



THREADLOCKING

Locking of threaded fasteners

- » PREVENTS LOOSENING FROM SHOCK AND VIBRATION
- » SINGLE COMPONENT – CLEAN AND EASY TO APPLY
- » CAN BE USED ON VARIOUS SIZES OF FASTENERS – REDUCES INVENTORY COSTS
- » FILLS GAP BETWEEN THREADS AND UNITIZES THE ASSEMBLY
- » STOPS RUST AND CORROSION

► ARE THE PARTS ALREADY ASSEMBLED?

Helpful Hints:

- Clean parts with LOCTITE® SF 7070 ODC-Free Cleaner and Degreaser before applying the adhesive.
- If the threadlocker will be applied below 5°C, pre-treat with LOCTITE® 7649 Primer N.
- If the parts were in contact with aqueous washing solutions or cutting fluids that leave a protective layer on the surface, wash with hot water before use.

YES

Wicking – Green

► HENKEL SOLUTIONS

LOCTITE® 290

| | |
|---|---------------------------|
| Fastener Size | 1/16" TO 1/2" (M2 TO M12) |
| Strength | High |
| Cure Time (Fixture/Full Strength)* | 20 min./24 hr. |
| Breakaway/Prevail Torque (N.m) | 10/29 |
| Temperature Resistance for Continuous Service | 150°C |

Package Size & IDH

50 ml bottle - 531724
250 ml bottle - 848069

* Typical value @ 22°C

ADDITIONAL PRODUCTS

| Name | Strength/Color | Breakaway/Prevail Torque (N.m) | Features |
|--------------|----------------|--------------------------------|---|
| LOCTITE® 220 | Low - Blue | 9/19 | Removable grade, wicking, for small threads of 1/4" (M6) or smaller |
| LOCTITE® 270 | High - Red | 26/36 | Fasteners up to 3/4" (M20) |
| LOCTITE® 271 | High - Red | 28/31 | Fasteners up to 1" (Up to M25) |
| LOCTITE® 272 | High - Orange | 22/24 | High Temp up to 11/2" (M36) |



Recommended for locking pre-assembled fasteners, i.e. instrumentation screws, electrical connectors, and set screws. Also seals porosities in welds and metal parts.

LOCTITE® PRIMERS

- Use LOCTITE® Primer to:**
1. Activate inactive surfaces.
 2. Speed cure times for faster return to service.
 3. Speed curing through larger gaps and deep threads.
 4. Substantially speed cure times on cold parts.
 5. Act as a cleaning agent.



NO

What strength do you require?

Low - Purple

Medium - Blue

High - Red

Permanent - Red

Oil tolerant

LOCTITE® 222

Up to 1/4" (Up to M6)

Low

10 min./24 hr.

6/3

150°C

50 ml bottle - 848063
250 ml bottle - 848062

Recommended for low strength threadlocking of adjustment screws, countersunk head screws, and set screws; on collars, pulleys, tool holders, and controllers. Also for low strength metals such as aluminum or brass.

LOCTITE® 243 (Up)

1/4" to 3/4" (M6 to M20)

Medium

10 min./24 hr.

20/7

180°C

10 ml bottle - 1427418
50 ml bottle - 1367282
250 ml bottle - 531707
1 litre bottle - 833788

With improved oil tolerance, LOCTITE® 243 Threadlocker is effective on all types of metal threaded fasteners. Prevents loosening on vibrating parts such as pump, motor mounting bolts, gear boxes, or presses. Removable with hand tools.

LOCTITE® 263 (Up)

Up to 1"

High

10 min./24 hr.

32/32

180°C

50 ml bottle - 1367281
250 ml bottle - 1511183

Engineered to cure consistently on a variety of metals, despite minor surface contaminants. Works on steel, stainless steel and most plated fasteners. Tolerates thread lubrication, anti-corrosion and protection fluids. Heat required for removal.

LOCTITE® 277

For large bolts > 7/8" (>20mm)

Permanent

60 min./24 hr.

31/31

150°C

50 ml bottle - 531723
250 ml bottle - 531722

High strength adhesive for locking and sealing large bolts and studs 1" (25 mm) or larger in diameter. Heat may be required to weaken bond before parts can be disassembled.

| Name | Color | Viscosity | Base | On-Part Life | Dry Time | Package Size & IDH | Primer is optional with: |
|---------------|-------------|-----------|---------------------|--------------|------------------|--------------------|--|
| 7649 Primer N | Clear/Green | 2 | Acetone | 30 days | 30 to 70 seconds | 100 ml - 849297 | Active surfaces: Brass, copper, bronze, iron, soft steel, nickel. |
| 7471 Primer T | Amber | 2 | Acetone/Isopropanol | 7 days | 30 to 70 seconds | 100 ml - 849296 | Primer is required with: Inactive surfaces: Aluminum, stainless steel, magnesium, zinc, black oxide, cadmium, titanium, and others. |



THREAD SEALING

- » LIQUIDS ENSURE COMPLETE CONTACT BETWEEN THREADS FOR A 100% SEAL
- » LIQUIDS WILL NOT CREEP, SHRINK, SHRED OR BLOCK SYSTEMS (INCLUDING FILTERS)
- » DISASSEMBLY CAN BE ACHIEVED EASILY WITH BASIC HAND TOOLS
- » REPLACES TAPES AND PASTES

► ARE THE PARTS METAL OR PLASTIC?

