

LOCTITE®

**SOUTHEAST ASIA
PRODUCT CATALOG**

LOCTITE® Product Catalog, First Edition, October 2019.
This is the first edition of the newly-redesigned LOCTITE Product Catalog. With this edition, we've put an emphasis on the products you most frequently need, making it easier than ever to find the products that solve the majority of issues you will face for product design and assembly and for maintenance, repair and operation.

Limitless Solutions to Help Unlock Your Limitless Potential.

LOCTITE® — The world's leading brand for adhesives, sealants and surface treatments — is obsessed with providing solutions that deliver products that are stronger, more durable, and long lasting. We help your designs and equipment operate and deliver on every task — from adhesives to lubricants that enhance your design capabilities and help maintain your equipment to function properly with the ability to repair them quickly and efficiently when needed. Limitless solutions unlocking your limitless potential.

275 to
250 Mg

5

Threadlockers

Prevent fastener loosening and seizure

15

Thread Sealants

Prevent leaks – air, hydraulic

23

Gasketing Products

Prevent flange leaks – oil, transmission, coolant

31

Retaining Compounds

Prevent backlash – keyway wallowing, spun bearings, shaft misalignment, wear, corrosion

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89

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97

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105

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109

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115

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Solve nearly any issue with a wide range of solutions

121

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OPTIMIZE ASSEMBLIES, REDUCE UNPLANNED DOWNTIME, WITH **LOCTITE® SERVICES.**

HOW WE CAN HELP

LOCTITE® Services include line audits, plant surveys, inventory assessments, and in-person and online training to make your design, production and maintenance processes much more efficient.

01.

DESIGN & ASSEMBLY

- Design guides
- Line surveys
- In-plant seminars
- Support through the developmental cycle

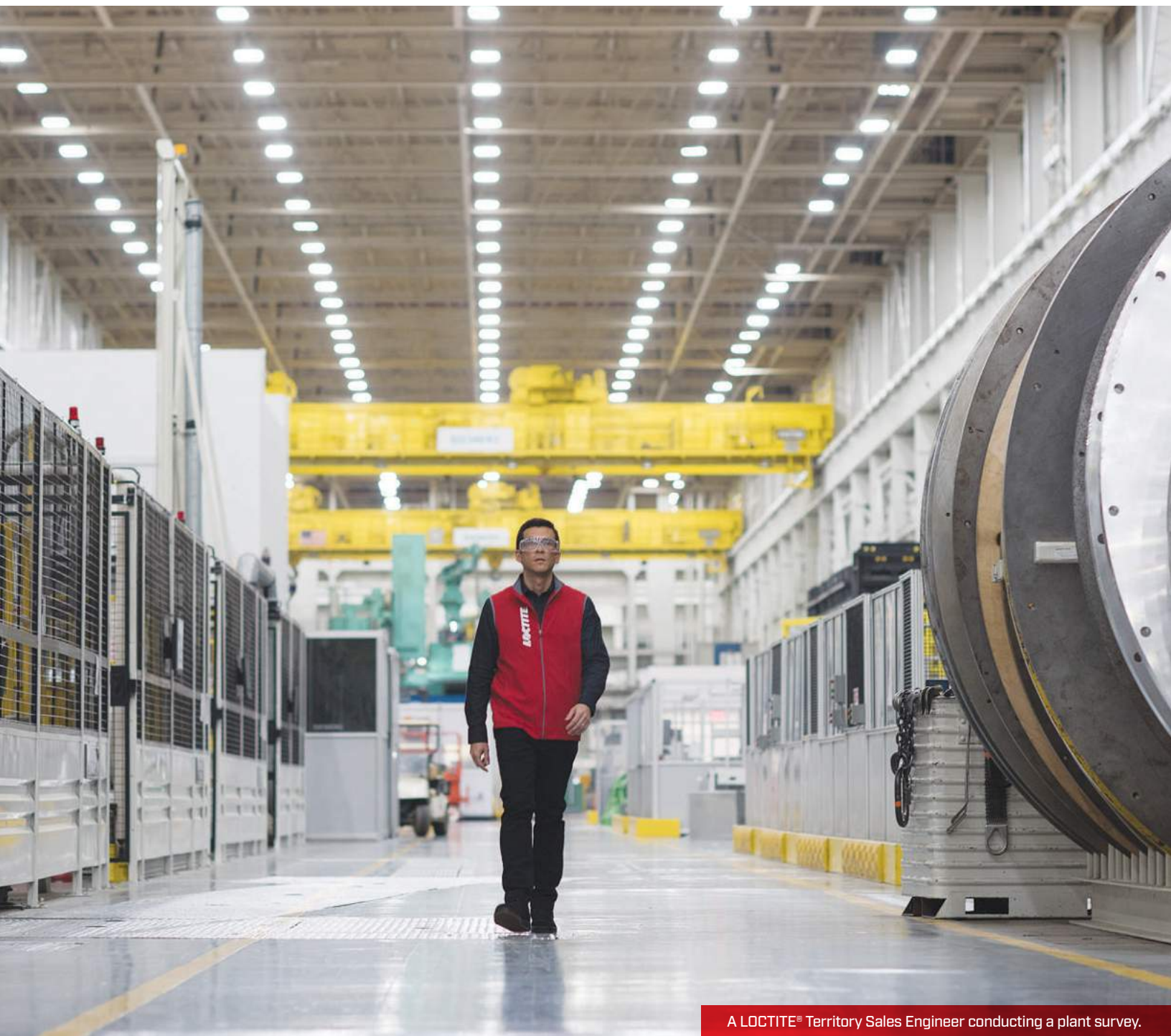
02.

MAINTENANCE REPAIR & OVERHAUL

- Repair guides
- Plant surveys
- Maintenance Reliability Workshops
- Inventory consolidation

services.loctite.com





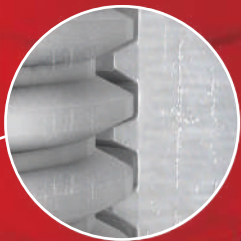
A LOCTITE® Territory Sales Engineer conducting a plant survey.

A photograph of industrial machinery, possibly a large pump or valve assembly, with a prominent red overlay. The machinery features various components like pipes, valves, and a large wheel. The text "THREAD LOCKERS" is centered over the image in a large, white, sans-serif font.

THREAD LOCKERS

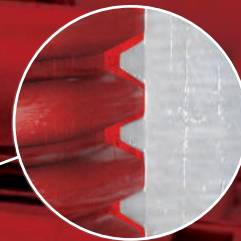
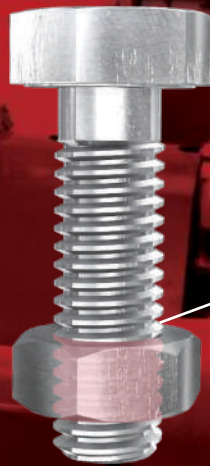
Traditional fastening methods have gaps.

Threadlockers fill them.



PROBLEM

Without Threadlockers:
Vibrational loosening
due to 85% air gap.



SOLUTION

With Threadlockers:
There's no vibrational
loosening, and no gaps.

Tighten your operation. **Eliminate loosening.**

Threadlockers lock and seal your threaded assemblies, protecting against vibration, corrosion and galling. But depending on your need, you have to choose the right Threadlocker and consider strength, form and removability. Which one will you need? LOCTITE® makes your choice easy.



How to choose a threadlocker.



STRENGTH & DISASSEMBLY

From heavy equipment and permanent assemblies to mounting bolts and adjustment screws, LOCTITE® has your Threadlocker.

LOW STRENGTH

Primarily used on adjustment screws, calibration screws, meters and gauges. They have high disassembly frequency and are removable with hand tools.

MEDIUM STRENGTH

Great for machine tools and presses, pumps and compressors, mounting bolts and gearboxes. They have normal disassembly frequency and are removable with hand tools.

HIGH STRENGTH

Used for more permanent assemblies, heavy equipment, suspension bolts, motor and pump mounts, cap bolts and studs. These are rarely disassembled and require localized heat for effective removal.



FORM

Threadlockers come in a variety of different forms ranging from liquid, which flow smoothly into gaps and spaces, to semi-solid, a no-drip, no-mess formulation ideal for overhead applications. Knowing your application will help you select the correct Threadlocker.



TEMPERATURE RESISTANCE

LOCTITE® Threadlockers are formulated to withstand extreme temperatures for continuous service from application to removal.



BEST SELLER

243™ Blue Threadlocker

General Purpose, Medium Strength

Works on all metals, including passive substrates such as stainless steel, aluminum and plated surfaces. Proven to be tolerant of minor contamination due to industrial oils, e.g. motor oils, corrosion prevention oils and cutting fluids.



Disassembly: Removable with hand tools



Form: Liquid



Temperature Resistance: 180°C



BEST SELLER

263™ Red Threadlocker

General Purpose, High Strength

Works on all metals, including passive substrates such as stainless steel, aluminum and plated surfaces. Proven to be tolerant of minor contamination due to industrial oils, e.g. motor oils, corrosion prevention oils and cutting fluids. For parts not expected to be disassembled.



Disassembly: Localized heat required for removal



Form: Liquid



Temperature Resistance: 180°C



Find the right product for your application



DISASSEMBLY

Medium Strength

LOCTITE® 243™
LOCTITE® 248™
LOCTITE® 290™

Low Strength

LOCTITE® 222

High Strength

LOCTITE® 263™
LOCTITE® 277™

Medium Strength

THREADLOCKERS



243™
General Purpose



Disassembly: Removable with hand tools



Form: Liquid



Temperature Resistance: 180°C

Viscosity: 2,150 cP Thixotropic
Breakaway Torque: 26 N.m.
Fixture Speed: 10 minutes
Full Cure: 24 hours



248™
No-drip, No-mess



Disassembly: Removable with hand tools



Form: Semi-solid



Temperature Resistance: 150°C

Viscosity: Semi-solid
Breakloose Torque: 23 N.m.
Fixture Speed: 5 minutes
Full Cure: 24 hours



290™
Wicking Grade



Disassembly: Removable with hand tools



Form: Liquid



Temperature Resistance: 150°C

Viscosity: 40 cP
Breakaway Torque: 10 N.m.
Fixture Speed: 20 minutes
Full Cure: 24 hours

Low Strength

THREADLOCKERS



222
General Purpose



Disassembly: Removable with hand tools



Form: Liquid



Temperature Resistance: 150°C

Military Spec: Mil-S-46163A
Viscosity: 1,200 cP Thixotropic
Breakaway Torque: 6 N.m.
Fixture Speed: 20 minutes
Full Cure: 24 hours

High Strength

THREADLOCKERS



263™

General Purpose



Disassembly: Localized heat required for removal



Form: Liquid



Temperature Resistance: 180°C

Viscosity : 500 cP

Breakaway Torque: 33 N.m.

Fixture Speed: 10 minutes

Full Cure: 24 hours



277™

Large Bolts



Disassembly: Localized heat required for removal



Form: Liquid



Temperature Resistance: 150°C

Viscosity: 7,000 cP Thixotropic

Breakaway Torque: 32 N.m.

Fixture Speed: 45 minutes

Full Cure: 24 hours

LOCTITE SERVICES

STOP FASTENER FAILURE BEFORE IT HAPPENS.

services.loctite.us

Surface Preparation

THREADLOCKERS



SF 7063™

Cleaner
2098749

LOCTITE® SF 7063™ is a non-CFC solvent based formulation for cleaning and degreasing of surfaces to be bonded with LOCTITE® adhesives. The product can also be used for cleaning and degreasing machine components during maintenance operations.



SF 7649™

Primer
135286

Designed to promote the curing speed of LOCTITE® anaerobic adhesives and sealants without any significant loss of joint strength. Especially recommended for applications with passive metals or inert surfaces and with large bond gaps.

