter bottle  | No Mix/<br>Small Gap  | Amber          | 17,000         | N/A          | 5 minutes        | 24                                | 2,700                               | 350°F (177°C)         | 7387™ or 7075™        |
|                  | 326™        | 32629<br>32685   | 50 ml bottle<br>1 ml bottle   | Fast Fixture  | Light Amber    | 17,000         | N/A          | 1 minutes        | 24                                | 2,200                               | 250°F (121°C)         | 7649™                 |
|                  | 330™        | 1691394<br>1690727<br>1691005<br>1689700<br>1689437<br>1689439 | 3 ml kit <sup>5</sup><br>25 ml kit <sup>6</sup><br>250 ml kit <sup>7</sup><br>250 ml tube<br>300 ml cartridge<br>1 liter bottle | General-Purpose   | Pale Yellow    | 67,500         | N/A          | 5 minutes        | 24                                | 3,300                               | 250°F (121°C)         | 7387™                 |
|                  | 331™        | 1057673<br>1057674*<br>1062124*                                | 25 ml syringe with manual plunger<br>1 liter bottle<br>10 liter pail  | Ultra-fast Fixture,<br>Acid-free                                    | Cream          | 20,000         | 0.040        | 20 seconds       | 24                                | 3,100                               | 350°F (177°C)         | 7387™                 |
|                  | 332™        | 33201<br>33275<br>33290  | 25 ml syringe with manual plunger<br>300 ml cartridge<br>1 liter bottle   | No Mix/<br>Small Gap  | Amber          | 100,000        | N/A          | 3 minutes        | 24                                | 3,000                               | 400°F (204°C)         | 7387™                 |
| MAGNET BONDING   | A-671™      | 1256488<br>1256501<br>1255709                                  | 4000 ml kit, adhesive/<br>activator<br>19 liter pail, adhesive<br>19 liter pail, activator                                      | Gap Filling,<br>Humidity Resistant,<br>Fast Fixture<br>External Mix | Dark Grey      | 30,000         | 0.100        | 30 to 60 seconds | 24                                | 2,500 to 3,000                      | 401°F (205°C)         | Two-Part External Mix |
|                  | A-6750™     | 1256503<br>1255702   | 2 liter bottle, adhesive<br>2 liter bottle, activator   | Extended Working Time, Large Gaps<br>External Mix                   | Green          | 30,000         | 0.200        | 10 to 13 minutes | 3                                 | 2,500 to 3,000                      | 311°F (155°C)         | Two-Part External Mix |
|                  | 334™        | 33403<br>33470   | 25 ml syringe with manual plunger<br>300 ml cartridge   | Severe Environment,<br>High Temperature                             | Yellow         | 80,000         | 0.020        | 60 seconds       | 24                                | 2,800                               | 350°F (177°C)         | 7387™ or 7380™        |
|                  | 392™        | 39250<br>39275<br>39280  | 50 ml tube<br>300 ml cartridge<br>1 liter bottle  | High Toughness,<br>Heat or Activator<br>Cure                        | Amber          | 6,500          | 0.025        | 60 seconds       | 24                                | 2,500                               | 250°F (121°C)         | 7387™                 |
|                  | 3060™       | 1087986<br>1087987   | 1 liter bottle, adhesive<br>1 liter bottle, activator   | Room Temperature,<br>Gap Filling, Acid-free<br>External Mix         | Green          | 15,000         | >0.050       | 75 seconds       | 24                                | 4,270                               | 300°F (149°C)         | Two-Part External Mix |

ITEMS IN RED = Source's PICK or NEW

\* Made-to-order item.

<sup>1</sup> Steel.

<sup>2</sup> Product is heat aged at temperature and tested at 72°F (22°C). Product maintained ≥ 75% of its initial strength.

<sup>3</sup> 10 ml bottle of LOCTITE® 312™ and 40 g aerosol can of LOCTITE® 736™ Primer NF™

<sup>4</sup> 50 ml bottle of LOCTITE® 312™ and 6 oz. aerosol can of LOCTITE® 736™ Primer NF™

<sup>5</sup> Contains 2.5 ml tube of LOCTITE® 330™ Depend® Adhesive and 0.6 ml ampule of LOCTITE® 7387™ Depend® Activator.

<sup>6</sup> Contains 25 ml syringe of LOCTITE® 330™ Depend® Adhesive and 25 g aerosol can of LOCTITE® 7387™ Depend® Activator.

<sup>7</sup> Contains 250 ml tube of LOCTITE® 330™ Depend® Adhesive and 128 g of LOCTITE® 7387™ Depend® Activator.

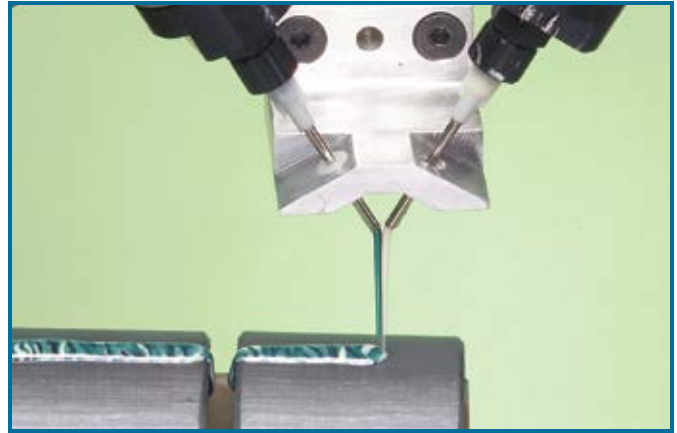
## LOCTITE® Activator & Primer Properties Chart








| LOCTITE® PRODUCT | ITEM               | PACKAGE TYPE & SIZE              | COLOR  | VISCOSITY (cP) | BASE | ON-PART LIFE            | DRY TIME | APPLICATION      | AGENCY APPROVALS |  |
|------------------|--------------------|----------------------------------|--|----------------|------|-------------------------|----------|------------------|------------------|--|
| ACTIVATORS       | 7075™              | 21349<br>22671                   | 1 quart can<br>4.5 oz. net wt. aerosol can   | Amber          | 2    | Acetone                 | 2 hours  | 3 minutes        | 324™ or 325™     | N/A  |
|                  | 7380™<br>DEPEND®   | 19822<br>19824<br>19907          | 1 liter can<br>1.75 fl. oz. bottle<br>1 gallon   | Light Brown    | 43   | No solvent              | 2 hours  | None             | Structurals      | N/A  |
|                  | 7387™<br>DEPEND®   | 18861<br>18862<br>21088          | 1.75 fl. oz. bottle<br>1 quart can<br>4.5 oz. net wt. aerosol can                                    | Light Brown    | 1.5  | Heptane/<br>Isopropanol | 2 hours  | None             | Structurals      | N/A  |
| PRIMER           | 7649™<br>PRIMER N™ | 19269<br>21347<br>21348<br>19266 | 1.75 fl. oz. glass bottle<br>25 g net wt. aerosol can<br>4.5 oz. net wt. aerosol can<br>1 gallon can | Clear/Green    | 2    | Acetone                 | 30 days  | 30 to 70 seconds | Anaerobics       | MIL-S-22473E for existing designs, ASTM D-5363 for new designs, NSF/ANSI 61, NSF P1, CFIA Listed |




# Two-Step Acrylic Adhesive Equipment

## YOUR EQUIPMENT Source


For more details, see the **LOCTITE® Equipment Sourcebook, LT-3669**, or visit us on the web for additional information, diagrams, products and our full line of equipment at [www.equipment.loctite.com](http://www.equipment.loctite.com).



| LOCTITE® PRODUCT   | ITEM NUMBERS   | USED TO DISPENSE | PACKAGE TYPES & SIZES   | VISCOSITY RANGE   | PRESSURE REGULATION | LOW LEVEL SENSING |     |
|--|--|------------------|---|---|---------------------|-------------------|-----|
| <b>SYRINGE DISPENSING – SIMPLE MANUAL DISPENSERS FOR LOW VOLUME SYRINGE APPLICATIONS</b>   |  |                  |   |   |                     |                   |     |
|   | <b>30 ML MANUAL SYRINGE APPLICATOR</b>                   | 1544934          | Any fluid in a 30 ml syringe, including 25 ml syringes                                    | 30 ml syringe   | Low to High         | N/A               |     |
|   | <b>10 / 30 ML SYRINGE MANUAL PLUNGERS</b>                | 98192            | Any fluid in a 10 ml syringe  | 10 ml syringe (3 pack)                                      | Low to High         | N/A               |     |
|  |  | 98193            | Any fluid in a 30 ml syringe  | 30 ml syringe (3 pack)                                      |                     |                   |     |
| <b>TUBE DISPENSING – EASY BUT EFFECTIVE TUBE DISPENSING</b>  |  |                  |   |   |                     |                   |     |
|   | <b>50 ML-F TUBE SQUEEZE DISPENSER</b>                    | 1083845          | Any 50 ml tube  | 50 ml tubes   | Low to High         | N/A               |     |
| <b>PRESSURE-TIME BOTTLE DISPENSE SYSTEMS – VERSATILE SYSTEMS FOR DISPENSING A WIDE RANGE OF PRODUCTS IN A VARIETY OF ADHESIVE BOTTLE SIZES</b> |  |                  |   |   |                     |                   |     |
|    | <b>BOND-A-MATIC® 3000 DISPENSER</b>                      | 982719           | Gel Adhesives, Instant Adhesives, Light Cure Acrylics, Retaining Compounds, Threadlockers | 250 ml bottle<br>1 lb. bottle                               | Low                 | 0 to 15 psi       | No  |
|  | <b>BOND-A-MATIC® 3000 DISPENSER</b>                      | 982722           |   | 1 liter bottle<br>2 kg bottle<br>200 g squeeze tube         | Medium to High      | 0 to 100 psi      | No  |
|   | <b>INTEGRATED SEMIAUTOMATIC DISPENSER</b>                | 1390322          | Gel Adhesives, Instant Adhesives, Light Cure Acrylics, Retaining Compounds, Threadlockers | 250 ml bottle<br>1 lb. bottle                               | Low to Medium       | 0 to 15 psi       | Yes |
|  |  | 1390321          |   | 1 liter bottle<br>2 kg bottle<br>200 g squeeze tube         | Medium to High      | 0 to 100 psi      | Yes |
| <b>PNEUMATIC CARTRIDGE DISPENSING</b>  |  |                  |   |   |                     |                   |     |
|   | <b>HIGH PRESSURE 300 ML BENCHTOP CARTRIDGE DISPENSER</b> | 1046901          | Silicone, Polyurethane, MS Polymer Adhesives  | 290 ml cartridges<br>300 ml cartridges<br>310 ml cartridges | 10,000 to 1,000,000 | 0 to 725 psi      | Yes |
|   | <b>300 ML CARTRIDGE PUSHER</b>                           | 98022            | Gel Adhesives, Anaerobic Gasketing, Light Cure Acrylics, Low Viscosity Silicones          | 300 ml cartridges<br>250 ml tubes                           | Medium              | 0 to 50 psi       | Yes |