Helpful Hints:

- If the sealant (LOCTITE® 545 Thread Sealant, LOCTITE® 565 Thread Sealant, LOCTITE® 567 Thread Sealant, or LOCTITE® 561 Pipe Sealant) will be applied below 5°C, pre-treat with LOCTITE® 7649 Primer N.
- All parts must be clean and dry before sealing - use LOCTITE® SF 7070 ODC-Free Cleaner and Degreaser.

PLASTIC AND/ OR METAL

| HENKEL SOLUTIONS | LOCTITE® 55 |
|---|---------------------------|
| Description | Cord |
| Maximum Thread Size | 4" (10.16 cm) |
| Temperature Resistance | 150°C |
| Maximum Pressure Resistance (N/mm²)/Cure Time | 10,000 psi (68.9)/instant |
| Substrate to be Sealed | Metal, Plastic or Both |
| Instant Low Pressure Seal | Yes |
| Package Size & IDH | 150 metres - 1752446 |

ADDITIONAL PRODUCTS

| Name | Features |
|--------------|--|
| LOCTITE® 572 | Easy application by hand. Slow curing. For use on construction pipe sealing. |
| LOCTITE® 545 | Low strength, fast curing for hydraulic / Pneumatic fittings. |



Can be safely applied on metal and plastic threaded fittings. Potable water: NSF/ANSI 61 UL Listed and Certified to CSA International. **



METAL PARTS

Are the threads fine or coarse?

| Fine | Coarse | | |
|---|--|--|--|
| LOCTITE® 542 (Hydraulic & Pneumatic) | LOCTITE® 565 | LOCTITE® 567 | LOCTITE® 577 |
| Brown Liquid | White to off White Paste | White Paste | Yellow Paste |
| Up to 3/4" (1.90 cm) | Up to 2" (5.08 cm) | 3" (7.62 cm) | Up to 3" (7.62 cm) |
| 150°C | 150°C | 204°C | 130°C |
| 10,000 psi (68.9)/24 hrs. | 10,000 psi (68.9)/72 hrs. | 10,000 psi (68.9)/72 hrs. | 10,000 psi (68.9)/72 hrs. |
| Metal | Metal | Stainless Steel, Aluminum | Metal |
| No | Yes | Yes | No |
| 50 ml bottle - 848735 250 ml bottle - 848736 | 50 ml bottle - 1751917 250 ml bottle - 1752552 | 50 ml bottle - 1752537 250 ml bottle - 1752545 | 50 ml bottle tube - 2121780 250 ml bottle tube - 2121367 |
| | | | |
| Recommended for fine threaded fittings as used in hydraulic and pneumatic installations and small fittings in general. Carries German DVGW approval (NG-5146 AR 0855) Meets BS 6956 type A for sealing gas fittings. ** | A general-purpose instant sealant for tapered and straight/tapered fittings. | Withstands temperatures to 204°C with excellent solvent resistance. Locks and seals tapered pipe threads and fittings, including high pressure applications. Disassembles with hand tools. | Medium strength, general purpose sealant for use on coarse, threaded components. |

** All approvals are region specific. Please contact your Henkel Sales Representative for further information.



GASKETING Sealing and Flanges

- » NO SHIMMING EFFECT – CONTROLLED TOLERANCES, NO NEED FOR RE-TORQUING
- » FILL ALL VOIDS – REDUCE THE NEED FOR A FINE SURFACE FINISH OF FLANGES
- » PARTS CAN BE DISASSEMBLED EASILY EVEN AFTER EXTENDED SERVICE
- » RESISTS HIGH PRESSURE WHEN FULLY CURED

► DOES THE EXISTING GASKET NEED TO BE USED AS A SHIM?

Helpful Hints:

- If there are traces of old gasket left on the parts to be sealed, clean with LOCTITE® SF 790 Chisel Gasket Remover.
- All parts must be clean and dry before sealing – use LOCTITE® SF 7070 ODC-Free Cleaner and Degreaser.
- Anaerobic products cure between metal surfaces with the absence of air.

► HENKEL SOLUTIONS

| | LOCTITE® 510 | LOCTITE® 518  |
|--|---|--|
| Color | Pink | Red |
| Gasket Type | Formed-in-place | Formed-in-place |
| Gap Fill | 0.010" (0.25 mm) | 0.010" (0.25 mm) |
| Cure Method | Anaerobic | Anaerobic |
| Fixture/Cure Time | N.A./24 hrs. | N.A./24 hrs. |
| Temperature Resistance (Continuous/Intermittent) | 204°C/N.A. | 150°C/N.A. |
| Instant Seal | Excellent | Excellent |
| Water/Glycol Resistance | Excellent | Excellent |
| Package Size & IDH | 50ml bottle tube - 848390 250ml bottle tube - 848731 300ml cartridge - 910888 | 50ml bottle tube - 211819 250ml bottle tube - 211817 |

ADDITIONAL PRODUCTS

| Name | Features |
|---|---|
| LOCTITE® 515 Gasket Eliminator Flange Sealant | For flexible applications. Cure speed: Unprimed - 1 to 12 hours. Primed - 15 minutes to 2 hours. |
| LOCTITE® 790 Chisel Gasket Remover | Solvent. Dry time: Leave on surface for 5 to 10 minutes. Wipe/scrape clean. |
| LOCTITE® SI 5920 | Designed for high temperature resistance and electrical insulating applications. Temperature resistance upto 360°C. |



High temperature. Product has a temperature range to 204°C with excellent solvent and chemical resistance. Makes or dresses gaskets in rigid assemblies. Eliminates gasket compression set.