Equipment

THREADLOCKERS



NEW LOCTITE® Pro Pump Handheld Dispenser

2564842

Our all-new easy to use, light-weight, durable applicator that allows for precision application of Threadlockers, retaining compounds and thread sealants.



LOCTITE® Pulse EQ RC50 Integrated Dispenser

2814024

The LOCTITE® Pulse RC50 Integrated Dispenser, I4.0, is an enhanced version of the RC40 Integrated Dispenser and offers a digital touch screen for operation, as well as a precision regulator for low-viscosity dispensing. The dispenser is industry 4.0 compatible, providing enhanced communication/connectivity via ethernet or Wi-Fi. The reservoir can accommodate most standard LOCTITE® adhesive bottles

ADDITIONAL EQUIPMENT

RC30 Manual Reservoir

2814022

Pneumatic Handheld Applicator

88643

Stationary Applicator Valve

97113/97114

New LOCTITE® Pro Pump Handheld Dispenser for easy application.

For a full lineup of equipment to support your needs visit equipment.loctite.com



THREADLOCKERS

Product	Item Number	Pack Size	Color	Features	Viscosity (cP) 20 RPM	Thixotropic (yes/no)	Breakaway Torque/ Prevail Torque, M10 Steel Nuts and Bolts [(N.m, lb.in)]	Temperature Range	Fixture Time (min)
LOW STRENGTH									
222™	228581	50 ml	Purple	Small screw, general purpose	1,200	Yes	6/4 N.m, 50/35 lb.in	-55°C to 150°C (-65°F to 300°F)	20
MEDIUM STRENGTH									
243™	1311320	50 ml	Blue	General Purpose Primerless	2,150	Yes	33/33 N.m, 290/290 lb.in	-55°C to 180°C (65°F to 360°F)	10
248™	525715	19 g	Blue	Easy application semisolid stick	Semi-solid	-	23/25 N.m, 200/225 lb.in	-55°C to 150°C (-65°F to 300°F)	5
290™	235226	250 ml	Green	Post application wicking capability	40	No	26/5 N.m, 230/40 lb.in	-55°C to 150°C (-65°F to 300°F)	20
HIGH STRENGTH									
263™	1307415	50 ml	Red	General Purpose	500	No	33/33 N.m, 290/290 lb.in	-55°C to 180°C (65°F to 360°F)	10
277™	232083	250 ml	Red	Ideal for large bolts with coarse threads	7,000	Yes	32/32 N.m, 280/280 lb.in	-55°C to 150°C (-65°F to 300°F)	45

SEE THE FULL LINE OF THREADLOCKERS AT:





Keeping a Wind Generator Operating Safely



“Thanks to our LOCTITE Engineering Solutions Expert, we don’t have to worry about corrosion or catastrophic fastener failure.”

A wind farm erecting its first wind generator wanted to insure that the bolts attaching the blade to the hub maintained the designed torque and were protected from the corrosion that can occur with exposure to the elements. The ideal solution was **LOCTITE® 243™** Threadlocker, which helps prevent catastrophic failure by resisting vibrational loosening, preventing thread corrosion and maintaining fastener torque in the wing to hub assembly. A LOCTITE® Engineering Solutions Expert helped the team remove the protective shipping covers from the exposed bolt

threads and clean the steel fasteners. They then inserted the blade into the main hub applied **LOCTITE® 243™** Threadlocker to the fasteners, torqued the blade to hub assembly to specification and mounted the hub to the generator drive system. Now, with corrosion free fasteners that maintain clamp load, and that are easily disassembled at a predictable break loose torque, the wind farm is assured of safe, maintenance-free wind turbine operation until scheduled downtime.

BENEFITS

LOCTITE® 243™ Threadlocker:

- Fills the gaps between threads to prevent movement between the nut and bolt
- Eliminates vibrational loosening, maintaining the original fastener torque and insuring safe operation
- Prevents corrosion that makes disassembly difficult



THREAD SEALANTS

Leaks cause downtime. **Liquid thread sealants** **prevent them.**



PROBLEM

With conventional thread sealants: Pressurized fluids and gas can cause costly leaks and downtime.



SOLUTION

With liquid thread sealants: Joints are sealed to the burst point of most piping systems.

Seal out leaks. Seal in productivity.

Thread sealants fill the space between threaded parts and provide an instant, low pressure seal that prevents fluid and gas leaks which can cause costly downtime. LOCTITE® has a variety of thread sealants, and the one you need will depend on your system material and thread type.



How to choose a thread sealant.



SUBSTRATE

There's a LOCTITE® thread sealant for any type of piping system.

METAL

For metal-to-metal pipe connections and fittings, use LOCTITE® anaerobic thread sealants. They cure in the absence of air and by contact with metals.

PLASTIC

Ideal for use on threaded plastic or plastic/metal substrate combinations.



THREAD TYPE

There are two types of threads to consider. The National Pipe Taper (NPT) seal, most widely used in the United States and Canada, which requires a lower strength thread sealant for disassembly. The British Standard Pipe Taper (BSPT), more common in other countries, requires a higher strength thread sealant in order to seal the connection properly.



FORM

Thread sealants are available in a variety of forms, from liquid to paste to solid. Each is suited to different applications. Liquids are ideal for flowing into gaps in threaded connections. Pastes and solids are best for overhead applications where it's necessary to prevent drips, or an instant seal is needed.



BEST SELLER

577™

General Purpose Paste

LOCTITE® 577™ is a general purpose thread sealant with robust curing performance. Cures in the presence of minor surface contaminations from various oils. Particularly suitable for use on stainless steel without the need for surface activation.



Substrate: Metal



Thread Type: Tapered, NPT and Straight



Form: Anaerobic Paste



BEST SELLER

545™

Hydraulic and Pneumatic Fittings

LOCTITE® 545™ is a pipe thread sealant designed for locking and sealing of metal pipes and fittings. It is specially formulated to offer high lubricity for easy assembly and removal. Recommended for fine threaded fittings as used in hydraulic and pneumatic installations and small fittings in general.



Substrate: Metal



Thread Type: Fine



Form: Liquid Anaerobic

Find the right product for your application



SUBSTRATE

Metal

LOCTITE® 545™
LOCTITE® 561™
LOCTITE® 567™
LOCTITE® 577™

Plastic

LOCTITE® SI 5331™
LOCTITE® 55

SEE OUR FULL LINE OF
THREAD SEALANTS:



Metal THREAD SEALANTS



567™
General Purpose



Substrate: Metal



Thread Type: Tapered, NPT and Straight



Form: Paste

Viscosity: 540,000 cP
Temperature Resistance: 200°C



545™
Hydraulic and Pneumatic Fittings



Substrate: Metal



Thread Type: Fine



Form: Liquid

Viscosity: 15,000 cP
Temperature Resistance: 150°C



561™
No-drip, No-mess



Substrate: Metal



Thread Type: Tapered and Straight



Form: Semi-solid

Viscosity: Semi-solid
Temperature Resistance: 150°C



577™
General Purpose



Substrate: Metal



Thread Type: Tapered, NPT and Straight



Form: Paste

Viscosity: 100,000 cP Thixotropic
Temperature Resistance: 150°C

Plastic THREAD SEALANTS



SI 5331™
Flexible, One Component



Substrate: Plastic



Thread Type: Tapered and Straight



Form: Paste

Viscosity: 50,000 cP
Temperature Resistance: 150°C



55
General Purpose, Pipe Cord



Substrate: Metal, Plastic



Thread Type: Tapered, NPT



Form: Coated Thread

Viscosity: N/A
Temperature Resistance: 150°C

Surface Preparation

THREAD SEALANTS



SF 7063™

Cleaner
2098749

LOCTITE® SF 7063™ is a non-CFC solvent based formulation for cleaning and degreasing of surfaces to be bonded with LOCTITE® adhesives. The product can also be used for cleaning and degreasing machine components during maintenance operations.



SF 7649™

Primer
135286

Designed to promote the curing speed of LOCTITE® anaerobic adhesives and sealants without any significant loss of joint strength. Especially recommended for applications with passive metals or inert surfaces and with large bond gaps.

Equipment

THREAD SEALANTS



Dial-A-Seal®

998400

The Dial-A-Seal® Applicator is a touch-actuated, all pneumatic applicator for dispensing high viscosity LOCTITE® product onto threaded pipe fittings and nipples.



NEW LOCTITE® Pro Pump Handheld Dispenser

2564842

Our all-new easy to use, light-weight, durable applicator that allows for precision application of threadlockers, retaining compounds and thread sealants in 50/250 ml bottles.

ADDITIONAL EQUIPMENT

50 ml F Tube Squeeze Dispenser

1083845

THREAD SEALANTS

Product	Item Number	Pack Size	Features	Color	Viscosity mPa-s, 20 RPM [cP]	Thixotropic [yes/no]	Temperature Range	Breakaway Torque Steel M10 [N/m]
METAL								
567™	2099597	250 ml	For Stainless Steel, high temperature	White	540,000 (2 rpm)	Yes	-55°C to 200°C (-65°F to 400°F)	12*
545™	232095	50 ml	Pneumatic hydraulic sealant, no fillers	Purple	15,000 (2.5 rpm)	No	-55°C to 150°C (-65°F to 300°F)	2
561™	463973	19 g	Easy application, general purpose	White	Semi-solid	-	-55°C to 150°C (-65°F to 300°F)	6**
577™	232097	50 ml	General purpose	Yellow	100,000 (2.5 rpm)	Yes	-55°C to 150°C (-65°F to 300°F)	12
PLASTIC								
SI 5331™	2061031	100 ml	Flexible, One Component	White	50,000 (10 rpm)	Yes	-55°C to 150°C (-65°F to 300°F)	12
55	483282	50 m	General Purpose, Pipe Cord	White	-	-	-55°C to 130°C (-65°F to 260°F)	-

*M10 Black Oxide

**3/8 x16 Zinc Phosphate

LOCTITE SERVICES

PREVENT COSTLY LEAKS AND UNPLANNED DOWNTIME.

services.loctite.us



Putting a Stop to Leaking Fittings



“LOCTITE helped us reduce downtime and labor costs with a better, longer-lasting solution.”

A compressor service company serving the natural gas production, processing, and transportation industry faced an increasing number of leaks on NPT fittings. Pipe dopes and PTFE tapes lacked sufficient sealing properties, and tapes might loosen and leak during equipment operation. And both options still meant downtime and high labor costs to rework fittings. A product is needed that seals NPT fittings and prevents thread galling during assembly. **LOCTITE® 567 PST™** Thread Sealant, which prevents thread galling and has high locking strength to prevent leaks, was an ideal alternative.

The LOCTITE® Engineering Solutions Expert showed the team how to clean the fittings, apply **LOCTITE® 567 PST™** to the leading threads, and properly tighten. Immediately, the fittings were sealed up to 1000 psi, and the company’s large natural gas compressors will run leak-free until the system is disassembled for required maintenance, lowering operating costs.