| LOCTITE® PRODUCT  | ITEM NUMBERS                                  | TYPE           | VISCOSITY RANGE                       | DISPENSE PATTERNS | USED TO DISPENSE   | STROKE ADJUSTMENT | SUCK-BACK               | CONSUMABLES – DISPENSE ACCESSORIES            |
|---|---|----------------|---------------------------------------|-------------------|--|-------------------|-------------------------|---|
| <b>HIGH PRECISION VALVES</b>  |   |                |                                       |                   |  |                   |                         |   |
|  | 97113   | High Precision | Low to Medium                         | Drop, Dot, Bead   | Gel Instant Adhesives, Instant Adhesives, Retaining Compounds, Threadlockers | Yes               | Yes                     | Dispense Tips and Accessories – Pages 176-177 |
|   | 97114   |                |                                       |                   |  |                   |                         |   |
| <b>HIGH VISCOSITY FLUID AND PASTE VALVES</b>  |   |                |                                       |                   |  |                   |                         |   |
|  | <b>VA 25 DISPENSE VALVE – 50 BAR</b>          | 1838885        | High Viscosity Fluid and Paste Valves | Drop, Bead        | Silicones, MS Polymers, Urethanes  | Yes               | Yes                     | Dispense Tips and Accessories – Pages 176-177 |
|  | <b>HIGH PRESSURE DISPENSE VALVE – 150 BAR</b> | 1153502        |                                       |                   |  |                   | 500,000 to 2,000,000 cP |   |

**ADDITIONAL ACCESSORIES SOLD SEPARATELY**

 1095801 – External Mix Assembly, designed for positioning two (2) separate dispense valves (sold separately) in proper alignment for high-speed dispensing of a 2-part, externally mixed adhesive without the use of a static mix nozzle.

**Your Source for Motion Control Robot Dispense Systems. See page 171.**



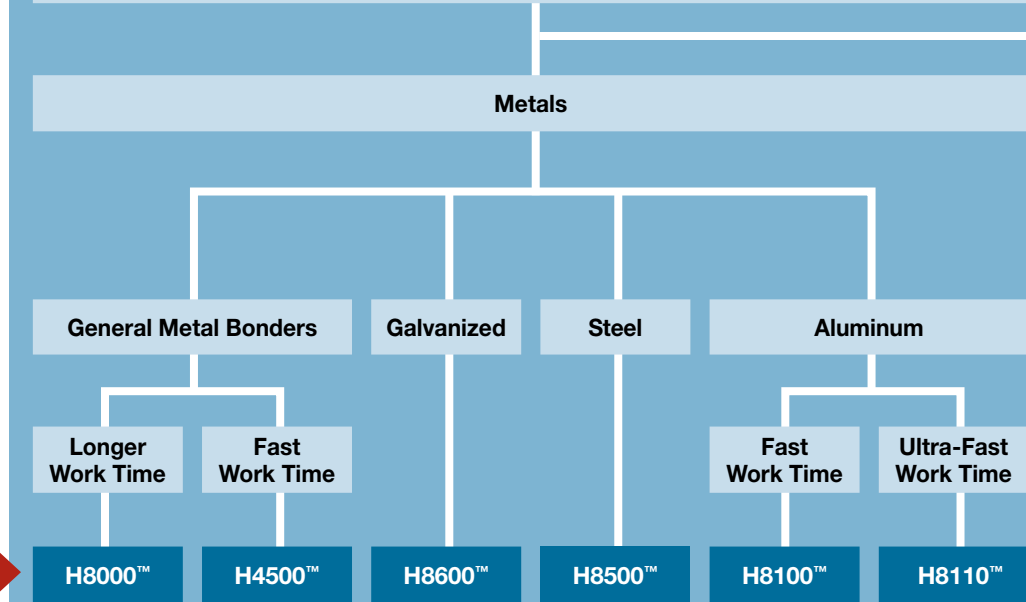
# Two-Part Acrylic Adhesives



## Your Application

- Specially formulated to provide tough, long-lasting bonds to most surfaces, including steel, galvanized steel, aluminum, sheet metal, stainless steel, plastics and composites
- Capable of reducing or replacing the need for threaded fasteners, welds or rivets, resulting in a lower cost assembly

## ARE YOU BONDING METALS OR PLASTICS/COMPOSITES?



## Solution

|                              | H8000™  | H4500™ | H8600™ | H8500™ | H8100™  | H8110™  |
|------------------------------|---------|--------|--------|--------|---------|---------|
| <b>Color</b>                 | Green   | Grey   | Blue   | Grey   | Green   | Green   |
| <b>Viscosity (cP)</b>        | 190,000 | 45,000 | 86,000 | 60,000 | 185,000 | 200,000 |
| <b>Mix Ratio</b>             | 10:1    | 10:1   | 2:1    | 10:1   | 10:1    | 10:1    |
| <b>Work Time† (min.)</b>     | 30      | 15     | 25     | 25     | 15      | 7       |
| <b>Shear Strength¹ (psi)</b> | 3,140³  | 3,100  | 3,355  | 3,380  | 3,090³  | 2,475³  |
| <b>Impact Strength⁵ (J)</b>  | 23      | 12     | 10     | 14     | 2³      | 10³     |
| <b>Peel Strength¹ (pli)</b>  | 45      | 58     | 35⁴    | 92     | 45      | 48³     |

## Product Description

### LOCTITE® H8000™ Structural Adhesive

#### Tough Metal Bonder

Exhibits excellent peel strength on multiple substrates, especially aluminum.

| P/N    | Package Size           |
|--------|------------------------|
| 996453 | 50 ml dual cartridge   |
| 36160  | 490 ml dual cartridge  |
| 35939* | 35 lb. pail, adhesive  |
| 35940* | 45 lb. pail, activator |

### LOCTITE® H4500™ Structural Adhesive

#### Fast Work Time

High strength structural adhesive for metals. Fixtures in 15 minutes. With color mix indication.

| P/N    | Package Size          |
|--------|-----------------------|
| 996512 | 50 ml dual cartridge  |
| 83041  | 490 ml dual cartridge |

### LOCTITE® H8600™ Structural Adhesive

#### Galvanized Steel Bonder

Excellent shear strength on steel and aluminum. Especially designed for severe environments.

| P/N    | Package Size             |
|--------|--------------------------|
| 38762  | 400 ml dual cartridge    |
| 38760* | 5 gallon pail, adhesive  |
| 38761* | 5 gallon pail, activator |

### LOCTITE® H8500™ Structural Adhesive

#### Ultra-Tough Steel Bonder

Excellent peel strength on steel and aluminum. Contains 30 mil spacer beads to prevent excessive squeeze-out of adhesive due to over-clamping.

| P/N    | Package Size             |
|--------|--------------------------|
| 827608 | 490 ml dual cartridge    |
| 40888* | 5 gallon pail, activator |
| 40889* | 5 gallon pail, adhesive  |

### LOCTITE® H8100™ Structural Adhesive

#### Aluminum Bonder

Exhibits excellent strength on aluminum.

| P/N     | Package Size          |
|---------|-----------------------|
| 1056942 | 50 ml dual cartridge  |
| 1056943 | 490 ml dual cartridge |

### LOCTITE® H8110™ Structural Adhesive

#### Ultra-Fast Aluminum Bonder

Aluminum bonder fixtures in 5 minutes.

| P/N     | Package Size          |
|---------|-----------------------|
| 1371355 | 50 ml dual cartridge  |
| 1371361 | 490 ml dual cartridge |

\* Made-to-order item.

† Working time = maximum time before assembly of parts to ensure proper wetting.

¹ Steel.