Recommended for use on rigid iron, steel and aluminum flanges. Spray LOCTITE® SF 7649 Primer N on only one surface.

NO

Are you sealing a rigid or a stamped flange?

Rigid

Stamped

| LOCTITE® 574 | LOCTITE® SI 587 | LOCTITE® SI 596 | LOCTITE® SI 5900 |
|---|---|--------------------------|---------------------------|
| Red | Blue | Red | Black |
| Formed-in-place | Formed-in-place | Formed-in-place | Formed-in-place |
| 0.010" (0.25 mm) | 0.250" (6.35 mm) | 0.250" (6.35 mm) | 0.240" (6 mm) |
| Anaerobic | Moisture (RTV) | Moisture (RTV) | Moisture (RTV) |
| N.A./24 hrs. | 50 min. (Skin formation) | 50 min. (Skin formation) | 20 min. (Skin formation) |
| 150°C/N.A. | 204°C/250°C | 316°C | 204°C/N.A. |
| Excellent | Excellent | Excellent | Excellent |
| Excellent | Excellent | Excellent | Excellent |
| 50ml bottle tube - 848739 250ml bottle tube - 848734 | 95g tube - 1266356 300ml cartridge - 1246389 | 300ml cartridge - 317667 | 300ml cartridge - 1257126 |



Recommended for sealing rigid & semi-rigid metal flanges. Fast curing. Gives instant sealing.



All types of flanges including stamped sheet metal. Designed for superior bonding properties to oil contaminated metals.



High temperature silicone sealant makes the repair of industrial furnaces, ovens, boilers, exhaust stacks, high temperature stacks, ducting and heating elements.



Superior flexibility, withstand high relative joint movement. High adhesion, gives instant seal. Low odor, Low volatility, Non-corrosive.



RETAINING Securing Cylindrical Assemblies

- » BOND NON-THREADED CYLINDRICAL METAL ASSEMBLIES
- » HIGH AND MODERATE STRENGTH PRODUCTS – CAN CARRY HIGH LOADS AND ELIMINATE FRETTING
- » FILL ALL VOIDS – PREVENT CORROSION
- » REDUCE THE NEED FOR CLOSE TOLERANCES
- » 100% CONTACT – LOAD AND STRESS ARE DISTRIBUTED EVENLY OVER THE JOINT

► IS THE ASSEMBLY BADLY WORN?

Helpful Hints:

- If the retaining compound will be applied below 5°C, pre-treat with LOCTITE® 7649 Primer N.
- All parts must be clean and dry before sealing – use LOCTITE® SF 7070 ODC-Free Cleaner and Degreaser.
- If the parts have been in contact with washing or cutting fluids containing nitrates, wash with hot water.

**YES - GAPS UP TO
0.020" (0.5 MM)**

► HENKEL SOLUTIONS

LOCTITE® 660

| | |
|---------------------------------|-----------------------|
| Strength Required | High |
| Shear Strength (N/mm²) | 3,335 psi (23) |
| Diametrical Clearance | Up to 0.020" (0.5 mm) |
| Temperature Resistance | 150°C |
| Cure Time (Setup/Full Strength) | 20 min./24 hr. |

Package Size & IDH 50ml bottle - 1752417

* Requires heat cure to achieve temperature resistance

ADDITIONAL PRODUCTS

| Name | Features |
|----------------------------|--|
| LOCTITE® 680 ^{Up} | Gives best resistance to dynamic, axial and radial loads. Recommended for retaining shafts, gears, pulleys, and similar cylindrical parts. |
| LOCTITE® 620 | Particularly suitable for applications where temperature resistance up to 200°C is required. Requires heat cure to achieve temperature resistance. |
| LOCTITE® 603 | For close-fitting parts (gap up to 0.1 mm) with light contamination. Typical applications include retaining roller bearings or oil impregnated bushings into housings. |



Used for repairing worn coaxial parts without remachining; enables reuse of worn bearing seats, keys, splines, tapers, or for retaining shims.



NO - GAPS TO 0.015" (0.25 MM)

Do you require low, medium or high strength?

Low Strength

Medium Strength

High Strength

High Viscosity

Low Viscosity

LOCTITE® 641

LOCTITE® 609

LOCTITE® 638 ^{Up}

LOCTITE® 648 ^{Up}

Low

Medium

High

High

1,700 psi (11.7)

2,300 psi (15.8)

4,200 psi (29)

4,480 psi (31)

Up to 0.006" (0.15 mm)

Up to 0.005" (0.1 mm)

Up to 0.01" (0.25 mm)

Up to 0.006" (0.15 mm)

150°C

150°C

180°C

180°C

20 min./24 hr.

10 min./24 hr.

15 min./24 hr.

10 min./24 hr.

50ml bottle - 848752
250ml bottle - 848750

50ml bottle - 848744
250ml bottle - 848745

50ml bottle - 1865160
250ml bottle - 1865048

50ml bottle - 1865163
250ml bottle - 1865164



A controlled strength retaining compound that is ideal for cylindrical parts that require disassembly.



Recommended for parts that will need subsequent dismantling, i.e. retention of bearings onto shafts and into housings.



Maximum strength. For use where high dynamic force or cyclic loading is expected. Offers high temperature performance and oil tolerance.



Press Fit/High Strength/Rapid Cure. Offers high temperature performance and oil tolerance.