BENEFITS

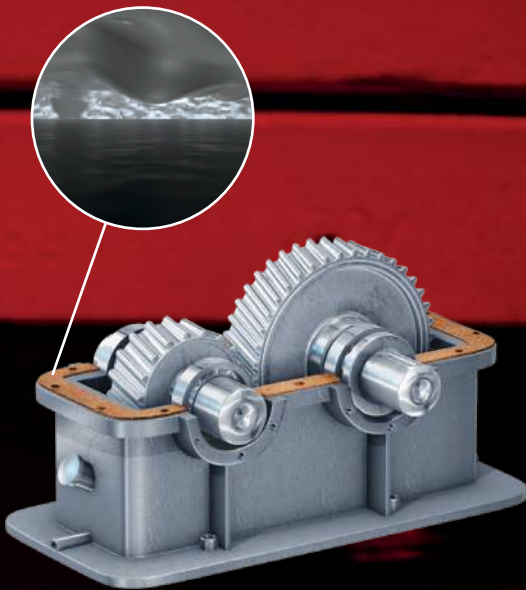
LOCTITE® 567 PST™ Thread Sealant:

- Provides lubrication to prevent thread galling on NPT fittings
- Has sufficient locking strength to maintain a complete seal during transport and operation
- Has significantly lowered rework costs associated with equipment fitting leaks



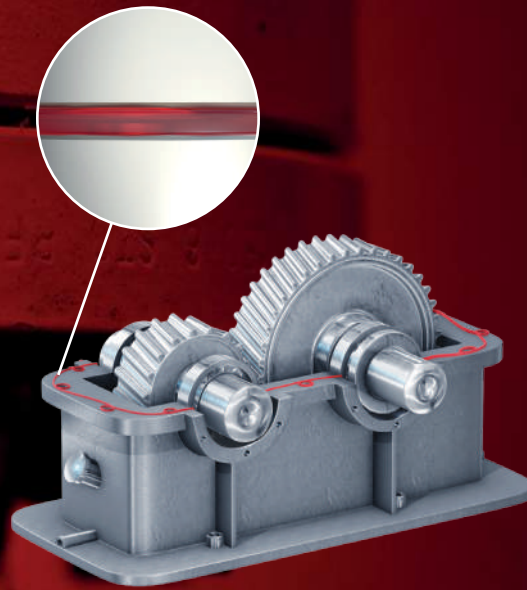
GASKETING PRODUCTS

Cut gaskets leak. **We seal.**



PROBLEM

With compression gaskets:
Not all surface imperfections are filled.
They distort, relax under compression
and displace from the joint.



SOLUTION

With liquid gaskets:
When assembled, all surface imperfections
are filled, adding structural stiffness and
eliminating micromovement and slipping.
They do not shrink, crack or suffer from
relaxation.

Liquid gaskets hold up better. **For longer lasting seals.**

To provide a leak-free seal over a long period of time, gaskets must fill voids and be resistant to liquids and/or gases, while withstanding the operating temperatures and pressures to which they are subjected. LOCTITE® offers a range of gasketing products designed for any flange type, gap size or material.



How to choose a gasketing product.



FLANGE TYPE

RIGID MACHINED FLANGES

Rigid, machined flange surfaces typically are designed for no gap, allowing for metal to metal contact. For these assemblies anaerobic liquid gaskets are the best choice because they provide the highest strength seal.

STAMPED OR FLEXIBLE FLANGES

Typically thinner, stamped metal flanges can have larger gaps that need to be filled. They are also subject to more flex in service. For these types of assemblies, silicone liquid gasketing products provide the best seal.



BEST SELLER

515™

General Purpose

LOCTITE® 515™ cures when confined in the absence of air between close fitting metal surfaces. It seals close fitting joints between rigid metal faces and flanges and will flex with minor flange movements. Provides resistance to low pressures immediately after assembly of flanges. Typically used as a form-in-place gasket for pumps, thermostats, compressors, transmission housings and axle covers.



Flange Type: Rigid Machined Flange



BEST SELLER

SI 5699™

Good Oil Resistance, Non-Corrosive

LOCTITE® SI 5699™ is designed primarily for flange sealing with excellent oil resistance on rigid flange sealing.



Flange Type: Stamped/ Flexible Flange



Find the right product for your application



FLANGE TYPE

Rigid Machined Flange

LOCTITE® 510™

LOCTITE® 515™

LOCTITE® 518™

Stamped Flange

LOCTITE® SI 596™

LOCTITE® SI 5699™

LOCTITE® SI 5900™

LOCTITE® SI 5910™

**SEE OUR FULL LINE OF
GASKETING PRODUCTS:**



Rigid Machined Flange

GASKETING PRODUCTS



518™

General Purpose

Color: Red

Viscosity: 4,000,000 Thixotropic

Temperature Resistance: 150°C

Cure Method: Anaerobic



515™

General Purpose

Color: Dark Purple

Viscosity: 1,200,000 cP (5.0 rpm)

Temperature Resistance: 150°C

Cure Method: Anaerobic



510™

High Temperature

Color: Opaque Pink

Viscosity: 475,000 cP Thixotropic

Temperature Resistance: 200°C

Cure Method: Anaerobic

Stamped Flange

GASKETING PRODUCTS



SI 5699™

Good Oil Resistance,
Non-Corrosive

Color: Grey

Viscosity: > 200 g/min

Temperature Resistance: 200°C

Cure Method: Moisture



SI 5900™

Instant Seal

Color: Black

Viscosity: 35 g/min

Temperature Resistance: 200°C

Cure Method: Moisture



SI 5910™

High Adhesion

Color: Black

Viscosity: 500 g/min

Temperature Resistance: 200°C

Cure Method: Moisture



SI 596™

High Temperature

Color: Red

Viscosity: 73,500 cPs

Temperature Resistance: 275°C

Cure Method: Moisture

* Viscosity is of one-time testing typical value, only for reference. More details are in TDS

Surface Preparation

GASKETING PRODUCTS



SF 790™

Part Cleaner
135544

A gray to off-white methylene chloride liquid solvent in an aerosol spray designed to remove baked-on chemical gaskets, gasket cements and conventional gasket materials from metal surfaces. Its aerosol spray form enables spray application on to intricate shapes with maximum penetration.



SF 7063™

Primer
2098749

LOCTITE® SF 7063™ is a non-CFC solvent based formulation for cleaning and degreasing of surfaces to be bonded with LOCTITE® adhesives. The product can also be used for cleaning and degreasing machine components during maintenance operations.

Equipment

GASKETING PRODUCTS



HD10 Pneumatic Handheld 300 ml Cartridge Dispenser

1714379

A manually controlled applicator that dispenses product from 300 ml cartridges or 250 ml tubes (when tube adapter 989347 is used). The cartridge or tube is pneumatically pressurized and product is dispensed from the nozzle while the trigger is depressed.



Manual Cartridge Applicator

1093940

A hand-held, manually operated meter-mix dispenser. These dispensers provide a convenient, cost-effective method to apply product with minimal waste. The dispensers are compatible with 1:1 and 1:2 mix ratio products.

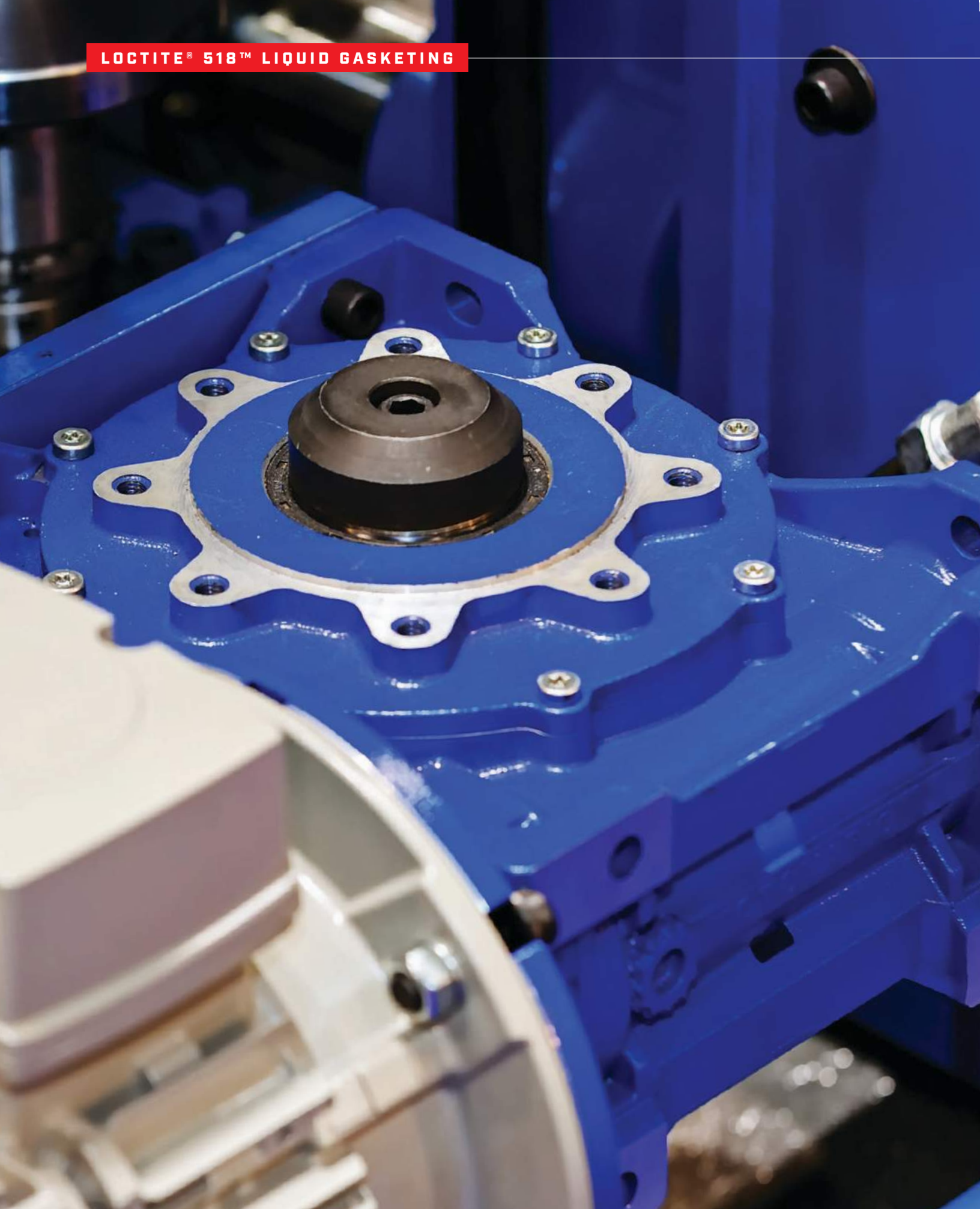
GASKETING PRODUCTS

Product	Item Number	Pack Size	Color	Features	Max Gap Fill Unprimed [in.]	Viscosity [cP] 20 RPM	Thixotropic [yes/no]	Temperature Range	Fixture Time [min] Steel
RIGID MACHINED FLANGES									
510™	235255	50 ml	Opaque Pink	High Temperature Applications	0.25 mm (0.01 in.)	475,000 (2.5 rpm)	Yes	-55°C to 200°C (-65°F to 400°F)	25
515™	231695	50 ml	Dark Purple	General Purpose	0.25 mm (0.01 in.)	1,200,000 (0.5 rpm)	Yes	-55°C to 150°C (-65°F to 300°F)	30
518™	2099618	300 ml	Red	Ideal for use on rigid iron, steel and aluminium flanges	0.25 mm (0.01 in.)	4,000,000 (0.5 rpm)	Yes	-55°C to 150°C (-65°F to 300°F)	20

Product	Item Number	Pack Size	Color	Feature	Viscosity* cps (Mpas) or Extrusion Rate** g/min	Temperature Range	Tack Free Time (min)
STAMPED OR FLEXIBLE FLANGES							
SI 596™	231567	300 ml	Red	High temperature (acetic acid silicone)	73,500 cPs*	-50°C to 275°C (-60°F to 500°F)	30
SI 5699™	491982	80 ml	Grey	For flexible flanges, machined or cast surfaces, metal or plastic, increased oil resistance	200 g/min**	-55°C to 200°C (-67°F to 392°F)	30
SI 5900™	578867	300 ml	Black	Excellent oil resistance, high adhesion, high joint movement, excellent in water/glycol	35 g/min**	-55°C to 200°C (-67°F to 392°F)	15
SI 5910™	578867	300 ml	Black	High joint movement, oil resistance, good on wide variety of plastics, glasses, ceramic, metals	500 g/min**	-55°C to 200°C (-67°F to 392°F)	40

*Note: To increase gap fill, use a primer

**Different viscosity test used



A Costly 5% Leakage Rate Eliminated



“A high leakage rate was causing warranty claims and production delays. LOCTITE’s Engineering Solutions Expert helped us completely eliminate the problem.”