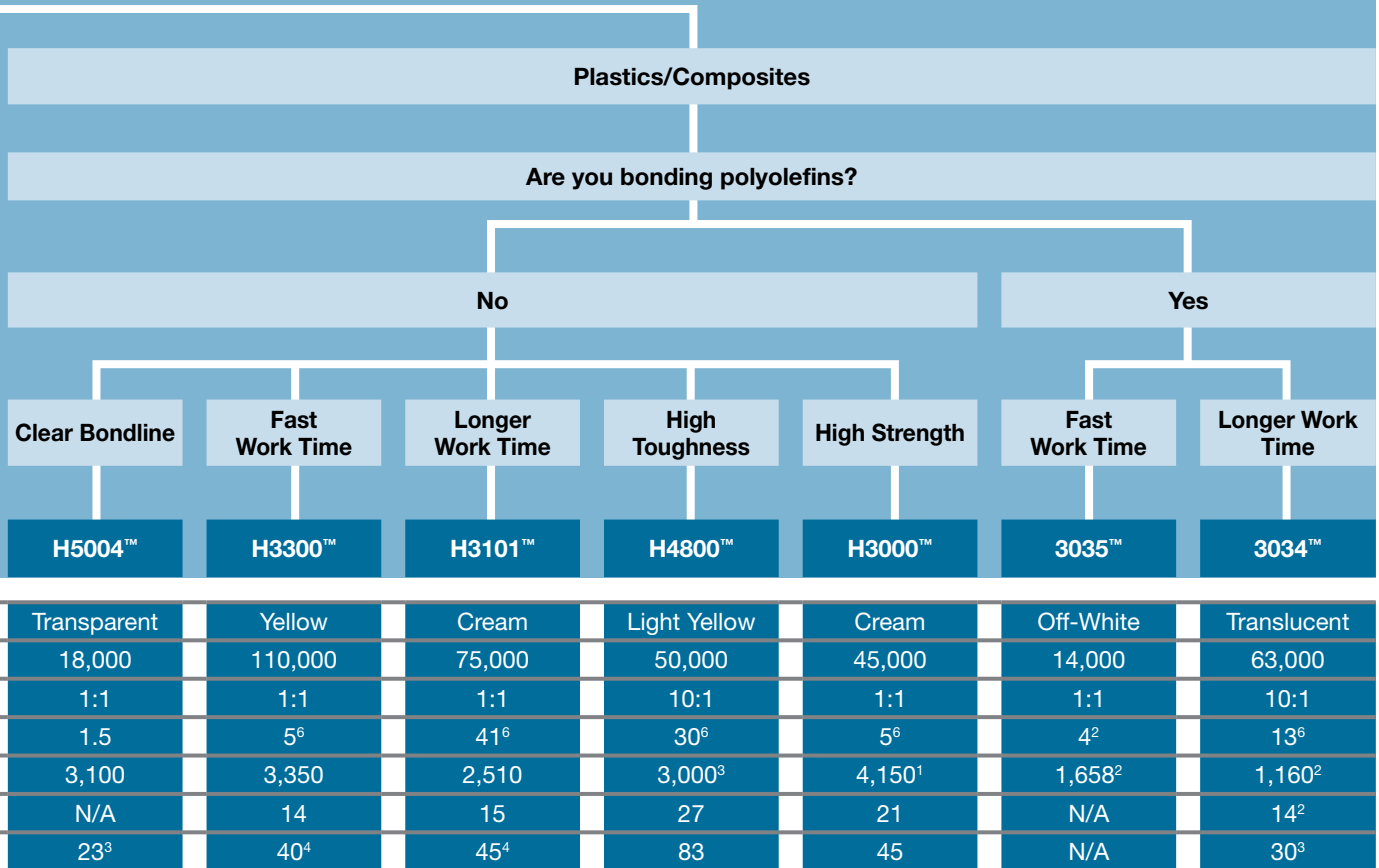
² High density polyethylene.

³ Aluminum.

⁴ Galvanized steel.

⁵ Grit-blasted mild steel.

⁶ Polyethylene.



**LOCTITE® H5004™  
Structural Adhesive  
Clear Bondline**

A fast setting, toughened adhesive for metals and plastics that creates a virtually transparent bondline.

| P/N     | Package Size         |
|---------|----------------------|
| 1384596 | 50 ml dual cartridge |

**LOCTITE® H3300™  
Structural Adhesive  
Fast Fixture**

A non-sag, fast fixturing structural adhesive for bonding a variety of substrates.

| P/N    | Package Size           |
|--------|------------------------|
| 83020  | 50 ml dual cartridge   |
| 83019  | 400 ml dual cartridge  |
| 83024* | 40 lb. pail, adhesive  |
| 83022* | 40 lb. pail, activator |

**LOCTITE® H3101™  
Structural Adhesive  
Extended Work Life**

A medium viscosity structural adhesive ideal for bonding a variety of substrates. **NSF/ANSI 61 Certified.**

| P/N   | Package Size          |
|-------|-----------------------|
| 83007 | 50 ml dual cartridge  |
| 83006 | 400 ml dual cartridge |

**LOCTITE® H4800™  
Structural Adhesive  
Toughened**

Excellent peel and impact resistance. Provides high bond strengths on composites.

| P/N    | Package Size          |
|--------|-----------------------|
| 996515 | 50 ml dual cartridge  |
| 83045  | 490 ml dual cartridge |

**LOCTITE® H3000™  
Structural Adhesive  
High Strength**

A low viscosity adhesive which exhibits high bond strength on a variety of substrates.

| P/N   | Package Size          |
|-------|-----------------------|
| 83001 | 50 ml dual cartridge  |
| 83000 | 400 ml dual cartridge |

**LOCTITE® 3035™  
Structural Adhesive  
Fast Fixture**

A fast fixturing acrylic adhesive designed to bond low energy plastic substrates without any surface preparation.

| P/N     | Package Size         |
|---------|----------------------|
| 1677288 | 50 ml dual cartridge |

**LOCTITE® 3034™  
Structural Adhesive  
Toughened**

Extended open time allows for adjustment of parts. Excellent peel and shear strength on polyethylene plastics.

| P/N    | Package Size          |
|--------|-----------------------|
| 960973 | 490 ml dual cartridge |

# Two-Part Acrylic Adhesives



## LOCTITE® Two-Part Acrylic Adhesive Properties Chart

| LOCTITE® PRODUCT | ITEM NUMBER                         | PACKAGE TYPE/SIZE  | FEATURES              | COLOR        | VISCOSITY (cP) | MIX RATIO | WORK TIME <sup>2</sup> (min.) | SHEAR STRENGTH <sup>1</sup> (psi) | IMPACT STRENGTH <sup>6</sup> (joules) | PEEL STRENGTH <sup>1</sup> (pli) |
|------------------|-------------------------------------|--|-----------------------|--------------|----------------|-----------|-------------------------------|-----------------------------------|---------------------------------------|----------------------------------|
| <b>H3151™</b>    | 83015<br>83014                      | 50 ml "A" dual cartridge<br>400 ml "C" dual cartridge  | Extended Work Life    | Light Yellow | 70,000         | 1:1       | N/A                           | 3,800                             | N/A                                   | N/A                              |
| <b>H4500™</b>    | 996512<br>83041                     | 50 ml "S" dual cartridge<br>490 ml "F" dual cartridge  | Fast Work Time        | Grey         | 45,000         | 10:1      | 15                            | 3,100                             | 12                                    | 58                               |
| <b>H8000™</b>    | 996453<br>36160<br>35939*<br>35940* | 50 ml "S" dual cartridge<br>490 ml "F" dual cartridge<br>35 lb. pail, adhesive<br>45 lb. pail, activator | Longer Work Time      | Green        | 190,000        | 10:1      | 30                            | 2,800<br>4,180 <sup>3</sup>       | 45                                    | 45                               |
| <b>H8010™</b>    | 40594                               | 490 ml "F" dual cartridge  | Gap Control           | Grey         | 200,000        | 10:1      | 35                            | 2,175                             | 29                                    | 89                               |
| <b>H8100™</b>    | 1056942<br>1056943                  | 50 ml "S" dual cartridge<br>490 ml "F" dual cartridge  | Fast Work Time        | Green        | 190,000        | 10:1      | 15                            | 2,880<br>3,090 <sup>3</sup>       | 11                                    | 45                               |
| <b>H8110™</b>    | 1371355<br>1371361                  | 50 ml "S" dual cartridge<br>490 ml "F" dual cartridge  | Ultra-Fast Work Time  | Yellow       | 200,000        | 10:1      | 7                             | 1,500                             | 10 <sup>3</sup>                       | 48 <sup>3</sup>                  |
| <b>H8500™</b>    | 827608<br>40888*<br>40889*          | 490 ml "F" dual cartridge<br>5 gallon pail, activator<br>5 gallon pail, adhesive                         | Fast Work Time        | Grey         | 60,000         | 10:1      | 25                            | 2,175<br>2,180 <sup>3</sup>       | 14                                    | 92                               |
| <b>H8510™</b>    | 1107651                             | 490 ml "F" dual cartridge  | Extended Work Time    | Grey         | 45,000         | 10:1      | 30                            | 2,175<br>1,900 <sup>3</sup>       | >14                                   | 104                              |
| <b>H8600™</b>    | 38762<br>38760*<br>38761*           | 400 ml "F" dual cartridge<br>5 gallon pail, adhesive<br>5 gallon pail, activator                         | Medium Work Time      | Blue         | 86,000         | 2:1       | 25                            | ≥1,800 <sup>4</sup>               | 10                                    | 35 <sup>4</sup>                  |
| <b>H8610™</b>    | 1055839                             | 400 ml "F" dual cartridge  | Fast Work Time        | Off-White    | 105,000        | 2:1       | 11                            | 1,800<br>4,180 <sup>4</sup>       | >14                                   | 55                               |
| <b>H8700™</b>    | 1064166<br>1064321                  | 50 ml "B" dual cartridge<br>400 ml "F" dual cartridge  | Paint-Bake Compatible | Blue         | 40,000         | 2:1       | 40                            | 2,175<br>2,870 <sup>3</sup>       | 14                                    | 34                               |
| <b>3034™</b>     | 960973                              | 490 ml "F" dual cartridge  | Toughened             | Translucent  | Thixotropic    | 10:1      | 13 <sup>7</sup>               | ≥1,160 <sup>2</sup>               | 14 <sup>2</sup>                       | 30 <sup>3</sup>                  |
| <b>3035™</b>     | 1677288                             | 50 ml "B" dual cartridge   | Fast Fixture Time     | Off-White    | 30,000         | 1:1       | 4 <sup>2</sup>                | 1,658 <sup>2</sup>                | N/A                                   | N/A                              |
| <b>H3000™</b>    | 83001<br>83000                      | 50 ml "A" dual cartridge<br>400 ml "C" dual cartridge  | High Strength         | Cream        | 45,000         | 1:1       | 5 <sup>7</sup>                | 4,150                             | 21                                    | 45                               |
| <b>H3101™</b>    | 83007<br>83006                      | 50 ml "A" dual cartridge<br>400 ml "C" dual cartridge  | Medium Work Time      | Cream        | 75,000         | 1:1       | 41 <sup>7</sup>               | 2,510                             | 15                                    | 35                               |
| <b>H3300™</b>    | 83020<br>83019<br>83024*<br>83022*  | 50 ml "A" dual cartridge<br>400 ml "C" dual cartridge<br>40 lb. pail, adhesive<br>40 lb. pail, activator | Fast Work Time        | Yellow       | 110,000        | 1:1       | 5 <sup>7</sup>                | 3,350                             | 14                                    | 40 <sup>4</sup>                  |
| <b>H4000™</b>    | 83025                               | 490 ml "F" dual cartridge  | Non-Sag               | Pale Yellow  | 130,000        | 10:1      | 30                            | 2,200 <sup>3</sup>                | 10                                    | 49                               |
| <b>H4100™</b>    | 83032                               | 490 ml "F" dual cartridge  | Ultra-Fast Work Time  | Pale Yellow  | 100,000        | 10:1      | N/A                           | 3,140                             | N/A                                   | 5                                |
| <b>H4200™</b>    | 83038                               | 490 ml "F" dual cartridge  | Fast Work Time        | Pale Yellow  | 90,000         | 10:1      | 9                             | 4,020                             | >29                                   | 76                               |
| <b>H4800™</b>    | 996515<br>83045                     | 50 ml "S" dual cartridge<br>490 ml "F" dual cartridge  | Impact Resistant      | Light Yellow | 50,000         | 10:1      | 30                            | 3,930                             | 27                                    | 83                               |
| <b>H5004™</b>    | 1384596                             | 50 ml "A" dual cartridge   | Clear, Fast Work Time | Transparent  | 18,000         | 1:1       | 1.5                           | 3,100                             | N/A                                   | 23                               |