INSTANT BONDING

- » ASSEMBLE PARTS QUICKLY AND EASILY
- » REPAIR BROKEN PARTS
- » BOND DISSIMILAR PARTS



▶ WHAT IS THE BONDING APPLICATION REQUIREMENT?

▶ HENKEL SOLUTIONS

| | |
|-----------------------------|--|
| Fixture Time | 15 sec. |
| Gap Fill (mm) | 0.12 |
| Temperature Resistance | 120°C |
| Shear Strength, psi (N/mm²) | 3200 (22) |
| Viscosity (cP) | 110 |
| Package Size & IDH | 20g bottle - 1669715 1litre bottle - 833784 |

Porous / absorbent material

LOCTITE® 401



Surface insensitive instant adhesive for difficult-to-bond, porous surfaces such as wood, paper, leather or fabric.

ADDITIONAL PRODUCTS

| Name | Features | Gap Fill (mm) |
|--------------|--------------------------------------|---------------|
| LOCTITE® 480 | Suitable for close-fitting parts | 0.15 |
| LOCTITE® 430 | Metal bonder for close fitting parts | 0.12 |
| LOCTITE® 420 | Wicking type plastic bonder | 0.05 |

BONDING RUBBER, PLASTIC, METAL - INSTANT BONDING

LOCTITE® 454

| |
|--|
| 15 sec. |
| 0.25 |
| 120°C |
| 3200 (22) |
| Gel |
| 20g bottle - 1752383 300g cartridge - 88525 |



Surface insensitive gel. Bonds porous & absorbent surfaces. Non-dripping, particularly suited for overhead applications.

Plastics / Rubber (EPDM)

LOCTITE® 406

| |
|----------------------|
| 15 sec. |
| 0.10 |
| 120°C |
| 3200 (22) |
| 20 |
| 20g bottle - 1669713 |



Particularly suited for bonding rubbers & plastics. A must for every tool box for general maintenance & repair. Makes O-rings instantly. Wicking viscosity for tight bond lines.

Metal parts

LOCTITE® 415

| |
|--|
| 30 sec. |
| 0.20 |
| 80°C |
| 3600 (25) |
| 1500 |
| 20g bottle - 848003 500gm bottle - 849230 |



High viscosity adhesive offering maximum adhesion to metals. Ideal for bonding small metal parts for general maintenance.

General Purpose

LOCTITE® 495

| |
|----------------------|
| 20 sec. |
| 0.10 |
| 120°C |
| 2750 (19) |
| 45 |
| 20g bottle - 1669711 |



A general purpose adhesive designed to bond rubber, metal & plastic parts.



STRUCTURAL BONDING

- » ELIMINATES OR SIGNIFICANTLY REDUCES COSTLY MECHANICAL FASTENING METHODS SUCH AS RIVETS, SCREWS AND WELDS
- » IDEAL FOR QUICK REPAIRS AND STRUCTURAL ASSEMBLIES
- » EXCELLENT RESISTANCE TO SEVERE ENVIRONMENTAL CONDITIONS
- » BONDS DISSIMILAR MATERIALS, SUCH AS METAL TO PLASTIC
- » FILLS LARGE GAPS BETWEEN PARTS



▶ WHAT IS THE BONDING APPLICATION REQUIREMENT?

| ▶ HENKEL SOLUTIONS | |
|------------------------|---|
| | LOCTITE® AA 324 |
| Color | Amber |
| Viscosity (cP) | 17000 cP |
| Mix Ratio | NA |
| Fixture Time | 5 min. |
| Cure Time | 24 hours |
| Temperature Resistance | 175°C |
| Shear Strength | 2700 psi |
| Package Size & IDH | 50ml bottle - 847577 250ml bottle - 847578 |

| ADDITIONAL PRODUCTS | |
|---------------------|---------------------------------|
| Name | Features |
| LOCTITE® AA 326 | Fast fixture (within 1 minute). |
| LOCTITE® AA 330 | General purpose. |
| LOCTITE® AA 331 | Ultra fast fixture. Acid free. |



Surface insensitive instant adhesive for difficult-to-bond, porous surfaces such as wood, paper, leather or fabric. Suitable for small gap. Specially formulated for toughness and impact strength. Use with LOCTITE® 7075 activator.

METAL

MULTIPLE SUBSTRATE

| LOCTITE® AA H 3151 | LOCTITE® EA E-214HP | LOCTITE® EA E-120HP | LOCTITE® EA E-30CL |
|--|---|---|--|
| Light Yellow | Light Grey | Amber | Clear |
| 70000 cP | Paste | 30000 cP | 10000 cP |
| 1:1 | NA | 2:1 | 2:1 |
| 90 mins | NA | 180 mins | > 180 mins |
| 24 hours | 2 hours | 24 hours | 24 hours |
| 120°C | 150°C | 120°C | 120°C |
| 3780 psi | 4820 psi | 4300 psi | 3100 psi |
| 400ml cartridge - 1751922 | 300ml cartridge - 1617847 | 400ml - 1752564 | 50ml syringe - 1752546 |
| | | | |
| Suitable for bonding a wide variety of plastic and metal substrates without the use of additional primer. Offers extended work life. | A one component acid free, heat cure epoxy with high strength, temperature resistance, non sag and non corrosive. | An amber, non-sag, aerospace grade epoxy with an extended open time to allow for the adjustment of large parts. | An ultra-clear, low viscosity, impact resistant epoxy with a 30-minute work life. An excellent glass bonder. Exhibits exceptional chemical resistance. |



FLEXIBLE BONDING AND SEALING

- » BOND AND SEAL PARTS THAT EXPERIENCE MOVEMENT, SUCH AS VIBRATION, IMPACT, THERMO EXPANSION/CONTRACTION, ETC
- » SUITED FOR INDOOR AND OUTDOOR APPLICATIONS THAT REQUIRE RESISTANCE TO HEAT, HUMIDITY, TEMPERATURE SWINGS AND UV LIGHT



► IS THE REQUIREMENT TO SEAL THE SUBSTRATE OR BOND THEM TOGETHER?