A manufacturer of cast iron gear boxes and geared motors experienced a 5% leakage rate using a competitor’s liquid gasket on the adapter assembly flange. This was costly due to both leakage-related warranty claims on purchased units and testing and production delays caused by the slow cure rate. The competitive product also made it difficult to disassemble and repair the gearbox. **LOCTITE® 518™** Gasket Sealant was an ideal solution, offering a complete seal, quick

curing, and easy disassembly. A LOCTITE® Engineering Solutions Expert showed the plant’s team how to clean flange surfaces and dispense **LOCTITE® 518™** in a continuous bead. Immediately following assembly, **LOCTITE® 518™** fills the gaps between the flange surfaces and the products can be instantly pressure tested to 40 psi. Leaks have now been eliminated and disassembly is easier for customers.

BENEFITS

LOCTITE® 518™ Gasket Sealant:

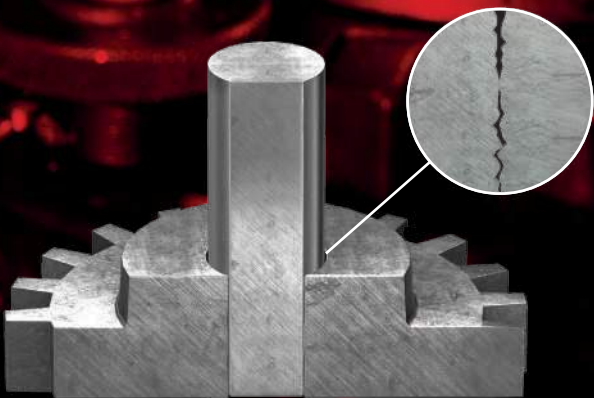
- Seals more effectively, eliminating leakage during operation
- Sustains low pressure testing of 40 psi immediately upon assembly
- Easily disassembles with a small amount of cleavage force



RETAINING COMPOUNDS

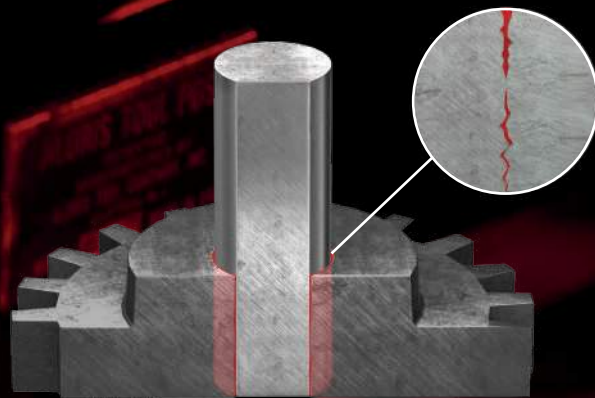
LOCTITE[®] retaining compounds secure components.

For strong reliable assemblies.



PROBLEM

Without retaining compounds:
Mechanical fitting methods leave gaps between fitted parts which cause cylindrical assembly failure.



SOLUTION

With retaining compounds:
Gaps are unitized to provide higher torsional loads and prevent fretting corrosion.

High loads high strength products

Retaining compounds secure bearings, keyways and cylindrical parts into housings or onto shafts, forming strong assemblies. LOCTITE® retaining compounds offer an effective and economical method to eliminate challenges like loosening, corrosion, backlash and wearing by unitizing the assembly and providing uniform stress distribution.



How to choose a retaining compound.



GAP SIZE

UP TO 0.006 in.

Typically, lower viscosity retaining compounds are used for gaps up to 0.006 in. These are typically tight fitting interference fits like those found in shrink fits.

0.006 TO 0.010 in.

For gaps above 0.006 in. retaining compounds with higher viscosities that allow for better gap fill are used. These include bonded slip fits.

0.010 TO 0.020 in.

For assemblies with large gaps that are badly worn, special paste-like retaining compounds should be used.



TEMPERATURE RESISTANCE

Most LOCTITE® retaining compounds are able to withstand temperatures of 150° - 180°C. However, certain chemistries are available that withstand temperatures up to 230°C for assemblies which see higher service temperatures.



STRENGTH

A high-strength retaining compound is recommended for applications that do not need to be disassembled or require extremely high torsional loads. If parts need to be taken apart for maintenance, a lower strength product should be used to aid in disassembly.



638™

High Strength, Slip Fit

LOCTITE® 638™ is recommended for slip fit parts with larger gaps. Excellent performance for dynamic, axial and radial loads. Tolerates minor surface contaminants and cures on inactive metals without an activator.

 **Gap:** Up to 0.010 in.

 **Temperature Resistance:** 180°C

 **Strength:** 29 N/mm²



648™

High Strength, Gap Filling

LOCTITE® 648™ is designed for the bonding of cylindrical fitting parts, particularly where bond gaps can approach 0.15 mm and where maximum strength at room temperature is required. Tolerates minor surface contaminants from various oils, such as cutting, lubrication, anti-corrosion and protection fluids.

 **Gap:** Up to 0.006 in

 **Temperature Resistance:** 180°C

 **Strength:** 31 N/mm²



Find the right product for your application



GAP SIZE

Gap Size Up To 0.006 in.

LOCTITE® 609™
LOCTITE® 641™
LOCTITE® 648™

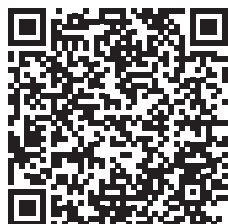
Gap Size 0.006 to 0.010 in.

LOCTITE® 620™
LOCTITE® 638™

Gap Size 0.010 to 0.020 in.

LOCTITE® 660™

SEE THE FULL PORTFOLIO
OF RETAINING COMPOUNDS AT:



Gap Size up to 0.006 in.

RETAINING COMPOUNDS



609™
General Purpose



Temperature Resistance:
150°C



Strength: 15 N/mm²

Cure Speed: 24 hours
Fixture Time: 10 minutes



641™
Medium Strength



Temperature Resistance:
150°C



Strength: 6.5 N/mm²

Cure Speed: 24 hours
Fixture Time: 20 minutes



648™
High Strength



Temperature Resistance:
180°C



Strength: 31 N/mm²

Cure Speed: 24 hours
Fixture Time: 3 minutes

Gap Size - 0.006 to 0.010 in.

RETAINING COMPOUNDS



620™
High Temperature



Temperature Resistance:
230°C



Strength: 17 N/mm²

Cure Speed: 24 hours
Fixture Time: 60 minutes



638™
General Purpose



Temperature Resistance:
180°C



Strength: 29 N/mm²

Cure Speed: 24 hours
Fixture Time: 4 minutes

Gap Size - 0.010 to 0.020 in.

RETAINING COMPOUNDS



660™
Badly Worn Assemblies



Temperature Resistance:
150°C



Strength: 17.2 N/mm²

Cure Speed: 24 hours
Fixture Time: 15 minutes

Equipment

RETAINING COMPOUNDS



NEW LOCTITE® Pro Pump Handheld Dispenser

2564842

Our all-new easy to use, light-weight, durable applicator that allows for precision application of threadlockers, retaining compounds and thread sealants in 50/250 ml bottles.



LOCTITE® Pulse EQ RC50 Integrated Dispenser

2814024

The LOCTITE® Pulse RC50 Integrated Dispenser, I4.0, is an enhanced version of the RC40 Integrated Dispenser and offers a digital touch screen for operation, as well as a precision regulator for low-viscosity dispensing. The dispenser is industry 4.0 compatible, providing enhanced communication/connectivity via ethernet or Wi-Fi. The reservoir can accommodate most standard LOCTITE® adhesive bottles

ADDITIONAL EQUIPMENT

RC30 Manual Reservoir

2814022

Pneumatic Handheld Applicator

88643

Stationary Applicator Valve

88644/88645

RETAINING COMPOUNDS

Product	Item Number	Pack Size	Color	Feature	Viscosity [cP]	Thixotropic [yes/ no]	Compressive Shear Strength, Steel to Steel, psi [N/mm²]	Fixture Time [min]	Temperature Range
GAP SIZE – UP TO 0.006 in.									
609™	232100	50 ml	Green	Press fit, low visocisty	120 (Cannon Fenske)	No	15 N/mm2 (2,300 psi)	10	-54°C to 150°C (-65°F to 300°F)
641™	387885	50 ml	Yellow	Medium strength, if disassembly is required	600	No	6.5 N/mm2 (940 psi)	20	-54°C to 150°C (-65°F to 300°F)
648™	1800518	50 ml	Green	High strength, high temperature resistance. Can be applied to slightly oily surfaces	500	No	31 N/mm2 (4,480 psi)	3	-54°C to 180°C (-65°F to 355°F)
GAP SIZE – 0.006 TO 0.010 in.									
620™	235288	50 ml	Green	High strength, high temperature resistance	8,500	No	17 N/mm2 (2,500 psi)	60	-54°C to 230°C (-65°F to 450°F)
638™	1800356	50 ml		High strength, high temperature resistance, Can be applied to slightly oily surfaces	2,500	No	29 N/mm2 (4,200 psi)	4	-54°C to 180°C (-65°F to 355°F)"
GAP SIZE – 0.010 TO 0.020 in.									
660™	231699	50 ml	Silver	High strength, gap fill for repair	250,000 (5.0 rpm)	Yes	17.2 N/mm2 (2,490 psi)	15	-54°C to 150°C (-65°F to 300°F)

LOCTITE SERVICES

**PREVENT
FRETTING
CORROSION AND
STRENGTHEN
ASSEMBLIES.**

services.loctite.us



A 5 Day Repair Reduced to 8 Hours



“We not only minimized our plant downtime on this repair, we also reduced the likelihood of future repairs and downtime.”

A loose, spinning bearing had damaged a large fan shaft at a cement manufacturer. Hardfacing and machining the shaft would have taken five days of downtime, and it could have led to future weakening and damage from distortion and fretting corrosion. The solution: **LOCTITE® 638™** Retaining Compound. It fills voids, prevents fretting corrosion and evenly distributes high load stress.

A LOCTITE® Engineering Solutions Expert provided training on this new repair method, and in just 8 hours, maintenance personnel cleaned and removed the main bearing, applied **LOCTITE® 638™** to the shaft, slipped the bearing into the proper position and the fan was up and running.

BENEFITS

LOCTITE® 638™ Retaining Compound:

- Allows maintenance personnel to make efficient, in-plant repairs
- Reduces downtime
- Prevents future damage and maintains long-term repair viability



INSTANT ADHESIVES

Fast, lightweight, multi-material bonding.

For more design options.



PROBLEM

Without instant adhesives:
Fastening options that
add complexity, slow
production or limit
materials.



SOLUTION

With instant adhesives:
Strong, fast lightweight
bonding of a wide range
of materials.

Bonds more material. **Faster.**

Instant adhesives are ideal for bonding small to medium-size parts with close fitting, smooth surfaces. They provide fast cure speeds and excellent bond strengths to a wide variety of substrates. LOCTITE® instant adhesives are available in a range of formulations for anything from general purpose repairs to specialty high-performance assembly applications.



How to choose an instant adhesive.