ITEMS IN RED = Source's PICK or NEW

\* Made-to-order item.  
<sup>1</sup> Steel.

<sup>2</sup> HDPE.  
<sup>3</sup> Aluminum.  
<sup>4</sup> Galvanized steel.

<sup>5</sup> Working time = maximum time before assembly.  
<sup>6</sup> Grit-blasted steel.  
<sup>7</sup> Polyethylene.

# Two-Part Acrylic Adhesive Equipment

## YOUR EQUIPMENT Source

For more details, see the **LOCTITE® Equipment Sourcebook, LT-3669**, or visit us on the web for additional information, diagrams, products and our full line of equipment at [www.equipment.loctite.com](http://www.equipment.loctite.com).



## LOCTITE® PRODUCT

| ADHESIVE PACKAGE TYPE/SIZE | HANDHELD APPLICATORS | DISPENSER ITEM NUMBER | EQUIPMENT TYPE             | VISCOSITY RANGE | MIX RATIOS    | RECOMMENDED MIX NOZZLE ITEM NUMBER | PCS/PK |
|----------------------------|----------------------|-----------------------|----------------------------|-----------------|---------------|------------------------------------|--------|
| <b>TWO-PART DISPENSING</b> |                      |                       |                            |                 |               |                                    |        |
| 50 ML "A" DUAL CARTRIDGE   |                      | 98472                 | Manual                     | Low to High     | 1:1, 1:2, 2:1 | 98455                              | 10     |
|                            |                      | 97042                 | Pneumatic                  | Low to High     | 1:1, 1:2, 2:1 | 98455                              | 10     |
| 50 ML "B" DUAL CARTRIDGE   |                      | 98472                 | Manual                     | Low to High     | 1:1, 2:1      | 1573149                            | 10     |
|                            |                      | 97042                 | Pneumatic                  | Low to High     | 1:1, 2:1      | 1573149                            | 10     |
| 50 ML "S" DUAL CARTRIDGE   |                      | 1034026               | Manual                     | Low to High     | 10:1          | 1034575                            | 10     |
|                            |                      | 1493310               | Pneumatic                  | Low to High     | 10:1          | 1034575                            | 10     |
| 400 ML "C" DUAL CARTRIDGE  |                      | 983438                | Manual                     | High to Paste   | 1:1, 2:1      | 720174                             | 10     |
|                            |                      | 983439                | Pneumatic                  | High to Paste   | 1:1, 2:1      | 720174                             | 10     |
| 400 ML "F" DUAL CARTRIDGE  |                      | 983438                | Manual                     | High to Paste   | 1:1, 2:1      | 1573138                            | 10     |
|                            |                      | 984211                | Conversion Kit (Manual)    | High to Paste   | 4:1           | 720177                             | 10     |
| 400 ML "F" DUAL CARTRIDGE  |                      | 983439                | Pneumatic                  | High to Paste   | 1:1, 2:1      | 1573138                            | 10     |
|                            |                      | 984210                | Conversion Kit (Pneumatic) | High to Paste   | 4:1           | 720177                             | 10     |
| 490 ML "F" DUAL CARTRIDGE  |                      | 985246                | Manual                     | High to Paste   | 10:1          | 1084092                            | 10     |
|                            |                      | 985249                | Pneumatic                  | High to Paste   | 10:1          | 1084092                            | 10     |

### MIX NOZZLES

Plastic, disposable nozzles that attach directly to LOCTITE® dual cartridges. They are designed to mix adhesive automatically as it travels through the static-mix nozzle.

See pages 178-180 for more Loctite® Mix Nozzles or visit [www.equipment.loctite.com](http://www.equipment.loctite.com).



ADDITIONAL RESOURCES

**EQUIPMENT** – Henkel is a full-service supplier of LOCTITE® branded equipment and offers a wide variety of equipment services to its customers. For more LOCTITE® branded equipment, go to page 165.

Can't find what you're looking for? Visit [www.equipment.loctite.com](http://www.equipment.loctite.com) or call 1-800-LOCTITE (562-8483).

**STRAIGHT FROM** *The Source*

# Epoxy Adhesives



## Your Application

- Bond a wide variety of materials, such as metal, ceramic and plastic
- Available in a variety of formulations and performance capabilities, including fast cure, superior moisture resistance, ease of dispense, high toughness, and a resistance to a wide range of chemicals

## DO YOU NEED A ONE-PART OR TWO-PART EPOXY?

### Two-Part

### Do you need the product to fixture in less than 15 minutes at room temperature?

#### Yes

#### No

### Potting (for more potting options, see page 97)

#### Moisture Resistant

#### Flexible

#### Non-Sag

#### Clear

#### Explosion Proof

#### Non-Corrosive

## Solution

**E-05MR™**

**E-05CL™**

**E-00NS™**

**E-30CL™**

**E-40EXP™**

**E-60NC™**

|   | E-05MR™       | E-05CL™      | E-00NS™      | E-30CL™       | E-40EXP™           | E-60NC™       |
|---|---------------|--------------|--------------|---------------|--------------------|---------------|
| <b>Color</b>                              | Clear         | Clear        | Translucent  | Clear         | Grey               | Black         |
| <b>Viscosity (cP)</b>                     | 25,000        | 2,500        | 100,000      | 10,000        | 24,000             | 8,000         |
| <b>Mix Ratio</b>                          | 1:1           | 1:1          | 1:1          | 2:1           | 2:1                | 1:1           |
| <b>Work Life (minutes)</b>                | 5             | 5            | 3            | 30            | 40                 | 60            |
| <b>Fixture Time (minutes)</b>             | 15            | 15           | 10           | >180          | N/A                | 180           |
| <b>Room Temperature Cure Time (hours)</b> | 24            | 24           | 24           | 24            | 24                 | 24            |
| <b>Shear Strength<sup>1</sup> (psi)</b>   | 3,360         | 1,430        | 1,600        | 3,100         | 3,000 <sup>2</sup> | 2,630         |
| <b>Temperature Resistance</b>             | 250°F (121°C) | 180°F (80°C) | 180°F (82°C) | 250°F (121°C) | 250°F (121°C)      | 250°F (121°C) |

## Product Description

### LOCTITE® E-05MR™ Hysol® Epoxy Adhesive

**Moisture Resistant**  
Clear, fast fixturing epoxy that provides excellent moisture resistance and exceptional toughness.

| P/N      | Package Size            |
|----------|-------------------------|
| 1086598  | 50 ml dual cartridge    |
| 1086599* | 400 ml dual cartridge   |
| 1087602* | 5 gallon pail, resin    |
| 1087603* | 5 gallon pail, hardener |

### LOCTITE® E-05CL™ Hysol® Epoxy Adhesive

**Flexible**  
A clear, flexible, high peel, low odor epoxy with a 3-minute work life.

| P/N    | Package Size            |
|--------|-------------------------|
| 29299  | 50 ml dual cartridge    |
| 29301  | 400 ml dual cartridge   |
| 29302* | 5 gallon pail, resin    |
| 29303* | 5 gallon pail, hardener |

### LOCTITE® E-00NS™ Epoxy Adhesive

**Non-Sag**  
A fast fixturing, thixotropic, non-sag epoxy which cures at room temperature to form a translucent, rigid and machinable bondline. Well suited for use on vertical surfaces.

| P/N   | Package Size          |
|-------|-----------------------|
| 29294 | 50 ml dual cartridge  |
| 29295 | 200 ml dual cartridge |
| 29296 | 400 ml dual cartridge |

### LOCTITE® E-30CL™ Hysol® Epoxy Adhesive

**Clear**  
An ultra-clear, low viscosity, impact resistant epoxy with a 30-minute work life. An excellent glass bonder. Exhibits exceptional chemical resistance.

| P/N   | Package Size          |
|-------|-----------------------|
| 29329 | 50 ml dual cartridge  |
| 29330 | 200 ml dual cartridge |
| 29331 | 400 ml dual cartridge |

### LOCTITE® E-40EXP™ Hysol® Epoxy Potting Compound

**Explosion Proof/ Chemical Resistant**  
An epoxy designed for potting electrical motors used in hazardous locations. Compliant with UL-674 for explosion-proof electric motors. Excellent chemical resistance.

| P/N     | Package Size           |
|---------|------------------------|
| 1511653 | 200 ml dual cartridge  |
| 1511896 | 5 gallon pail - part A |
| 1511897 | 5 gallon pail - part B |