SEALING

General Purpose

TEROSON® MS 930

► HENKEL SOLUTIONS

| | |
|--------------------------------|--------------------|
| Colour | Black, White, Grey |
| Hardness [Shore A] | 30 |
| Skin formation time [min] | 18 |
| Tensile strength [MPa] | 1.0 |
| Elongation at break [%] | 250 |
| Service temperature range [°C] | -50°C to +80°C |

Package Size & IDH

310ml cartridge white-1656499
310ml cartridge grey-1656500
310ml cartridge black-1845185



- Soft-elastic
- Multi purpose
- UV & weathering resistance
- Good adhesion to wide variety of substrates
- 100% sealing

BONDING

Medium Strength

TEROSON® MS 935

Black, White, Grey

| |
|----------------|
| 50 |
| 8 |
| 2.8 |
| 230 |
| -40°C to 100°C |

290ml cartridge black-1940293



- Good paintability
- Environmental resistance
- Easy smoothing
- Elastic sealant adhesive

General Purpose

TEROSON® MS 939

Black, White, Off-White, Grey

| |
|----------------|
| 55 |
| 5 |
| 3.0 |
| 250 |
| -40°C to 100°C |

570ml sausage white-212653
290ml cartridge grey-1846007
570ml sausage black-1752515



- Very versatile across substrates
- UL Listing for electrical equipment
- Excellent bonding and sealing even without primer
- Good environment & UV resistance
- Paintable

2K Rapid Cure

TEROSON® MS 9399

Black, White, Grey

| |
|----------------|
| 55 |
| 35 |
| 3.0 |
| 150 |
| -40°C to 100°C |

400ml white - 2048329



- Fast curing
- High initial strength
- Good sag resistance
- Independent from air / humidity
- Good UV and environmental resistance

Windshield Bonding

TEROSON® PU 8590

Black

| |
|---------------|
| 60 |
| 25 |
| 8.0 |
| 400 |
| -40°C to 90°C |

310ml cartridge(N/M)-1574002
310ml kit - 1574212



- Short setting time leads to faster turn around
- Excellent UV resistance (retains elasticity even after aging)
- Higher reliability due to 100% bonding of substrates
- Excellent strength of bonding on multiple substrates
- Solvent - free composition
- Used with Teroson PU 8517H Primer



ANTI-SEIZE LUBRICANTS

- » PROTECT AGAINST RUST, CORROSION, SEIZING AND GALLING
- » PROVIDE LUBRICATION IN EXTREME ENVIRONMENTS



▶ WHAT TYPE OF ANTI-SEIZE DO YOU REQUIRE?

▶ HENKEL SOLUTIONS

| | |
|-------------------------|-------------------|
| Color | Silver |
| Solid Lubricating Agent | Graphite/Aluminum |
| Torque Coefficient* | 0.18 |
| Temperature Range | -29°C to 870°C |
| Metal-Free | No |
| Package Size & IDH | 500g jar - 833783 |

* K value on steel nuts and bolts

| ADDITIONAL PRODUCTS | | |
|---|----------|---|
| Name | Max Temp | Features |
| LOCTITE® LB 8700 Extreme Pressure Resistant Lubricant | 399°C | MOS, based thread lubricant |
| LOCTITE® LB 8012 Low Friction Lubricant | 399°C | Recommended for maximum lubricity at low speeds, high loads, Metal free formulation |



Heavy duty, temperature resistant, petroleum based lubricant compound fortified with graphite and metallic flake. Inert and will not evaporate or harden in extreme cold or heat. For use in assemblies up to 871°C. ABS Approved. Tested to Mil-PRF-907E. CFIA Approved. **

GENERAL PURPOSE

| |
|---|
| Up to 982°C |
| LOCTITE® LB 8008 C5-A Copper Anti-Seize |
| Copper |
| Copper/Graphite |
| 0.16 |
| -29°C to 982°C |
| No |
| 1 kg - 2096331 |



Exclusive formula suspends copper and graphite in a high quality grease. Protects metal parts from rust, corrosion, galling, and seizing at temperatures to 982°C. Tested to Mil-PRF-907E. CFIA Approved. **

| |
|-----------------------------------|
| Up to 1315°C |
| LOCTITE® LB 771 Nickel Anti-Seize |
| Silver |
| Nickel/Graphit |
| 0.13 |
| -29°C to 1315°C |
| No |
| 1 lb - 1751839 |



Copper-free. Recommended for stainless steel and other metal fittings. For preventing corrosion, seizing, and galling in harsh, chemical environments, and temperatures to 1315°C. ABS Approved. **

METAL-FREE APPLICATION

| |
|--|
| LOCTITE® LB 8009 Heavy Duty Anti-Seize |
| Black |
| Graphite/Calcium Fluoride |
| 0.16 |
| -29°C to 1315°C |
| Yes |
| 510gm - 1751851 |



Metal free. Excellent lubricity. Provides outstanding lubrication to all metal including stainless steel, aluminum and soft metals up to 1315°C.