GENERAL PURPOSE vs. SPECIALTY ADHESIVES

LOCTITE® has an instant adhesive formulated for any application.

GENERAL PURPOSE – Strong and versatile enough for the vast majority of applications, including acidic surfaces such as chromated or galvanised metals and porous substrates such as wood, paper, leather, cork and fabric.

TOUGHENED – Elastomer modified adhesives for applications subjected to high shock, impact and humidity.

FLEXIBLE – For bonding materials subjected to bending or distortion, as well as flexible components, and acidic surfaces.

HIGH TEMPERATURE – For applications where speed, gap filling and high temperature, humidity and vibration resistance are required.

LOW ODOR/LOW BLOOM – Low volatile adhesives for applications where cosmetic appearance, minimal frosting and low odor are required.

HIGH GAP FILL – For applications with gaps up to 0.2 inches.

LIGHT CURE – Designed to cure very rapidly upon exposure to UV/visible light of the proper intensity.



VISCOSITY

Available in viscosities from thin liquids to thixotropic, no-run gels.



FIXTURE SPEED

Available in various fixture speeds to accommodate applications that may require instant set times to those that may require minor adjustment time.



STRENGTH

Available in shear resistant, general purpose formulations to toughened, high impact, high peel resistant formulations to meet the specific strength requirements of your application.



401™

Fast, Medium Viscosity

LOCTITE® 401™ is an instant adhesive designed for the assembly of difficult-to-bond materials requiring uniform stress distribution and high tensile and/or shear strength. The product provides for the rapid bonding of a wide range of materials, including metals, plastics and elastomers. LOCTITE® 401™ is also suited to bonding porous materials such as wood, paper, leather and fabric. Perfect for all quick repairs and all types of small emergency repairs.

 **Viscosity:** 100 cP

 **Fixture Speed:** 5 seconds **Full Cure:** 24 hours

 **Strength:** 20 N/mm²



495™

General Purpose, Low Viscosity

LOCTITE® 495™ is an instant adhesive designed for the assembly of difficult-to bond materials which require uniform stress distribution and high tensile and/or shear strength. The product is a general purpose, low viscosity cyanoacrylate instant adhesive. LOCTITE® 495™ provides rapid bonding of a wide range of materials, including metals, plastics and elastomers. Perfect for all quick repair jobs.

 **Viscosity:** 40 cP

 **Fixture Speed:** 5 seconds **Full Cure:** 24 hours

 **Strength:** 14.2 N/mm²



Find the right product for your application



General Purpose

LOCTITE® 401™
LOCTITE® 406™
LOCTITE® 454™
LOCTITE® 495™

Toughened

LOCTITE® 435™
LOCTITE® 480™

High Temperature

LOCTITE® 402™

Flexible

LOCTITE® 4902™

Low Odor / Low Bloom

LOCTITE® 403™
LOCTITE® 460™

High Gap Fill

LOCTITE® 3090™

Light Cure

LOCTITE® 4310™
LOCTITE® 4311™

General Purpose

INSTANT ADHESIVES



401™
Medium Viscosity



Viscosity: 100 cP



Fixture Speed: 5 seconds
Full Cure: 24 hours



Strength: 20 N/mm²

Color: Clear
Temperature Resistance: 121°C



406™
Wicking Grade



Viscosity: 20 cP



Fixture Speed: 30 seconds
Full Cure: 24 hours



Strength: 15.5 N/mm²

Color: Clear
Temperature Resistance: 121°C



454™
No-Run Gel



Viscosity: Gel



Fixture Speed: 45 seconds
Full Cure: 24 hours



Strength: 20.9 N/mm²

Color: Clear
Temperature Resistance: 121°C



495™
Low-Medium Viscosity



Viscosity: 40 cP



Fixture Speed: 5 seconds
Full Cure: 24 hours



Strength: 14.2 N/mm²

Color: Clear
Temperature Resistance: 121°C

SEE THE FULL LINE OF INSTANT
ADHESIVES:



Toughened

INSTANT ADHESIVES

**435™**

Surface Insensitive

**Viscosity:** 200 cP**Fixture Speed:** 30-45 seconds
Full Cure: 24 hours**Strength:** 18.5 N/mm²**Color:** Clear**Temperature Resistance:** 100°C**480™**

Black, High Strength

**Viscosity:** 200 cP**Fixture Speed:** 90 seconds
Full Cure: 24 hours**Strength:** 26 N/mm²**Color:** Black**Temperature Resistance:** 100°C

Low Odor / Low Bloom

INSTANT ADHESIVES

**403™**

Gap Filling

**Viscosity:** 1,200 cP**Fixture Speed:** 30 seconds
Full Cure: 24 hours**Strength:** 20.3 N/mm²**Color:** Pale Yellow to Colorless**Temperature Resistance:** 80°C**460™**

Close Fitting Parts

**Viscosity:** 40 cP**Fixture Speed:** 20 seconds
Full Cure: 24 hours**Strength:** 21 N/mm²**Color:** Colorless to Straw**Temperature Resistance:** 80°C

High Temperature

INSTANT ADHESIVES

**402™**

High Temperature

**Viscosity:** 110 cP**Fixture Speed:** 20 seconds
Full Cure: 24 hours**Strength:** 22 N/mm²**Color:** Slightly Pale Yellow / Colorless**Temperature Resistance:** 135°C

High Gap Fill

INSTANT ADHESIVES

**3090™**

Two-component Gel

**Viscosity:** Gel**Fixture Speed:** 210 seconds*
Full Cure: 24 hours**Strength:** 21 N/mm²**Color:** Clear to Slightly Cloudy**Temperature Resistance:** 100°C

Flexible

INSTANT ADHESIVES

**4902™**

High Viscosity

**Viscosity:** 200 cP**Fixture Speed:** 20 seconds
Full Cure: 24 hours**Strength:** 10.5 N/mm²**Color:** Colorless**Temperature Resistance:** 82°C

Light Cure

INSTANT ADHESIVES

**4310™**

Close Fitting Parts

**Viscosity:** 180 cP**Fixture Speed:** > 25 seconds****Strength:** 20.3 N/mm²**Color:** Light Yellow-Green to
Dark Blue-Green Liquid
Temperature Resistance: 100°C**4311™**

Gap Filling

**Viscosity:** 1,000 cP**Fixture Speed:** > 30 seconds***Strength:** 21 N/mm²**Color:** Light Yellow-Green to
Dark Blue-Green Liquid
Temperature Resistance: 100°C

* Dependent upon gap size - Stated at 0.2" gap, aluminum

** Faster fixture times can be achieved with light cure

Surface Preparation

INSTANT ADHESIVES



SF 7070™

Cleaner, Degreaser
231562

Color: Colorless
Viscosity: 1.5 cP
Base: Hydrocarbon
Dry Time: Equivalent to water



SF 770™

Polyolefin Primer
135266

Color: Clear
Viscosity: 1.25 cP
Base: Heptane
Dry Time: < 30 sec.
On-Part Life: 8 hours



SF 7109™

Accelerator
135336

Color: Clear/Amber
Viscosity: 0.87 cP
Base: Acetone
Dry Time: < 30 sec.
On-Part Life: 1 minute



SF 768™

Cleanup Solvent
235018

Color: Clear to Yellow
Viscosity: 1.5 cP
Base: Nitromethane
Dry Time: N/A

Equipment

INSTANT ADHESIVES



PU20 Benchtop Peristaltic Dispenser

2265279

The LOCTITE® EQ PU20 Digital Peristaltic Dispenser is a reliable and effective volumetric dispenser for single-component, low viscosity adhesives. It is great for precise dosing or applications that require a specific flow rate.



LOCTITE® Pulse EQ RC50 Integrated Dispenser

2814024

The LOCTITE® Pulse RC50 Integrated Dispenser, I4.0, is an enhanced version of the RC40 Integrated Dispenser and offers a digital touch screen for operation, as well as a precision regulator for low-viscosity dispensing. The dispenser is industry 4.0 compatible, providing enhanced communication/connectivity via ethernet or Wi-Fi. The reservoir can accommodate most standard LOCTITE® adhesive bottles

ADDITIONAL EQUIPMENT

Bond-A-Matic® 3000 Dispenser

982719/982722

Low Viscosity Handheld Applicator

IDH 97130

Stationary Applicator Valve

97113/97114CA

Cyanoacrylate Dispense Valve

IDH 98013

Light Cure Dispense Valve

IDH 98009

INSTANT ADHESIVES								
Product	Item Number	Pack Size	Color	Viscosity [cP]	Gap Fill	Fixture Speed, Steel [sec]	Shear Strength, GBMS	Temperature Range
GENERAL PURPOSE								
401™	235144	500 g	Clear	100	0.15 mm (0.005 in.)	5	20 N/mm² (2,900 psi)	-40°C to 121°C (-40°F to 250°F)
406™	231474	20 g	Clear	20	0.12 mm (0.004 in.)	30	15.5 N/mm² (2,250 psi)	-40°C to 121°C (-40°F to 250°F)
454™	195678	20 g	Clear	Gel	0.25 mm (0.01 in.)	45	20.9 N/mm² (3,030 psi)	-40°C to 121°C (-40°F to 250°F)
495™	231478	20 g	Clear	40	0.12 mm (0.004 in.)	5	14.2 N/mm² (2,060 psi)	-40°C to 121°C (-40°F to 250°F)
TOUGHENED								
435™	840057	20 g	Clear	200	0.18 mm (0.006 in.)	30-45	18.5 N/mm² (2,700 psi)	-40°C to 100°C (-40°F to 212°F)
480™	852269	20 g	Black	200	0.18 mm (0.006 in.)	90	26 N/mm² (3,800 psi)	-40°C to 100°C (-40°F to 212°F)
HIGH TEMPERATURE								
402™	2714623	20 g	Clear	110	0.15 mm (0.005 in.)	20	22 N/mm² (3,200 psi)	-40°C to 135°C (-40°F to 275°F)
FLEXIBLE								
4902™	1875841	20 g	Colorless	200	0.12 mm (0.004 in.)	20	10.5 N/mm² (1,500 psi)	-40°C to 82°C (-40°F to 180°F)
LOW ODOR / LOW BLOOM								
403™	255299	20 g	Pale yellow to colorless	1,200	0.24 mm (0.008 in.)	30	20.3 N/mm² (2,950 psi)	-40°C to 80°C (-40°F to 175°F)
460™	271857	20 g	Colorless to straw	40	0.12 mm (0.004 in.)	20	21 N/mm² (3,050 psi)	-40°C to 80°C (-40°F to 175°F)
HIGH GAP FILL								
3090™	1379599	11 g	Clear to slightly cloudy gel	Gel	5 mm (0.2 in.)	10	21 N/mm² (3,045 psi)	-40°C to 100°C (-40°F to 212°F)
LIGHT CURE								
4310™	1401792	1 oz.	Light yellow-green to dark blue-green liquid	180	0.15 mm (0.005 in.)	25*	20.3 N/mm² (2,950 psi)	-40°C to 100°C (-40°F to 212°F)
4311™	1401791	1 oz.	Light yellow-green to dark blue-green liquid	1,000	0.24 mm (0.008 in.)	30*	21 N/mm² (3,050 psi)	-40°C to 100°C (-40°F to 212°F)

Note: Faster fixture times can be achieved with higher light cure intensities

LOCTITE SERVICES

REDUCE COMPLEXITY AND TIME WHILE EXPANDING DESIGN.

services.loctite.us



HOSPITAL

Improved Appearance, Durability and Production Speed



“LOCTITE® helped make our signs more aesthetically pleasing and stronger while enabling us to ship more product faster.”