### LOCTITE® E-60NC™ Hysol® Epoxy Adhesive

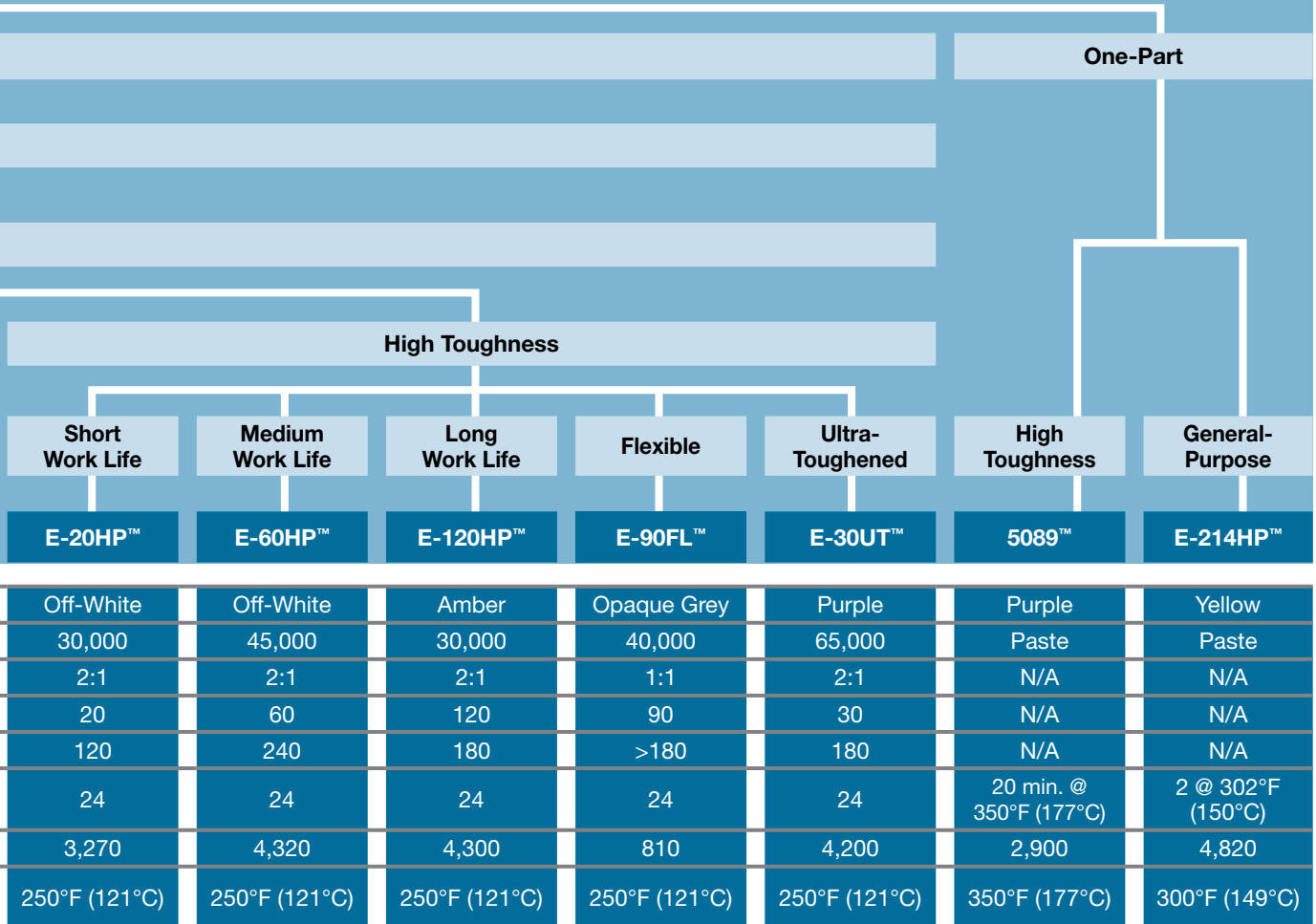
**Noncorrosive/ Potting**  
An electronics-grade potting compound with a 60-minute work life. Black, opaque, low viscosity with excellent cure-through depth.

| P/N    | Package Size            |
|--------|-------------------------|
| 29324  | 50 ml dual cartridge    |
| 29325  | 200 ml dual cartridge   |
| 29326  | 400 ml dual cartridge   |
| 29327* | 5 gallon pail, resin    |
| 29328* | 5 gallon pail, hardener |

\* Made-to-order item.

<sup>1</sup> Grit blasted steel.

<sup>2</sup> Aluminum.



**LOCTITE® E-20HP™**  
Hysol® Epoxy Adhesive

**High Performance**

A high strength epoxy with a 20-minute work life. Off-white, toughened, high peel, high shear.

| P/N   | Package Size            |
|-------|-------------------------|
| 29314 | 50 ml dual cartridge    |
| 29315 | 200 ml dual cartridge   |
| 29316 | 400 ml dual cartridge   |
| 29317 | 5 gallon pail, resin    |
| 29318 | 5 gallon pail, hardener |

**LOCTITE® E-60HP™**  
Hysol® Epoxy Adhesive

A high strength epoxy with a 60-minute work life. Off-white, high peel, high shear.

| P/N   | Package Size          |
|-------|-----------------------|
| 29319 | 50 ml dual cartridge  |
| 29321 | 400 ml dual cartridge |

**LOCTITE® E-120HP™**  
Hysol® Epoxy Adhesive

An amber, non-sag, aerospace grade epoxy with an extended open time to allow for the adjustment of large parts.

| P/N    | Package Size            |
|--------|-------------------------|
| 29353  | 50 ml dual cartridge    |
| 29354  | 200 ml dual cartridge   |
| 29355  | 400 ml dual cartridge   |
| 29356* | 5 gallon pail, resin    |
| 29357* | 5 gallon pail, hardener |

**LOCTITE® E-90FL™**  
Hysol® Epoxy Adhesive

**Flexible**

A grey, impact-resistant, toughened epoxy with a 90-minute work life.

| P/N   | Package Size          |
|-------|-----------------------|
| 29309 | 50 ml dual cartridge  |
| 29311 | 400 ml dual cartridge |

**LOCTITE® E-30UT™**  
Hysol® Epoxy Adhesive

**Ultra-Tough**

An epoxy that provides exceptional fracture toughness characteristics for the most demanding structural bonding requirements.

| P/N     | Package Size          |
|---------|-----------------------|
| 1078234 | 50 ml dual cartridge  |
| 1078235 | 400 ml dual cartridge |

**Terokal® 5089™**  
Structural Adhesive

**High Performance**

A toughened heat curable epoxy offering high shear strength and extremely good peel and impact resistance. Can be spot-welded through and is compatible with most paint bake processes.

| P/N     | Package Size     |
|---------|------------------|
| 1182757 | 300 ml cartridge |
| 1182761 | 5 gal. pail      |
| 1182927 | 55 gal. drum     |

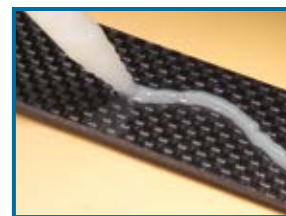
**LOCTITE® E-214HP™**  
Hysol® Epoxy Adhesive

**General-Purpose/Heat Cure**

A one-component, acid-free, heat cure epoxy. Light grey, temperature resistant, high strength, non-sag. Noncorrosive to sensitive parts.

| P/N   | Package Size     |
|-------|------------------|
| 29339 | 30 ml cartridge  |
| 29340 | 300 ml cartridge |