INCIDENTAL FOOD CONTACT

| |
|--|
| LOCTITE® LB 8014 Food Grade Anti-Seize |
| White |
| White Lubricating Solids |
| 0.13 |
| -29°C to 399°C |
| Yes |
| 2 lb - 1751942 |



Prevents seizure, galling, and friction in stainless steel and other metal parts up to 399°C. NSF H1 rated for incidental food contact. **

WATER RESISTANT

| |
|--|
| LOCTITE® LB 8023 Marine Grade Anti-Seize |
| Black |
| Calcium Sulfonate |
| 0.18 |
| -29°C to 1315°C |
| Yes |
| 16 oz - 1752448 |



Formulated to protect assemblies exposed directly or indirectly to fresh and salt water, this anti-seize works especially well in high humidity conditions. It has excellent lubricity, superior water washout spray resistance, and prevents galvanic corrosion. ABS Approved. **

** All approvals are region specific. Please contact your Henkel Sales Representative for further information.



CLEANING

» CLEAN AND DEGREASE WORK SURFACES, PARTS AND HANDS

► WHAT TYPE OF CLEANER DO YOU REQUIRE?

► HENKEL SOLUTIONS

KB Values

Package Size & IDH

GENERAL PURPOSE

LOCTITE® SF 7061

N.A.

100ml can - 849292



Solvent based (acetone) general parts cleaner, evaporates very fast, removing dirt, resins, lacquer, oils and greases from metals. Recommended for pre assembly cleaning.

GASKET REMOVING

LOCTITE® SF 790
Chisel Gasket Remover

Greater than 200

510g aerosol can - 1751840
510g bottle - 1409698



Removes gaskets from any type of assembly in 10 to 15 minutes. Prepares metal parts for new gaskets, eliminating scrapin and sadin. Works on wood; non-corrosive on aluminum. Not for use with plastics, Linoleum, or synthetic fibers.

BIODEGRADABLE

LOCTITE® SF 7840
Natural Blue Biodegradable
Cleaner & Degreaser

N.A.

5litre bottle - 789065
20litre bucket - 789705



Biodegradable, all-purpose, industrial strength, concentrated cleaner and degreaser. Can be economically diluted with water. Formulated for wipe down, pressure spraying, ad immersion cleaing processes at room temperature or heated. Non-flammable and non-toxic. Contains no ODCs.

DEGREASER

LOCTITE® SF 7070
ODC-Free Cleaner & Degreaser

34

150g bottle - 1423361
425g bottle - 1423327
10litre bucket - 1522516



A non-aqueous, hydrocarbon-based solvent designed for cleaning and degreasing surfaces to be bonded with adhesives, as well as for general purpose industrial cleaning. Safe on aluminum, rubber, and most plastics, and will not cause flash rusting on water-sensitive parts. Dries residue-free. Contains no ozone-depleting compounds (ODCs).

LOCTITE® SF 7611
Pro Strength Parts Cleaner

132

1902 aerosol can - 1752427



Aggressively penetrates, dissolves, and removes oil and grease from parts. Dries quickly with no residue. Contains no ODCs.








MOULD RELEASE AGENTS

- » EASY TO APPLY, RAPID CURE
- » NO CONTAMINATING TRANSFER
- » MULTIPLE RELEASES
- » MINIMAL MOULD BUILD-UP
- » HIGH THERMAL STABILITY




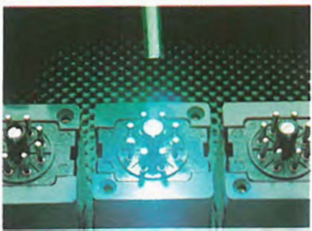

| ► FREKOTE MOULD RELEASE AGENTS | | | |
|---|--|--|---|
| | SOLVENT BASED | WATER BASED | |
| | FRP release | Rubber release | Rubber release |
| ► HENKEL SOLUTIONS | LOCTITE® FREKOTE® 770-NC | LOCTITE® FREKOTE® R-120 | LOCTITE® FREKOTE® R-220 |
| Description | Quick curing | Ready to use | Highly filled elastomers |
| Moulding Process | Cast Compression Molding Lay-up RTM Vacuum Bagging Filament Winding | Compression Transfer | Difficult molding application, especially for high aspect ratio parts |
| Application Temperature | 15°C - 60°C | 60°C - 204°C | 60°C - 205°C |
| Cure Time and Temperature | Cure at room temperature for 5-10 minutes | 25 minutes at 60°C or 10 minutes at 93°C or 4 minutes at 150°C | 25 minutes at 60°C or 10 minutes at 93°C or 4 minutes at 150°C |
| Package Size & IDH | 1 gal drum - 416032 | 20 litre - 1661893 | 5 gal - 2007063 |
| <div><div><p>Versatile release agent which provides high slip where mould geometry problems are encountered. It cures rapidly at RT to give a high gloss finish to the moulded parts. It is a low odour, clear fast evaporating solution that can be used with FRP composites, epoxies, polyester resins, vinyl resins and thermoplastics.</p></div><div><p>A water-based, semi-permanent release agent for rubber molding. Capable of releasing all natural and synthetic polymers including some thermoplastic urethanes.</p></div><div><p>Offers excellent release and slip properties and is recommended for the most demanding rubber molding applications, such as EPDM rubber, and will also release thermoplastic urethanes and solid polyurethane cast elastomers.</p></div></div> | | | |