The thick bond lines and slow curing speed of a high-viscosity RTV used to bond aluminum letters to PVC sign boards was causing aesthetic issues and delaying production for a retail sign manufacturer. In addition, letters were sometimes lost due to the low bond strength of the RTV. **LOCTITE® 401™** Instant Adhesive, which cures more quickly and minimizes the gap between the letters and the sign board, was an ideal solution.

A LOCTITE® Engineering Solutions Expert showed how just a few small drops of **LOCTITE® 401™** on each sign letter, which was then applied to the sign board with light hand pressure, allowed the sign company to manufacture signs more quickly and provide customers with a higher quality product.

BENEFITS

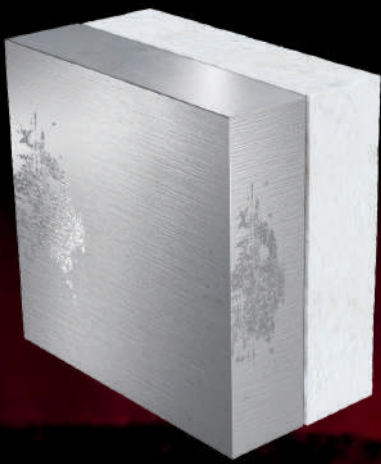
LOCTITE® 401™ Instant Adhesive:

- Minimizes gap and improves aesthetic appeal with thin bond lines
- Cures fast, maximizing production output and lowering overall production costs
- Has high bond strength that eliminates loss of sign letters and addresses customer complaints



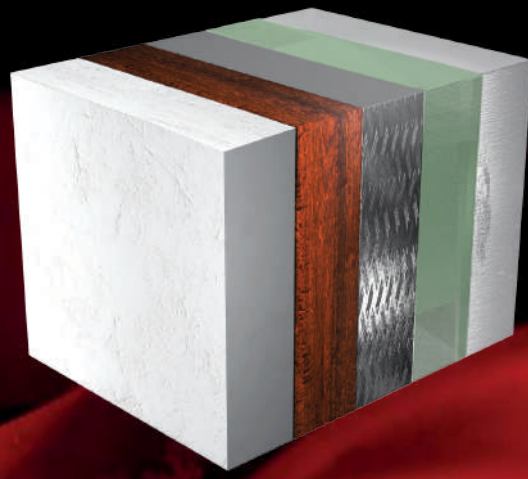
UNIVERSAL BONDERS

HY 4070™ and HY 4090.™ **Almost nothing they can't do.**



PROBLEM

Without Universal Bonders:
Multiple material assemblies
require additional primers,
more cure time and are
susceptible to vibration,
temperature changes and
humidity.



SOLUTION

With Universal Bonders:
Strong, durable, fast
bonding of multiple
materials.

The most versatile adhesive.

In your toolbox.

Faster fixture. Faster repairs.



BEST SELLER



HY 4070™

Universal Bonder
Ultra Fast Structural Adhesive

LOCTITE® HY 4070™ is a 2-part, transparent, colorless to pale yellow cyanoacrylate/acrylic hybrid gel adhesive that provides a fast fixture at room temperature in bond gaps up to 0.2 in. (5 mm). It suits various substrates including most plastics, rubbers and metals. It is used where complete cure of excess adhesive as well as temperature and moisture resistance is required.



Fixture Time: <60 seconds



Strength: 25 N/mm²



Substrate: Plastic, Rubber, Metal, Wood



Product	Item Number	Pack Size	Features	Color	Gap Fill	Viscosity [cP]	Mix Ratio	Temperature Range	Fixture Time	Lap Shear Strength, GBMS
HY 4070™	2143579	11 gm	Ultra-fast, multi-substrate bonder	Transparent to Pale Yellow	5mm (0.2 in.)	Gel	10:1	-4°C to 100°C (-40°F to 212°F)	< 60 (aluminum, 0.05 mm gap)	25 N/mm ² (3,625 psi)

Nozzles

UNIVERSAL BONDRERS

11 gm
1434516





Fast curing adhesives. For industrial design solutions.

Create strong and reliable bonds with HY 4090.™



HY 4090™

Universal Bonder
Fast & Versatile Structural Adhesive

LOCTITE® HY 4090™ is an off-white to light yellow gel with high viscosity. It opens up new application areas in structural bonding by combining instant adhesive properties with those of epoxies to give more striking benefits:

- Fixture time of 90-180 seconds and suitable for gaps up to 5 mm
- Resistant to vibration, shock loads and impacts



Fixture Time: <180 seconds



Strength: 17 N/mm²



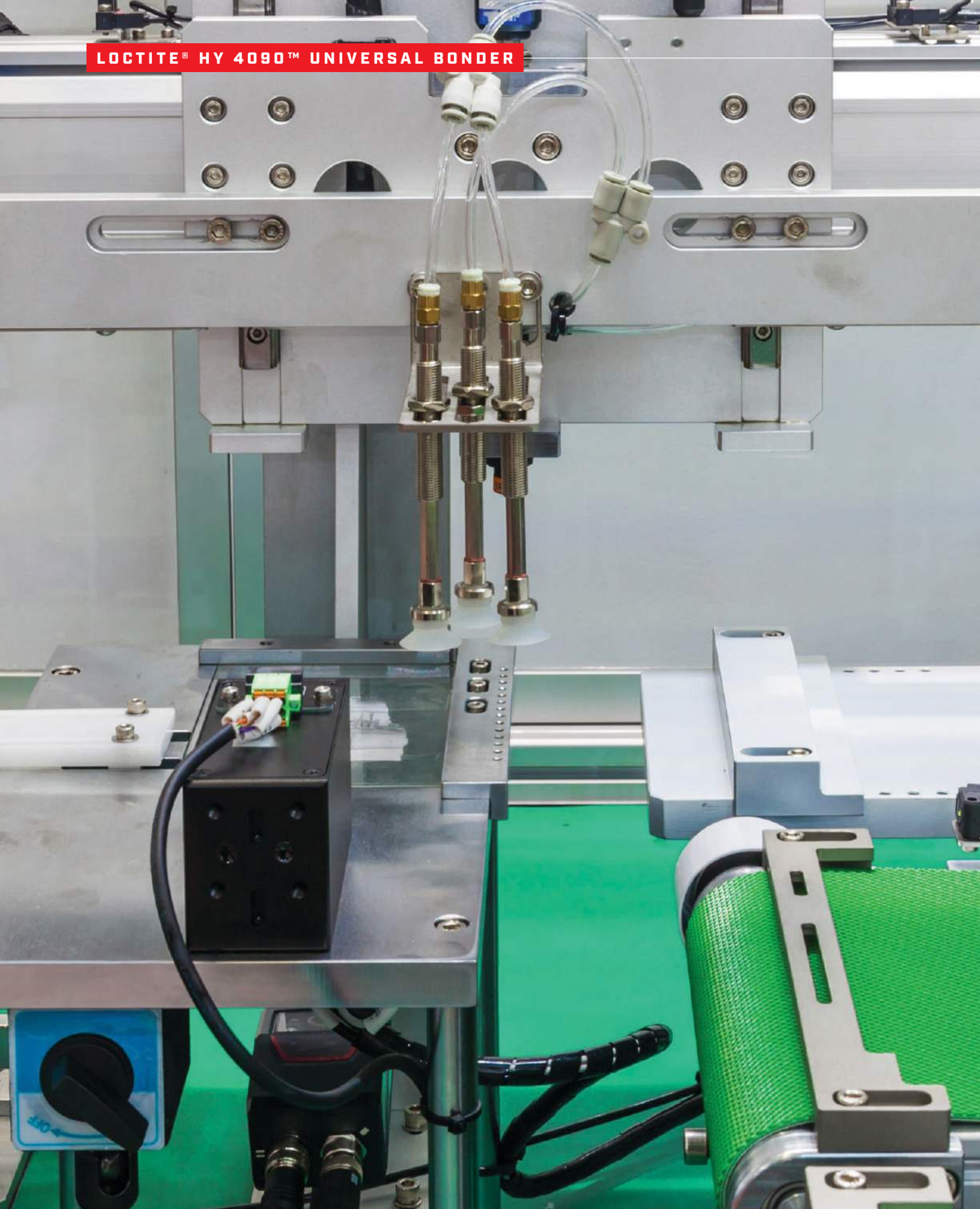
Substrate: Plastic, Rubber, Metal, Wood

Product	Item Number	Pack Size	Features	Color	Gap Fill	Viscosity [cP]	Mix Ratio	Temperature Range	Fixture Time	Lap Shear Strength, GBMS
HY 4090 GY	2151898	50 G	Multi-material bonder; fast strength build; good environmental resistance	Grey	2 mm (0.08 in.)	Gel	1:1	-40°C to 140°C (-40°F to 284°F)	< 180	17 N/mm ² (2,420 psi)
HY 4090 DC	2113520	50 G	Multi-material bonder; fast strength build; good environmental resistance	Multi-material bonder; fast strength build; good environmental resistance	2 mm (0.08 in.)	Gel	1:1	-40°C to 140°C (-40°F to 284°F)	< 180	17 N/mm ² (2,420 psi)
HY 4090 CR	2422268	50 G	Multi-material bonder; fast strength build; good environmental resistance	Multi-material bonder; fast strength build; good environmental resistance	2 mm (0.08 in.)	Gel	1:1	-40°C to 140°C (-40°F to 284°F)	< 180	17 N/mm ² (2,420 psi)

Nozzles

UNIVERSAL BONDERS

50 ml
1573153



Fast, Durable Bonding of High Volume PA and ABS Components



“LOCTITE had the perfect adhesive solution to help bring our new product to life.”

A designer and manufacturer of battery packs for electronic devices was designing a new product and searching for an adhesive to bond PA and ABS plastics. The adhesive needed to allow for projected production line volumes and be resistant to vibration, temperature and humidity variances. **LOCTITE® HY 4090™**, a fast curing universal bonder that provides strong bonds without primers or other surface treatments, was a perfect candidate. A LOCTITE® Engineering Solutions Expert showed them how to clean

battery pack parts with LOCTITE® SF 7063™ to remove molding compounds that may inhibit final bond strengths, then dispense **LOCTITE® HY 4090™** from the dual cartridge packaging using the LOCTITE® manual applicator equipped with a mixer nozzle. The hybrid adhesive fixtured in just 3 minutes, minimizing any potential blooming from exposed fillets of the cyanoacrylate based product, and provided a bond to PA and ABS plastics that withstood vibration, temperature and humidity variances.

BENEFITS

LOCTITE® HY 4090™ Universal Bonder:

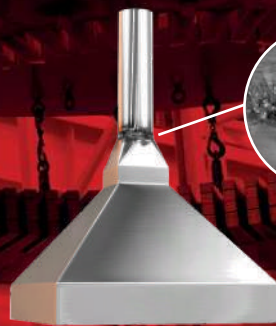
- Generates strong, multi-material bonds without requiring additional surface primers
- Provides a fast fixture rate of 3 minutes that will not impede the proposed line speed
- Results in assemblies that resist vibration, temperature changes and attack by high humidity

A low-angle, upward-looking photograph of a complex industrial structure, possibly a bridge or a large building under construction. The image is heavily overlaid with a red color filter. The structure consists of numerous steel beams, girders, and support columns, creating a dense network of lines. Several large, circular industrial lights are visible, some of which are illuminated, casting a warm glow. The overall composition is dynamic, with strong geometric patterns and a sense of height and scale.

STRUCTURAL ADHESIVES

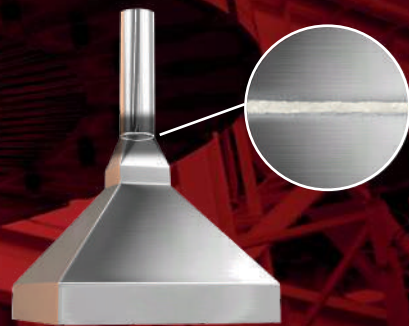
Superior speed, aesthetics and strength.