# Epoxy Adhesives



## LOCTITE® Epoxy Adhesive Properties Chart

| LOCTITE® PRODUCT       | ITEM NUMBER   | PACKAGE TYPE/SIZE   | FEATURES                               | COLOR       | VISCOSITY (cP) | MIX RATIO | WORK LIFE <sup>3</sup> (minutes) | FIXTURE TIME (minutes) | CURE TIME (hours) | SHEAR STRENGTH <sup>1</sup> (psi) | TEMPERATURE RESISTANCE |
|------------------------|---|---|--|-------------|----------------|-----------|----------------------------------|------------------------|-------------------|-----------------------------------|------------------------|
| <b>1C™ HYSOL®</b>      | 1373425<br>1377344<br>1377777<br>1377391                    | EPK 4 oz. kit<br>17 lb. kit<br>60 lb. pail, resin<br>43 lb. pail, hardener  | Gap Filling                            | Off-White   | 350,000        | 2.5:1     | 20                               | 210                    | 24                | 1,500 <sup>2</sup>                | 250°F (121°C)          |
| <b>0151™ HYSOL®</b>    | 83176<br>83069<br>83179                                     | EPK 3.3 oz. kit<br>50 ml "A" dual cartridge<br>2.6 lb. kit  | Extended Work Life                     | Clear       | 60,000         | 2.7:1     | 60                               | >180                   | 24                | 2,675                             | 160°F (71°C)           |
| <b>9340™ HYSOL®</b>    | 83104<br>83105  | EPK 2.7 oz. kit<br>5 lb. kit  | Non-Sag                                | Grey        | Paste          | 1:1       | 90                               | >180                   | 24                | 2,300 <sup>2</sup>                | >180°F (82°C)          |
| <b>9430™ HYSOL®</b>    | 83114<br>83113  | 2 lb. kit<br>10 lb. kit   | Impact Resistant                       | Off-White   | 12,000         | 3.78:1    | 50                               | >180                   | 24                | 4,230                             | 180°F (82°C)           |
| <b>9460™ HYSOL®</b>    | 83129<br>83128<br>83127<br>83131<br>83130<br>83133<br>83134 | 50 ml "A" dual cartridge<br>200 ml "C" dual cartridge<br>400 ml "C" dual cartridge<br>5 lb. kit<br>20 lb. kit<br>50 lb. pail, hardener<br>50 lb pail, resin | Non-Sag                                | Grey        | 200,000        | 1:1       | 50                               | >180                   | 24                | 3,500 <sup>4</sup>                | 250°F (121°C)          |
| <b>9462™ HYSOL®</b>    | 83142   | 50 ml "A" dual cartridge  | High Strength                          | Beige       | 70,000         | 1:1       | 55                               | >180                   | 24                | 4,180                             | 250°F (121°C)          |
| <b>E-20HP™ HYSOL®</b>  | 29314<br>29315<br>29316<br>29317<br>29318                   | 50 ml "A" dual cartridge<br>200 ml "C" dual cartridge<br>400 ml "C" dual cartridge<br>5 gallon pail, resin<br>5 gallon pail, hardener                       | Easy Mix, Toughened                    | Off-White   | 30,000         | 2:1       | 20                               | 120                    | 24                | 3,270                             | 250°F (121°C)          |
| <b>E-20NS™ HYSOL®</b>  | 29334<br>29335<br>29336                                     | 50 ml "A" cartridge<br>200 ml "C" dual cartridge<br>400 ml "C" dual cartridge   | Low Sag                                | Tan         | 60,000         | 2:1       | 20                               | 150                    | 24                | 2,790                             | 250°F (121°C)          |
| <b>E-30CL™ HYSOL®</b>  | 29329<br>29330<br>29331                                     | 50 ml "A" dual cartridge<br>200 ml "C" dual cartridge<br>400 ml "C" dual cartridge  | Medium Work Life, Chemical Resistant   | Clear       | 10,000         | 2:1       | 30                               | >180                   | 24                | 3,100                             | 250°F (121°C)          |
| <b>E-30UT™ HYSOL®</b>  | 1078234<br>1078235  | 50 ml "A" dual cartridge<br>400 ml "C" dual cartridge   | Ultra-Tough                            | Purple      | 65,000         | 2:1       | 30                               | 180                    | 24                | 4,200                             | 250°F (121°C)          |
| <b>E-40EXP™ HYSOL®</b> | 1511653<br>1511896<br>1511897                               | 200 ml "C" dual cartridge<br>5 gallon pail, part A<br>5 gallon pail, part B   | Extended Work Life                     | Grey        | 24,000         | 2:1       | 40                               | N/A                    | 24                | 3,000                             | 250°F (121°C)          |
| <b>E-40FL™ HYSOL®</b>  | 29304<br>29305<br>29306                                     | 50 ml "A" dual cartridge<br>200 ml "C" dual cartridge<br>400 ml "C" dual cartridge  | Medium Fixture                         | Opaque Grey | 70,000         | 1:1       | 40                               | 180                    | 24                | 640                               | 250°F (121°C)          |
| <b>E-40HT™ HYSOL®</b>  | 1086065<br>1086081  | 50 ml "A" dual cartridge<br>400 ml "C" dual cartridge   | High Strength                          | Off-White   | 430,000        | 2:1       | 40                               | 180                    | 24                | 4,030                             | 300°F (149°C)          |
| <b>E-60HP™ HYSOL®</b>  | 29319<br>29321<br>29322*<br>29323*                          | 50 ml "A" dual cartridge<br>400 ml "C" dual cartridge<br>5 gallon pail, resin<br>5 gallon pail, hardener  | High Performance                       | Off-White   | 45,000         | 2:1       | 60                               | >180                   | 24                | 4,320                             | 250°F (121°C)          |
| <b>E-60NC™ HYSOL®</b>  | 29324<br>29325<br>29326<br>29327*<br>29328*                 | 50 ml "A" dual cartridge<br>200 ml dual cartridge<br>400 ml "C" dual cartridge<br>5 gallon pail, resin<br>5 gallon pail, hardener                           | Extended Work Life, Noncorrosive       | Black       | 8,000          | 1:1       | 60                               | >180                   | 24                | 2,630                             | 250°F (121°C)          |
| <b>E-90FL™ HYSOL®</b>  | 29309<br>29311  | 50 ml "A" dual cartridge<br>400 ml "C" dual cartridge   | Extended Work Life                     | Opaque Grey | 40,000         | 1:1       | 90                               | >180                   | 24                | 810                               | 250°F (121°C)          |
| <b>E-120HP™ HYSOL®</b> | 29353<br>29354<br>29355<br>29356*<br>29357*                 | 50 ml "A" dual cartridge<br>200 ml "C" dual cartridge<br>400 ml "C" dual cartridge<br>5 gallon pail, resin<br>5 gallon pail, hardener                       | High Temperature/ Chemically Resistant | Amber       | 30,000         | 2:1       | 120                              | >180                   | 24                | 4,300                             | N/A                    |

HIGH PERFORMANCE

ITEMS IN RED = Source's PICK or NEW

\* Made-to-order item.  
<sup>1</sup> Grit-blasted steel.  
<sup>2</sup> Etched aluminum.

<sup>3</sup> Work life = time for viscosity to double; Working time = maximum time before assembly (steel).  
<sup>4</sup> Block Shear – grit-blasted mild steel.

## LOCTITE® Epoxy Adhesive Properties Chart

| LOCTITE® PRODUCT       | ITEM NUMBER                   | PACKAGE TYPE/SIZE                                   | FEATURES   | COLOR                    | VISCOSITY (cP) | MIX RATIO | WORK LIFE <sup>3</sup> (minutes) | FIXTURE TIME (minutes) | CURE TIME (hours)             | SHEAR STRENGTH <sup>1</sup> (psi) | TEMPERATURE RESISTANCE |               |
|------------------------|-------------------------------|---|--|--------------------------|----------------|-----------|----------------------------------|------------------------|-------------------------------|-----------------------------------|------------------------|---------------|
| <b>FAST FIXTURE</b>    | <b>608™ HYSOL®</b>            | 83086<br>83075                                      | 4 g foil pack<br>50 ml "A" dual cartridge  | Fast Fixture<br>Non-Sag  | Clear          | 100,000   | 1:1                              | 5                      | 15                            | 24                                | 2,980                  | 130°F (54°C)  |
|                        | <b>615™ HYSOL®</b>            | 83094   | EPK 3.2 oz. kit  | Fast Fixture             | Light Blue     | 200,000   | 1:1                              | 10                     | 25                            | 24                                | 3,825                  | 180°F (82°C)  |
|                        | <b>E-00CL™ HYSOL®</b>         | 29289<br>29290<br>29291                             | 50 ml "A" dual cartridge<br>200 ml "C" dual cartridge<br>400 ml "C" dual cartridge                       | Fast Fixture<br>Flowable | Clear          | 10,000    | 1:1                              | 3.5                    | 15                            | 24                                | 2,160                  | 180°F (82°C)  |
|                        | <b>E-00NS™ HYSOL®</b>         | 29294<br>29295<br>29296                             | 50 ml "A" dual cartridge<br>200 ml "C" dual cartridge<br>400 ml "C" dual cartridge                       | Fast Fixture<br>Low Odor | Translucent    | 100,000   | 1:1                              | 3                      | 15                            | 24                                | 1,600                  | 180°F (82°C)  |
|                        | <b>E-05CL™ HYSOL®</b>         | 29299<br>29301<br>29302*<br>29303*                  | 50 ml "A" dual cartridge<br>400 ml "C" dual cartridge<br>5 gallon pail, resin<br>5 gallon pail, hardener | Fast Fixture             | Clear          | 2,500     | 1:1                              | 3                      | 30                            | 24                                | 1,430                  | 180°F (80°C)  |
|                        | <b>E-05MR™ HYSOL®</b>         | 1086598<br>1086599*<br>1087602*<br>1087603*         | 50 ml "A" dual cartridge<br>400 ml "C" dual cartridge<br>5 gallon pail, resin<br>5 gallon pail, hardener | Moisture Resistant       | Ultra-Clear    | 25,000    | 1:1                              | 5                      | 15                            | 24                                | 3,380                  | 250°F (121°C) |
| <b>3982™ HYSOL®</b>    | 36767                         | 30 ml syringe                                       | Fluorescent<br>Heat Cure   | Off-White                | 8,000          | N/A       | N/A                              | N/A                    | 0.5 @<br>257°F<br>(125°C)     | 5,830 <sup>4</sup>                | 250°F (121°C)          |               |
| <b>3985™ HYSOL®</b>    | 40870<br>34731*               | 1 liter bottle<br>5 gallon pail                     | Non-Sag<br>Heat Cure   | Black                    | 50,000         | N/A       | N/A                              | N/A                    | 0.5 @<br>272°F<br>(133°C)     | N/A                               | 300°F (149°C)          |               |
| <b>TEROKAL® 5089™</b>  | 1182757<br>1182761<br>1182927 | 300 ml cartridge<br>5 gallon pail<br>55 gallon drum | High Performance   | Purple                   | 100,000        | N/A       | N/A                              | N/A                    | 20 min.<br>@ 350°F<br>(177°C) | 2,900                             | 350°F (177°C)          |               |
| <b>9432NA™ HYSOL®</b>  | 83217*<br>83216*              | 2 lb. can<br>55 lb. pail                            | High Temperature   | Grey                     | 225,000        | N/A       | N/A                              | N/A                    | 1 @<br>248°F<br>(120°C)       | 2,850                             | 300°F (149°C)          |               |
| <b>E-214HP™ HYSOL®</b> | 29339<br>29340                | 30 ml cartridge<br>300 ml cartridge                 | High Strength  | Grey                     | Paste          | N/A       | N/A                              | N/A                    | 0.66 @<br>248°F<br>(120°C)    | 4,820                             | 300°F (149°C)          |               |
| <b>E-910™</b>          | 1501093                       | 5 gallon pail                                       | Low Cure Temperature   | Green                    | 40,000         | N/A       | N/A                              | N/A                    | 1 @<br>176°F<br>(80°C)        | 2,000 <sup>2</sup>                | 300°F (149°C)          |               |

ITEMS IN RED = Source's PICK OR NEW

\* Made-to-order item.  
<sup>1</sup> Grit-blasted steel.  
<sup>2</sup> Aluminum.

<sup>3</sup> Work life = time for viscosity to double; Working time = maximum time before assembly (steel).  
<sup>4</sup> Block Shear – grit-blasted mild steel.