LIGHT CURE ADHESIVES

- » CURES IN SECONDS WHEN EXPOSED TO UV / VISIBLE LIGHT SOURCES
- » SINGLE COMPONENT - EASY TO USE
- » EXCELLENT BOND STRENGTHS TO PLASTIC AND GLASS
- » DUAL CURE FORMULATIONS FOR CURING WHERE LIGHT CANNOT REACH



| ► LIGHT CURE ADHESIVES | | | |
|---|-------------------------------------|---------------------------------|-----------------------------------|
| | GLASS BONDING | GENERAL PURPOSE | MEDICAL APPLICATION |
| ► HENKEL SOLUTIONS | LOCTITE® AA 349 | LOCTITE® AA 352 | LOCTITE® AA 3081 |
| Appearance Clarity / Color | Clear | Light Amber | Clear |
| Cure Type | Ultraviolet | Ultraviolet, heat, activator | Ultraviolet |
| Key Substrates | Glass, metal | Glass, metal | Glass, metal, some thermoplastics |
| Viscosity cP (Brookfield, 25°C) | 9500 | 19,500 | 100 |
| Elongation at break, % | 300 | 290 | 7.6 |
| Shore Hardness | D 70 | D 60 | D 74 |
| Temperature Range | -54°C to 150°C | -54°C to 150°C | -54°C to 150°C |
| Package Size & IDH | 50ml - 1751830 1 litre - 1751833 | 50ml - 847579 250ml - 848070 | 1 litre - 1752409 |
| <div><div><p>A medium viscosity adhesive that bonds & seals glass to glass, or glass to metal components. Electrical properties of the material makes it suitable for potting and tacking.</p></div><div><p>A high viscosity adhesive that creates a tough, flexible bond resistant to vibration and shock. Effective on a wide range of materials. Cures in minutes using an activator, UV light or both.</p></div><div><p>A low viscosity, UV cure adhesive that has excellent adhesion to glass, metal & certain thermoplastics. ISO 10993 compliant.</p></div></div> | | | |



LOCTITE® EQUIPMENT SOLUTIONS

- » PRECISION DISPENSING
- » ELIMINATES WASTE
- » INCREASED PRODUCTIVITY DUE TO AUTOMATION



Since 1971, Henkel Corporation has designed, built and integrated high-quality equipment solutions. From simple handheld devices to fully automated systems, Henkel offers a complete line of standard off-the-shelf LOCTITE® brand dispensing and light curing equipment, which can be integrated easily into your manufacturing process.

From water-thin liquids to high-viscosity pastes, LOCTITE® brand equipment is capable of dispensing and curing a wide variety of adhesives, sealants and other industrial fluids.

In addition to our standard line of equipment, Henkel offers a number of resources to support your dispensing needs:

- Custom Equipment Systems – We can modify any LOCTITE® brand standard system or customize a system to meet your specific assembly needs.
- Equipment Website – Locate details on LOCTITE® brand standard and custom equipment, parts and accessories, and equipment services. To learn more about our equipment, visit www.equipment.loctite.com or contact your Henkel Sales Representative.
- Adhesive and Sealant Specialists – Henkel Adhesive and Sealant Specialists are available across the continent to personally assist you with new assembly challenges or to help you re-engineer an existing application for improved performance and cost savings using LOCTITE® brand products.



LOCTITE® EQUIPMENT RANGE

| DISPENSING SYSTEM | CONSUMMABLES | MOTION CONTROL | LIGHT CURE |
|---|--|---|--|
| <ol style="list-style-type: none"> 1. Adhesive Bottles 2. Pneumatic Syringe 3. Tube bonding 4. Controllers and reservoirs 5. Hand held, soft pack and cartridge 6. Volumetric dispensing - single component, two component 7. Handheld applicators, valves 8. Hotmelt dispenser 9. Anaerobic dispenser 10. Dispense monitoring system | <ol style="list-style-type: none"> 1. High Precision Stainless Steel Dispense Tips 2. Tapered Dispense Tips 3. General-Purpose Dispense Tips 4. Flexible Dispense Tips 5. Cartridge Accessories 6. LOCTITE® Brand Static Mix Nozzles & Accessories 7. LOCTITE® Brand Syringe Accessories 8. LOCTITE® Brand Spare Parts | <ol style="list-style-type: none"> 1. Benchtop Robot 2. Gantry Robot 3. SCARA Robot 4. Rotary Dispense System 5. Mounting hardware and guarding enclosures | <ol style="list-style-type: none"> 1. Led light curing devices 2. Led flood systems 3. Wand systems 4. Cure chambers & flood systems 5. Cure conveyors 6. High intensity light sources 7. Assurecure® system 8. Light meters |

Static Mix Tip

IDH - 720173

Mix nozzles for 50 ml to 400 ml



Integrated Semi Automatic Dispenser

IDH - 1390321 / 1390322 + 318654

For low to high viscosity dispensing



LOCTITE® H/Held 300 ml Cartridge Disp

IDH - 88632

For elastic adhesives and sealants dispensing



Desktop Servo Robot 331

IDH - 1931030

Integrated solution for accurate dispensing



Peristaltic Handpump

IDH - 88631

Ergonomical design for controlled dispensing



Digital Syringe System

IDH - 88633

No mess - no wastage, precision dispensing



LOCTITE® PRE-APPLIED SOLUTIONS

- » THE EFFICIENT & RELIABLE WAY TO LOCK & SEAL THREADED PARTS



Products with a pedigree

For over 50 years the LOCTITE® brand has been at the leading edge of securing threaded fasteners with adhesives. This has led LOCTITE® becoming the number one brand for sealing and locking threaded components worldwide and is widely accepted as being best method to ensure component security & reliability.