Without the weight.



PROBLEM

With traditional fastening:
Added weight, time, cost
and difficulty.



SOLUTION

With structural adhesives:
Lightweight, strong,
durable, less expensive
fastening with better end
product aesthetics.

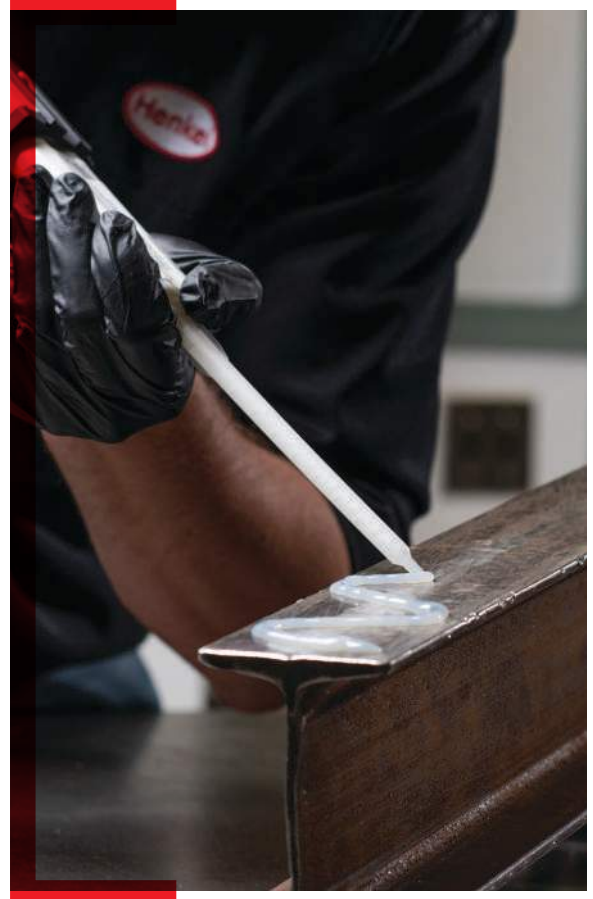
Take off the weight. Take on the load.

Structural adhesives join two materials firmly and permanently using an adhesive “bridge” between the substrates. They eliminate many of the shortcomings of mechanical methods, such as:

- Improper stress distribution which can affect product reliability
- Added weight to the end-product which can increase costs

They are also easier to apply and assemble.

Selection factors to consider include adhesive-material compatibility and joint requirements.



How to choose a structural adhesive.

GENERAL PURPOSE vs. SPECIALTY ADHESIVES

LOCTITE® has a wide range of structural adhesives, from general purpose — strong and versatile enough to cover the majority of applications, to specialty — formulated for the rare cases where general purpose won't do.

HIGH PERFORMANCE

Solutions designed for a range of product needs, with respect to impact strength, peel strength, durability, working time etc.

FLEXIBLE SOLUTIONS

Offering excellent shock absorption, elasticity and adhesion to plastics, metals and glass.

SPECIAL SUBSTRATES

From epoxies designed to be safe for food and water contact to acrylics and polyurethanes for bonding e-coated metals, rigid foams, plastics and glass.

BONDING FERRITE COMPONENTS

Epoxies and acrylics designed for the specific requirements of bonding ferrite.

POTTING

Flowable epoxies designed for filling cavities and protecting components.



FIXTURE SPEED

A range of fixture times from ultra fast to slow to meet your process requirements.



SUBSTRATE

LOCTITE® structural adhesives can bond most materials.



BEST SELLER

EA E-20HP™

Fast Fixture, High Shear

LOCTITE® EA E-20HP™ is an off-white, 2-part, toughened, medium-viscosity, industrial grade epoxy adhesive with a medium work life. The mixture cures at room temperature to form a tough bondline with high peel resistance and high shear strengths. It is resistant to a wide range of chemicals and solvents and is an excellent electrical insulator.



Fixture Speed: 120 minutes



Substrate: Concrete, Aluminum, Steel, Stainless Steel, Polyamide (Nylon), Polycarbonate, Wood



BEST SELLER

AA 326™

Fast Fixture, Small Gaps, 2-step

LOCTITE® AA 326™ is a yellow to amber, no-mix, medium viscosity (thixotropic) structural and magnet bonder which is activated with LOCTITE® SF 7649™. It has good adhesion to different types of ferrites, a fixture time of 3 minutes and a shear strength of 15.2 N/mm. It can be used in temperatures up to 120°C.



Fixture Speed: 2 minutes



Substrate: Aluminum, Steel



Find the right product for your application



GENERAL PURPOSE

LOCTITE® AA 330™
LOCTITE® EA AA 352™

SPECIALTY

High Performance

WORK LIFE

A range of life times from fast to slow to meet your process requirements.

< 1 Hour

LOCTITE® EA E-60HP™

≥ 1 Hour

LOCTITE® EA 9466™

Heat Cure

LOCTITE® EA 9514™

Flexible Solutions

LOCTITE® EA E-05CL™

Magnet Bonding

LOCTITE® AA 326™

LOCTITE® AA 332™

Potting

LOCTITE® EA E-30CL™

LOCTITE® EA E-60NC™

General Purpose STRUCTURAL ADHESIVES



AA 330™
Small Gap



AA 352™
Fast Fixture

THIS PRODUCT REQUIRES
AN ACTIVATOR **SF 7387™**



Fixture Speed: 4 minutes



Substrate: Aluminum, Ceramic,
Concrete, Glass, Metal, Stainless
Steel, Steel, Wood

Gap: 0.5 mm

Temperature Resistance: 120°C

Color: Pale Yellow

Chemistry: Two-step Acrylic



Fixture Speed: < 12 seconds



Substrate: Metal, Glass

Temperature Resistance: 120°C

Color: Transparent light amber

Chemistry: Light cure acrylic

LOCTITE SERVICES

**IMPROVE STRENGTH
AND AESTHETICS
IN REDUCED TIME.**

services.loctite.us

*Work Life = maximum time before assembly

High Performance STRUCTURAL ADHESIVES

WORK LIFE* < 1 HOUR



EA E-20HP™

High Shear, High Peel



Work Life: 20 minutes



Substrate: Aluminum, Ceramic, Concrete, Glass, Metal, Steel, Stainless Steel, Wood



Fixture Speed: 120 minutes

Temperature Resistance: 175°C

Color: Off-white

Chemistry: Epoxy

HEAT CURE



EA 9514™

Heat Cure, Gap Filling



Work Life: N/A



Substrate: Plastics, Metals



Fixture Time: 180 mins

Temperature Resistance: 150°C

Color: Off-white opaque paste

Chemistry: Epoxy

*Work Life = maximum time before assembly

WORK LIFE* ≥ 1 HOUR



EA E-60HP™

High Shear, High Peel



Work Life: 60 minutes



Substrate: Aluminum, Ceramic, Concrete, Glass, Metal, Plastic, Stainless Steel, Steel, Wood



Fixture Speed: 180 minutes

Temperature Resistance: 175°C

Color: Off-white

Chemistry: Epoxy



EA 9466™

Extended Work Life



Work Life: 120 minutes



Substrate: Plastics, Metals



Fixture Speed: > 180 minutes

Temperature Resistance: 175°C

Color: Off-white opaque paste

Chemistry: Epoxy



EA E-120HP™

High Shear, Non-Sag



Work Life: 120 minutes



Substrate: Aluminum, Ceramic, Concrete, Glass, Metal, Plastic, Stainless Steel, Steel, Wood



Fixture Speed: > 180 minutes

Temperature Resistance: 177°C

Color: Amber

Chemistry: Epoxy

Flexible Solutions

STRUCTURAL ADHESIVES



EA E-05CL™

Fast Fixture



Work Life: 5 minutes



Substrate: Aluminum, Ceramic, Concrete, Glass, Metal, Plastic, Stainless Steel, Steel, Wood



Fixture Speed: 30 minutes

Temperature Resistance: 150°C

Color: Clear

Chemistry: Epoxy

Magnet Bonding

STRUCTURAL ADHESIVES



AA 332™

High Temp Resistance

THIS PRODUCT REQUIRES AN ACTIVATOR **SF 7387™**



Fixture Speed: 3 minutes



Substrate: Magnets

Gap: 0.5 mm

Temperature Resistance: 200°C

Color: Amber

Chemistry: Two-step Acrylic



AA 326™

High Viscosity

THIS PRODUCT REQUIRES AN ACTIVATOR **SF 7649™**



Fixture Speed: 2 minutes



Substrate: Metal

Gap: 0.5 mm

Temperature Resistance: 120°C

Color: Light Amber

Chemistry: Two-step Acrylic

Potting

STRUCTURAL ADHESIVES



EA E-30CL™

Water Resistant, Clear



Work Life: 30 minutes



Substrate: Ceramics, Glass, Metals, Optical Fibers, Rigid Plastics



Fixture Speed: 180 minutes

Temperature Resistance: 175°C

Color: Clear

Chemistry: Epoxy



EA E-60NC™

Non-corrosive



Work Life: 60 minutes



Substrate: Ceramics, Glass, Metals, Optical Fibers, Rigid Plastics



Fixture Speed: >180 minutes

Temperature Resistance: 120°C

Color: Black

Chemistry: Epoxy

Equipment

STRUCTURAL ADHESIVES

DISPENSERS



50 ml

Dual Cartridge Applicators

1:1, 2:1, 4:1

Manual: 720228

Pneumatic: 476898

50 ml

Dual Cartridge Applicators

10:1 S-Style

1:1, 2:1, 4:1

Manual: 1034026

Pneumatic: 1493310

200 ml

EQ HD14 Dispenser

1:1, 2:1

Manual: 2693822

Pneumatic: 2693824

490 ml

EQ HD14 Dispenser

10:1

Manual: 2693823

Pneumatic: 2693825

SEE THE FULL LINE OF
STRUCTURAL ADHESIVES:



STRUCTURAL ADHESIVES - 2-STEP ACRYLICS									
Product	Item Number	Pack Size	Features	Color	Viscosity [mPa·s, cP]	Gap Fill	Fixture Time [min]	Shear Strength, GBMS	Temperature Resistance
GENERAL PURPOSE									
AA 330™	1690727	25 ml	Metal, wood, ferrite, ceramic, plastic	Cloudy, colorless to pale yellow	65,000	0.5 mm [0.02 in.]	4	23 N/mm² [3,399 psi]	0°C to 120°C (32°F to 250°F)
AA 352	257239	1L	Metal, glass, unitizing electrical devices, appliances parts, decorative components	Transparent light amber	20,000	0.5 mm [0.02 in.]	<12 seconds	15.2 N/mm² [2,200 psi]	0°C to 120°C (32°F to 250°F)
MAGNET BONDING									
AA 332	160794	1L	Securing permanent magnets in motor magnet bonding	Opaque light yellow to dark amber	100,000	0.5 mm [0.02 in.]	3	20 N/mm² [3,000 psi]	0°C to 200°C (32°F to 400°F)
AA 326	231560	50 ml	Ferrites to plated materials in electric motors, loudspeakers hardware, jewelry	Transparent, yellow to light amber	18,000	0.5 mm [0.02 in.]	2	15 N/mm² [2,200 psi]	0°C to 120°C (32°F to 250°F)