# Epoxy Adhesive Equipment



## YOUR EQUIPMENT Source

For more details, see the **LOCTITE® Equipment Sourcebook, LT-3669**, or visit us on the web for additional information, diagrams, products and our full line of equipment at [www.equipment.loctite.com](http://www.equipment.loctite.com).



| LOCTITE® PRODUCT   | ITEM NUMBERS                            | USED TO DISPENSE | PACKAGE TYPES & SIZES                                  | VISCOSITY RANGE        | CONSUMABLES – DISPENSE ACCESSORIES |  |
|--|---|------------------|--|------------------------|------------------------------------|--|
| <b>SYRINGE DISPENSING – SIMPLE MANUAL DISPENSERS FOR LOW VOLUME SYRINGE APPLICATIONS</b> |   |                  |  |                        |                                    |  |
|         | <b>30 ML MANUAL SYRINGE APPLICATOR</b>  | 1544934          | Any fluid in a 30 ml syringe, including 25 ml syringes | 30 ml syringe          | Low to High                        | Dispense Tips and Accessories – Pages 176-177<br>Syringe Accessories – Pages 181-182 |
|         | <b>10/30 ML SYRINGE MANUAL PLUNGERS</b> | 98192            | Any fluid in a 10 ml syringe                           | 10 ml syringe (3 pack) | Low to High                        | N/A  |
|  |   | 98193            | Any fluid in a 30 ml syringe                           | 30 ml syringe (3 pack) |                                    |  |

| LOCTITE® PRODUCT                      | ITEM NUMBER   | PRESSURE REGULATION                                      | USED TO DISPENSE | PACKAGE TYPE & SIZES | VISCOSITY RANGE  | LOW LEVEL SENSING   | CONSUMABLES – DISPENSE ACCESSORIES |     |                                  |
|---------------------------------------|---|--|------------------|----------------------|--|---|------------------------------------|-----|----------------------------------|
| <b>PNEUMATIC CARTRIDGE DISPENSING</b> |   |  |                  |                      |  |   |                                    |     |                                  |
| <b>DISPENSE SYSTEMS</b>               |   | <b>300 ML PNEUMATIC CARTRIDGE DISPENSING RETAINER</b>    | 98319A           | 0 to 60 psi          | Gel Cyanoacrylates, Anaerobic Gasketing, Light Cure/Acrylics, Silicones          | 300 ml cartridges   | Low to Medium                      | No  | Cartridge Accessories – Page 177 |
|                                       |  | <b>300 ML CARTRIDGE PUSHER</b>                           | 98022            | 0 to 50 psi          | Gel Adhesives, Anaerobic Gasketing, Light Cure Acrylics, Low Viscosity Silicones | 300 ml cartridges<br>250 ml tubes                           | Medium                             | Yes |                                  |
|                                       |  | <b>HD10 300 ML PNEUMATIC CARTRIDGE DISPENSER</b>         | 1714379          | 0 to 60 psi          | Gel Cyanoacrylates, Anaerobic Gasketing, Light Cure Acrylics, Silicones          | 300 ml cartridges<br>250 ml tubes                           | Medium to High                     | No  |                                  |
|                                       |  | <b>HIGH PRESSURE 300 ML BENCHTOP CARTRIDGE DISPENSER</b> | 1046901          | 0 to 725 psi         | Silicone, Polyurethane, MS Polymer Adhesives                                     | 290 ml cartridges<br>300 ml cartridges<br>310 ml cartridges | 10,000 to 1,000,000                | Yes |                                  |

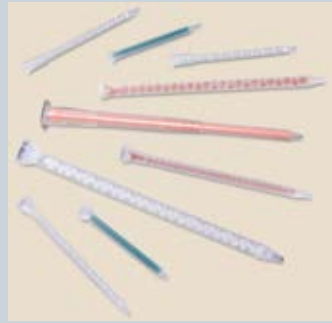
| LOCTITE® PRODUCT  | ITEM NUMBERS                                  | TYPE    | VISCOSITY RANGE                       | DISPENSE PATTERNS | USED TO DISPENSE                  | STROKE ADJUSTMENT | SUCK-BACK               | CONSUMABLES – DISPENSE ACCESSORIES            |
|---|---|---------|---------------------------------------|-------------------|-----------------------------------|-------------------|-------------------------|---|
| <b>HIGH VISCOSITY FLUID AND PASTE VALVES</b>  |   |         |                                       |                   |                                   |                   |                         |   |
|  | <b>VA 25 DISPENSE VALVE – 50 BAR</b>          | 1838885 | High Viscosity Fluid and Paste Valves | Drop, Bead        | Silicones, MS Polymers, Urethanes | Yes               | Yes                     | Dispense Tips and Accessories – Pages 176-177 |
|  | <b>HIGH PRESSURE DISPENSE VALVE – 150 BAR</b> | 1153502 |                                       |                   |                                   |                   | 500,000 to 2,000,000 cP |   |

ITEMS IN RED = Source's PICK or NEW

**MIX NOZZLES**

Plastic, disposable nozzles that attach directly to LOCTITE® dual cartridges. They are designed to mix adhesive automatically as it travels through the static-mix nozzle.

See pages 178-180 for more LOCTITE® Mix Nozzles or visit [www.equipment.loctite.com](http://www.equipment.loctite.com).



ADDITIONAL RESOURCES



| LOCTITE® PRODUCT            |         | ITEM NUMBER   | USED TO DISPENSE  | PACKAGE TYPE & SIZES             | MIX RATIOS     | VISCOSITY RANGE | TYPE      | CONSUMABLES – DISPENSE ACCESSORIES               |
|-----------------------------|---------|---|---|----------------------------------|----------------|-----------------|-----------|--|
| <b>TWO-PART DISPENSING</b>  |         |   |   |                                  |                |                 |           |  |
| <b>HANDHELD APPLICATORS</b> |         | 98472   | Two-Component Epoxies, Urethanes, Methacrylates             | 50 ml dual cartridge             | 1:1, 2:1, 4:1  | Low to High     | Manual    | Static Mix Nozzles & Accessories – Pages 178-180 |
|                             |         | 1034026   |   | S-50 dual cartridge              | 10:1           |                 |           |  |
|                             |         | 97042   | Two-Component Epoxies, Urethanes, Methacrylates             | 50 ml dual cartridge             | 1:1, 2:1       | Low to High     | Pneumatic |  |
|                             |         | 1493310   | Two-Component Epoxies, Urethanes, Methacrylates, 10:1 ratio | 50 ml dual cartridge             | 10:1           | Low to High     | Pneumatic |  |
|                             |         | 983436  | Two-Component Epoxies, Urethanes, Methacrylates             | 200 ml dual cartridge            | 1:1, 2:1       | High to Paste   | Manual    |  |
|                             |         | 983438  |   | 400 ml dual cartridge            | 1:1, 2:1       |                 |           |  |
|                             |         | 985246  |   | 490 ml dual cartridge            | 10:1           |                 |           |  |
|                             |         | 983437  | Two-Component Epoxies, Urethanes, Methacrylates             | 200 ml dual cartridge            | 1:1, 2:1       | High to Paste   | Pneumatic |  |
| 983439                      |         | 400 ml dual cartridge   |   | 1:1, 2:1                         |                |                 |           |  |
| 985249                      |         | 490 ml dual cartridge   |   | 10:1                             |                |                 |           |  |
|                             | 1500890 | Two-Component Epoxies, Urethanes, Methacrylates                           | 400 ml dual cartridge                                       | 1:1, 2:1                         | High           | Pneumatic       |           |  |
|                             | 1093940 | Henkel Construction Adhesives, Caulking products in 10 oz. caulking tubes | 300 ml cartridges   | All 300 ml caulking style ratios | Medium to High | Manual          |           |  |
|                             | 1372751 | Two-Component Epoxies, Urethanes, Methacrylates                           | 200 ml/400 ml dual cartridges                               | 1:1, 2:1, 4:1, 10:1              | High to Paste  | Manual          |           |  |

ITEMS IN RED = Source's PICK or NEW

**EQUIPMENT** – Henkel is a full-service supplier of LOCTITE® branded equipment and offers a wide variety of equipment services to its customers. For more LOCTITE® branded equipment, go to page 165.

Can't find what you're looking for? Visit [www.equipment.loctite.com](http://www.equipment.loctite.com) or call 1-800-LOCTITE (562-8483).

**STRAIGHT FROM** *The Source*

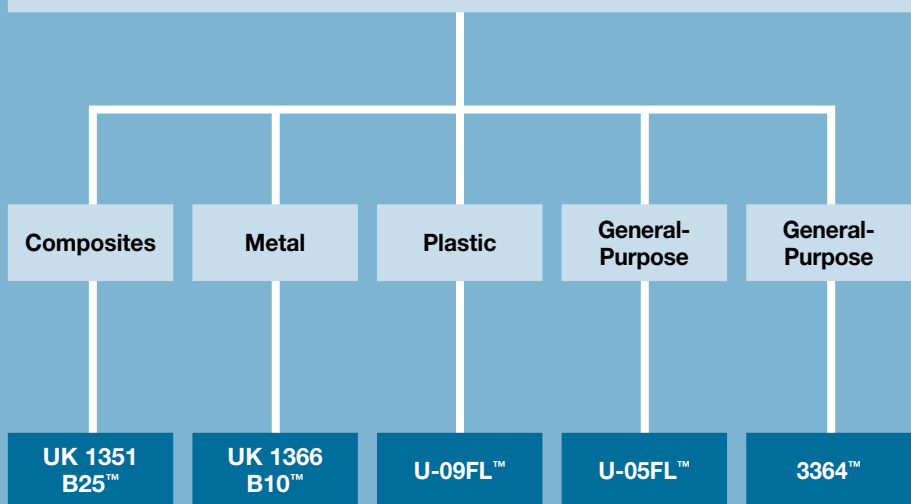
# Polyurethane Adhesives



## Your Application

- Bond a wide variety of materials, including most metals, plastics and composites
- Exhibit superior moisture and humidity resistance, as well as good toughness and flexibility

## WHAT ARE YOU BONDING?



## Solution

|                               | UK 1351 B25™ | UK 1366 B10™ | U-09FL™ | U-05FL™   | 3364™  |
|-------------------------------|--------------|--------------|---------|-----------|--------|
| <b>Color</b>                  | Green        | Green        | Clear   | Off-White | Black  |
| <b>Viscosity (cP)</b>         | 29,000       | 34,000       | 5,000   | 100,000   | 5,000  |
| <b>Mix Ratio</b>              | 2:1          | 4:1          | 1:1     | 1:2       | 1:2    |
| <b>Work Life (minutes)</b>    | 50           | 30           | 10      | 5         | 5      |
| <b>Fixture Time (minutes)</b> | 75           | 35           | 120     | 180       | 30     |
| <b>Cure Time (hours)</b>      | 72           | 72           | 72      | 72        | 72     |
| <b>Shear Strength** (psi)</b> | 2,360        | 1,550        | 1,460   | 930†      | 2,800† |

## Product Description

**LOCTITE® UK 1351 B25™ Urethane Adhesive Composite Bonder**

A highly toughened, GL approved two-part urethane for composites bonding. Non-sag with excellent fatigue and environmental resistance.