Now, threaded parts can be pre-coated with a solvent free locking medium that is dry-to-touch and will only cure on assembly ensuring clean, efficient & user friendly assembly. LOCTITE® offers a complete range of Dri-Seal®, Dri-Loc® and Anti-Seize Pre-Applied coatings, for locking and/or sealing threaded parts. This means that there is no longer a need to apply adhesives, sealants, or any other locking or sealing device during assembly.

In addition, every product in LOCTITE's Pre-Applied range of coatings is environmentally friendly.

For the Dri-Loc® and Dri-Seal® products manufacturing, application and the drying process are all water based and are free of organic solvents. They are all brightly coloured which enables easy inspection and identification of different grades.

LOCTITE® Pre-Applied Centres have fully automatic coating machines, which allow almost any size or shape, of a bolt, screw, stud, plug, nut etc. to be coated. Any pre-treated component can be reused after disassembly by applying the appropriate liquid LOCTITE® threadlocking or threadsealing product.

LOCTITE® Pre-Applied products have many benefits such as:

- Vibration resistant - resulting in equipment reliability
- Dry to touch coating - ease of handling
- Ease of automation - higher speed of assembly
- Guaranteed quality - trusted by leading automotive OEMs worldwide
- Any fastener becomes a self locking / self sealing fastener
- Reduced component costs and assembly time

When to use LOCTITE® Dri-Loc®, Dri-Seal® and Anti-Seize

Dri-Loc®

is a locking adhesive which provides excellent resistance to vibration loosening on any threaded fastener including nuts. The adhesive is activated during assembly and cures to form a tough polymer that eliminates movement between the threads and provides a total seal.

Dri-Seal® / Vibra Seal®

is used to permanently seal tapered and parallel threads. It gives excellent torque tension (lubricating) characteristics to aid assembly. It gives an instant seal and prevents leakage whilst allowing disassembly.

Anti-Seize

is a pre-applied high temperature, antigalling, thread lubricant that is dry to touch. For use on applications such as exhaust manifold bolts, and catalytic converter. Once applied, the part can be reused up to five times.

| Dri-Loc® | |
|----------|------------------|
| Name | Features |
| 204 | Highest Strength |

| Dri-Seal® | |
|-----------|-----------------|
| Name | Features |
| 5061 | General Purpose |
| 516 | Big Thread |

| Anti-Seize | |
|------------|---|
| Name | Features |
| 17015 | Dry-to-touch Anti-Seize Anti-gally High Temperature resistance upto 650°C |

LOCTITE® 4090 – Hybrid Adhesive



Speed + Strength

LOCTITE® 4090 adhesive is an innovative hybrid that combines the bond strength and speed you need 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.

This powerful combination provides high impact resistance, high strength bonding on a variety of substrates, and high temperature resistance – making LOCTITE® 4090 the essential adhesive solution. LOCTITE® 4090 opens the door to new applications and new solutions.

These are just some of the benefits of LOCTITE® 4090:

- Strength of a structural adhesive
- Speed of an instant adhesive
- High impact and vibration resistance
- Temperature resistance up to 150°C
- Gap filling up to 5 mm
- Suitable for a variety of substrates, including metals, most plastics and rubbers



| TECHNICAL DATA | |
|--------------------|---------------------------------|
| COLOR | Slightly cloudy to light yellow |
| APPEARANCE | High viscosity gel |
| MIX RATIO (VOLUME) | 1:1 |
| WORKING TIME | 3 to 5 min. |


| PROPERTIES OF CURED MATERIAL | | |
|--|---------------------------------------|-----------|
| LAP SHEAR STRENGTH, ISO 4587, AFTER 24 HOURS, 22°C | Steel (grit blasted) | 17 N/mm² |
| | Aluminum (etched) | 13 N/mm² |
| | Polycarbonate | 6.9 N/mm² |
| HIGH GAP FILL | Up to 5 mm depending on bond geometry | |
| TEMPERATURE RESISTANCE | -40°C to 150°C | |
| CHEMICAL RESISTANCE | Very good chemical/solvent resistance | |

LOCTITE® EA E-30 HV




High Performance Potting & Bonding Epoxy Compound


FEATURES



Excellent thermal resistance
Reliable performance in extreme conditions even upto 180°C




Excellent electrical insulation
Great choice for electrical insulation application
Dielectrical strength of 19.2 KV/mm



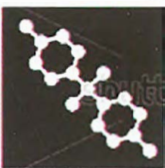
Fast fixture strength
3X-8X increase in production 4 hrs fixture time

| PROPERTIES | LOCTITE® EA E-30 HV | CONVENTIONAL SOLUTION |
|---------------------------------------|---------------------|-----------------------|
| Temperature Resistance (intermittent) | 180°C | 120°C |
| Dielectrical Strength KV/mm | 19.2 | 17.3 |
| Fixture Time | 4 hours | 6 hours |


SUBSTRATE VERSALITY




GLASS




PLASTIC



OPTICAL FIBER



METAL



CERAMIC