**P/N Package Size**  
1667557 400 ml cartridge

**LOCTITE® UK 1366 B10™ Urethane Adhesive Metal Bonder**

A highly flexible, medium fixture structural bonder that has good adhesion to metals and plastics. Excellent environmental resistance and impact strength.

**P/N Package Size**  
1668032 415 ml cartridge

**LOCTITE® U-09FL™ Hysol® Urethane Adhesive Plastic Bonder**

A two-part, high performance urethane adhesive for plastic bonding with a 10-minute work life. Clear, impact resistant, high peel.

**P/N Package Size**  
29460 50 ml dual cartridge  
29462\* 400 ml dual cartridge

**LOCTITE® U-05FL™ Hysol® Urethane Adhesive General-Purpose**

A high performance urethane adhesive for general-purpose metal bonding with a 5-minute work life. Off-white, highly flexible, impact and moisture resistant, high peel, high shear.

**P/N Package Size**  
29348 50 ml dual cartridge  
29349 200 ml dual cartridge  
29350 400 ml dual cartridge

**LOCTITE® 3364™ Urethane Adhesive/Potting Compound General-Purpose**

A fast fixturing, flame resistant, general-purpose polyurethane suitable for bonding or potting. It carries a UL® 94 V-0 rating for flame resistance.

**P/N Package Size**  
1166733 50 ml dual cartridge

\* Made-to-order item.  
\*\* Steel.  
† Grit-blasted steel.

## LOCTITE® Polyurethane Adhesive Properties Chart








| LOCTITE® PRODUCT |                | ITEM NUMBER             | PACKAGE TYPE/SIZE  | FEATURES                                | COLOR     | VISCOSITY (cP) | MIX RATIO | WORK LIFE (minutes) | FIXTURE TIME (minutes) | CURE TIME (hours) | SHEAR STRENGTH** (psi) |
|------------------|----------------|-------------------------|--|---|-----------|----------------|-----------|---------------------|------------------------|-------------------|------------------------|
| COMPOSITES       | UK 1351 B25™   | 1667557                 | 400 ml cartridge   | Toughened Composite Bonder, GL Approved | Green     | 29,000         | 2:1       | 50                  | 75                     | 72                | 2,360                  |
|                  | UK 1366 B10™   | 1668032                 | 415 ml cartridge   | Metal Bonder, Flexible                  | Green     | 34,000         | 4:1       | 30                  | 35                     | 72                | 1,550                  |
| METAL            | U-09FL™ HYSOL® | 29460<br>29462*         | 50 ml "A" dual cartridge<br>400 ml "C" dual cartridge                              | Plastic Bonder, Flexible                | Clear     | 5,000          | 1:1       | 10                  | 120                    | 72                | 1,460                  |
|                  | U-09LV™ HYSOL® | 38588                   | 50 ml "A" dual cartridge   | Low Viscosity, Medium Work Life         | Clear     | 1,000          | 1:1       | 10                  | >180                   | 72                | 1,146†                 |
| PLASTIC          | U-05FL™ HYSOL® | 29348<br>29349<br>29350 | 50 ml "A" dual cartridge<br>200 ml "C" dual cartridge<br>400 ml "C" dual cartridge | General-Purpose, Flexible               | Off-White | 100,000        | 1:2       | 5                   | 160                    | 72                | 930†                   |
|                  | 3364™          | 1166733                 | 50 ml "A" dual cartridge   | General-Purpose, Flame Resistant        | Black     | 5,000          | 1:2       | 5                   | 30                     | 72                | 2,800†                 |

| LOCTITE® PRODUCT  | ITEM NUMBER   | PACKAGE TYPE/SIZE  | COLOR | EXTRUSION RATE (G MIN) | CURE METHOD | SKIN TIME (MIN) | TEMP. RANGE                     | SHORE HARDNESS | TENSILE STRENGTH (PSI) | ELONGATION AT BREAK (%) | SHEAR STRENGTH ON STEEL (PSI) |
|---|---------------|--------------------|-------|------------------------|-------------|-----------------|---------------------------------|----------------|------------------------|-------------------------|-------------------------------|
| GENERAL PURPOSE<br><b>3370™ POLYURETHANE ADHESIVE/SEALANT</b> | 1535077       | 300 ml cartridge   | White | N/A                    | Moisture    | 30              | -40°F (-40°C) to 200°F (93°C)   | A 50           | 330                    | 400                     | N/A                           |
|   | 1538161       | 20 oz. sausage     | White |                        |             |                 |                                 |                |                        |                         |                               |
|   | 1552178       | 5 gallon pail      | White |                        |             |                 |                                 |                |                        |                         |                               |
|   | 1552179       | 485 lb. drum       | White |                        |             |                 |                                 |                |                        |                         |                               |
|   | 1535036       | 300 ml cartridge   | Grey  |                        |             |                 |                                 |                |                        |                         |                               |
|   | 1675274       | 20 oz. sausage     | Grey  |                        |             |                 |                                 |                |                        |                         |                               |
|   | 1550218       | 5 gallon pail      | Grey  |                        |             |                 |                                 |                |                        |                         |                               |
|   | 1550231*      | 485 lb. drum       | Grey  |                        |             |                 |                                 |                |                        |                         |                               |
|   | 1535076       | 300 ml cartridge   | Black |                        |             |                 |                                 |                |                        |                         |                               |
|   | 1538160       | 20 oz. sausage     | Black |                        |             |                 |                                 |                |                        |                         |                               |
| 1550213   | 5 gallon pail | Black              |       |                        |             |                 |                                 |                |                        |                         |                               |
| 1548600   | 485 lb. drum  | Black              |       |                        |             |                 |                                 |                |                        |                         |                               |
| URETHANE SEALANT  | 39916         | 10.2 oz. cartridge | Grey  | NA                     | 24 hours    | Moisture        | -40°F (-40°C) to 180°F (82.2°C) | 33             | 200                    | 1000                    | 170                           |

ITEMS IN RED = Source's PICK or NEW

\* Made-to-order item. \*\* Steel. † Grit-blasted steel.

## Polyurethane Adhesive Equipment

| LOCTITE® PRODUCT  | ITEM NUMBER   | USED TO DISPENSE                                  | PACKAGE TYPE & SIZES                            | MIX RATIOS  | VISCOSITY RANGE       | TYPE          | CONSUMABLES – DISPENSE ACCESSORIES |  |           |
|---|---|---|---|---|-----------------------|---------------|------------------------------------|--|-----------|
| <b>TWO-PART DISPENSING</b>  |   |   |   |   |                       |               |                                    |  |           |
| HANDHELD APPLICATORS  |  | 50 ML DUAL CARTRIDGE MANUAL APPLICATORS           | 98472   | Two-Component Epoxies, Urethanes, Methacrylates             | 50 ml dual cartridge  | 1:1, 2:1, 4:1 | Low to High                        | Static Mix Nozzles & Accessories – Pages 178-180 |           |
|   |   |   | 1034026   |   | S-50 dual cartridge   | 10:1          |                                    |  |           |
|   |  | 50 ML DUAL CARTRIDGE PNEUMATIC APPLICATOR         | 97042   | Two-Component Epoxies, Urethanes, Methacrylates             | 50 ml dual cartridge  | 1:1, 2:1      | Low to High                        |  | Pneumatic |
|   |  | 50 ML S-STYLE DUAL CARTRIDGE PNEUMATIC APPLICATOR | 1493310   | Two-Component Epoxies, Urethanes, Methacrylates, 10:1 ratio | 50 ml dual cartridge  | 10:1          | Low to High                        |  | Pneumatic |
|   |  | 200 ML/400 ML DUAL CARTRIDGE MANUAL APPLICATORS   | 983436  | Two-Component Epoxies, Urethanes, Methacrylates             | 200 ml dual cartridge | 1:1, 2:1      | High to Paste                      |  | Manual    |
|   |   |   | 983438  |   | 400 ml dual cartridge | 1:1, 2:1      |                                    |  |           |
|   |   |   | 985246  |   | 490 ml dual cartridge | 10:1          |                                    |  |           |
|  | 200 ML/400 ML DUAL CARTRIDGE PNEUMATIC APPLICATORS                                  | 983437  | Two-Component Epoxies, Urethanes, Methacrylates | 200 ml dual cartridge                                       | 1:1, 2:1              | High to Paste | Pneumatic                          |  |           |
|   |   | 983439  |   | 400 ml dual cartridge                                       | 1:1, 2:1              |               |                                    |  |           |
|   |   | 985249  |   | 490 ml dual cartridge                                       | 10:1                  |               |                                    |  |           |
|  | 400 ML DUAL CARTRIDGE PNEUMATIC APPLICATOR  | 1500890   | Two-Component Epoxies, Urethanes, Methacrylates | 400 ml dual cartridge                                       | 1:1, 2:1              | High          | Pneumatic                          |  |           |
|  | FIXMASTER® UNIVERSAL DISPENSER  | 1372751   | Two-Component Epoxies, Urethanes, Methacrylates | 200 ml/400 ml dual cartridges                               | 1:1, 2:1, 4:1, 10:1   | High to Paste | Manual                             |  |           |

ITEMS IN RED = Source's PICK or NEW