STRUCTURAL ADHESIVES - EPOXIES									
Product	Item Number	Pack Size	Features	Color	Viscosity [cP]	Mix Ratio	Fixture Time [min]	Lap Shear Strength, Steel	Temperature Resistance
HIGH PERFORMANCE									
EA E-20HP™	237107	50 ml	Excellent bond strength to plastics, metals, dry concrete, limestone	Off-white	30,000	2:1	120	22 N/mm² [3,200 psi]	-40°C to 175°C (-40°F to 350°F)
EA E-60HP™	237110	50 ml	Extended work life	Off-white	45,000	2:1	>180	30 N/mm² [4,320 psi]	-40°C to 175°C (-40°F to 350°F)
EA E-120HP™	1403943	50 ml	High impact and peel strength; aerospace applications, aluminum, steel, plastics, ceramics	Amber-beige	30,000	2:1	>180	30 N/mm² [4,300 psi]	-40°C to 175°C (-40°F to 350°F)
9466	2057343	400 ml	Toughened, extended work life	Off-white opaque	40,000	2:1	180	37 N/mm² [5,365 psi]	-40°C to 175°C (-40°F to 350°F)
HEAT CURE									
9514™	2065585	300 ml	Toughened, large gap fill, non-sag	Gray opaque	45,000 (Casson Viscosity)	One Component	N/A	45 N/mm² [6,530 psi]	-40°C to 150°C (-40°F to 300°F)
FLEXIBLE SOLUTION									
EA E-05CL™	237099	50 ml	Ideal for bonding when flexibility is needed	Clear	2,500	1:1	30	10 N/mm² [1,450 psi]	-40°C to 150°C (-40°F to 300°F)
POTTING									
EA E-30CL™	237116	50 ml	Excellent bond strength to plastics, metals, dry concrete, limestone	Off-white	30,000	2:1	120	22 N/mm² [3,200 psi]	-40°C to 175°C (-40°F to 350°F)
EA E-60NC™	237113	50 ml	Bonding, potting, encapsulating electrical components	Black opaque	8,000	1:1	>180	16 N/mm² [2,360 psi]	-40°C to 120°C (-40°F to 250°F)



A Long-Lasting Alternative to Welding



“LOCTITE® helped us find a solution to constant spot weld failures that were costing us equipment downtime and repair costs.”

A paper recycler's stainless steel filter screens failed regularly in service—every 6 to 8 weeks—due to the erosion of spot welds that caused the mesh to fall into the rotating screen system. The frequent replacement required by these failures caused equipment downtime and labor costs.

LOCTITE® E-20HP™, a structural adhesive that is resistant to peel and shear forces, was the perfect solution. A LOCTITE® Engineering Solutions Expert walked the team through the process, from ground

washing the screen mesh and filter to remove any paper recycling debris and chemical residues, to dispensing from a 50 ml. dual cartridge, to positioning and weighting the replacement mesh. The new process has lowered filter replacement costs, labor repair costs and doubled uptime between process downtime, thereby increasing recycling production output.

BENEFITS

LOCTITE® E-20HP™ Structural Adhesive:

- Provides the needed durability to withstand the abrasive forces in the filter process
- Replaces spot welds and holds the fine filter mesh in place for more than 16 weeks
- Offers cost savings by reducing equipment down time and labor costs

FLEXIBLE ADHESIVES AND SEALANTS

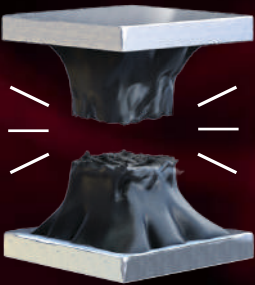
TEKROSON[®]
MS 600NA WHITE
ELASTIC ADHESIVE

- Low odor
- Paintable
- Isocyanate- and solvent-free
- Weathering- and UV-resistant
- Neutral cure, non-corrosive
- High adhesion to most substrates without primer

PART NO. 2138430

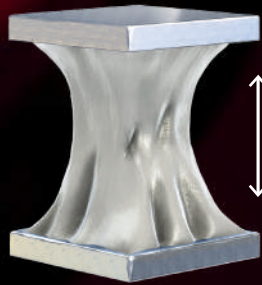
Varied substrates.
High elongation.

**For joints with
high movement.**



PROBLEM

Without flexible adhesives:
Joints may fail under
dynamic stresses.



SOLUTION

With flexible adhesives:
Joints compensate for
movement.

Bonding and sealing for dynamic loads.

Flexible adhesives and sealants are ideal for applications that are subjected to dynamic forces and require durable adhesion to a variety of substrates. They fill large gaps and once cured, their resilient properties provide UV-resistant, waterproof seals and strong bonds that withstand high tensile and impact forces, as well as cold and hot temperature cycles, where substrates expand and contract at different rates.



How to choose a flexible adhesive or sealant.

BONDING vs. SEALING

While all of the flexible adhesives and sealants provide both a bond and a seal, some are formulated with higher tensile strengths which make them better suited for bonding applications. Alternatively, others are developed with higher elongation properties, which make them more ideally suited for sealing applications.



PAINTABILITY

SMP*-based adhesives and sealants are paintable immediately after application, while silicone-based adhesives and sealants are not compatible with paint.



TEMPERATURE

The operating temperature requirements of your end device may have an impact on which flexible adhesive and sealant is best suited for your application.



CURE SPEED

Two-component flexible adhesive and sealants provide fast cure times, while one-component products rely on ambient moisture and require longer times to cure.

*Silane Modified Polymer



TEROSON® MS 939™

Primerless, Multi-purpose Adhesive

IDH 2496647 White - 310 ml

IDH 2496651 Grey - 310 ml

TEROSON® MS 939™ is an industrial elastomeric bonding adhesive that offers high versatility. The product demonstrates both high strength and good elasticity. TEROSON® MS 939™ meets the damp heat test for the solar industry and the UL listing for electrical equipment. It has excellent weathering resistance.



Paintability: Yes



Temperature Resistance: 100°C



Cure Speed: 24 hours

TEROSON® MS 930™

Primerless Sealant/Adhesive

IDH 2447722

TEROSON® MS 930™ is a 1-part, white, grey or black, moisture-cured, thixotropic silane modified polymer sealant/adhesive. It is suitable for various applications involving a wide range of substrate materials. It forms a soft elastic product and provides excellent UV and weathering resistance. It complies with UL QMFZ2 for electrical safety.



Paintability: Yes



Temperature Resistance: 100°C



Cure Speed: 24 hours



BEST SELLER

LOCTITE® SI 587™

One component, Silicone

IDH 231482

LOCTITE® SI 587™ is used for gasketing and sealing applications for both plant maintenance and small, medium, and large-sized OEM. As a formed-in-place gasket/sealant, LOCTITE® SI 587™ has been designed to give outstanding performance in typical automotive gasketing applications including valve covers, rocker covers, oil pans, water pumps, end seals, intake manifolds, and rear axle housings. Excellent adhesive for bonding and repairing fabricated silicone gaskets.



Temperature Resistance: 260°C



Base Oil: Hydrocarbon



Find the right product for your application



Flexible Adhesives

TEROSON MS 939NA™
TEROSON MS 9399™
LOCTITE SI 587™

Flexible Adhesives



TEROSON MS 930™
 One-component, SMP*



Paintability: Yes



Temperature Resistance: 100°C



Cure Speed: 24 hours
Skin Over Time: 5 min.

Color: White, Grey
Cure Method: Moisture
Tensile Strength: 0.9 N/mm²



TEROSON MS 939™
 One-component, SMP*



Paintability: Yes



Temperature Resistance: 100°C



Cure Speed: 3 hours
Skin Over Time: 25 min.

Color: Grey
Cure Method: Moisture
Tensile Strength: 3 N/mm²



LOCTITE SI 587™
 One-component, Silicone*



Paintability: No



Temperature Resistance: 260°C



Cure Speed: 24 hours
Skin Over Time: 10 min.

Color: Blue
Cure Method: Moisture
Tensile Strength: > 1.6 N/mm²

Equipment

FLEXIBLE ADHESIVES AND SEALANTS



Manual Cartridge Applicator, 300 ml

1093940

The LOCTITE® brand Manual Cartridge Applicator is designed for use with sealants and adhesives packaged in 300 ml cartridges. The mechanical advantage of a 26:1 thrust ratio allows for easy application of medium to high viscosity materials.



HD10 300 ml Pneumatic Cartridge Dispenser

1714379

The LOCTITE® HD10 Pneumatic Hand-Held Cartridge Dispenser is a manually controlled applicator that dispenses product from 300 ml cartridges or 250 ml tubes (when tube adapter 989347 is used). The cartridge or tube is pneumatically pressurized and product is dispensed from the nozzle while the trigger is depressed.

ADDITIONAL EQUIPMENT

400 ml Dual Cartridge Dispenser

Manual: 218312

Pneumatic: 218311

FLEXIBLE ADHESIVES

Product	Item Number	Pack Size	Color	Features	Extrusion Rate [g/min]	Technology	Skin Over Time [minutes]	Temperature Range	Shore Hardness	Tensile Strength [psi]	Elongation at Break [%]	Lap Shear Strength on Steel [psi]
TEROSON MS 939NA™	2068378	290 ml	Black	Primerless, good UV/ weather resistance, paintable, solvent/ isocyanate-free	20	Silane Modified Polymer	5	-40°C to 100°C (-40°F to 212°F)	A 55	400	500	270
TEROSON MS 9399™	2081197	50 ml	White	Non-sag, high tack, fast set time	NA	Silane Modified Polymer	30	-40°C to 100°C (-40°F to 212°F)	A 55	400	150	270
	2081666	400 ml										

FLEXIBLE SEALANTS

LOCTITE® SI 593™	193996	80 ml	Black	Good resistance to extreme thermal and UV cycling without hardening, shrinking or cracking	100	Silicone	30	-55°C to 232°C (-65°F to 450°F)	A 20	200	300	NA											
	491979																						
	1243138																						
	193997	300 ml																					
	495315																						
	545505																						
LOCTITE® SI 595™	160809	80 ml	Clear	Good resistance to extreme thermal and UV cycling without hardening, shrinking or cracking	550	Silicone	30	-55°C to 232°C (-65°F to 450°F)	A 15	200	275	NA											
	491981																						
	544411																						
	193999	300 ml																					
	495076																						
	544412																						
TEROSON MS 930NA™	2138430	290 ml	White	Primerless, good UV/ weather resistance, paintable, solvent/ isocyanate-free	300	Silicone	25	-50°C to 80°C (-60°F to 175°F)	A 30	200	380	145											
	2138431		Black										TEROSON MS 5510™	1560557	300 ml	Black	Outstanding adhesion and toughness; for bonding/sealing dissimilar substrates subjected to joint movement or impact	375	Silane Modified Polymer	35	-40°C to 100°C (-40°F to 212°F)	A 40	200
TEROSON MS 5510™	1560557	300 ml	Black	Outstanding adhesion and toughness; for bonding/sealing dissimilar substrates subjected to joint movement or impact	375	Silane Modified Polymer	35	-40°C to 100°C (-40°F to 212°F)	A 40	200	375	230											
	1562040		Clear																				
	1562042		White																				
	1562044		Grey																				

SEE THE FULL LINE OF FLEXIBLE ADHESIVES AND SEALANTS:





A Single Flexible Option to Replace Other Elevator Door Fasteners



“LOCTITE® reduced our elevator door production time and cost, while improving product quality.”

Manufacturers of elevators and elevator components have discovered that **LOCTITE® Teroson® MS 930™** Flexible Adhesive allows them to replace everything from other adhesives to welded connections with a single solution that performs better and is faster, easier and safer to apply. A LOCTITE® Engineering Solutions Expert helped one elevator door manufacturer replace spot welding operations for internal door supports with **LOCTITE® Teroson® MS 930™** to improve product quality and

simplify the assembly process. Another manufacturer designing a new elevator door jamb learned how to use **LOCTITE® Teroson® MS 930™** to replace a competitor's adhesive tape that required a flammable solvent primer to apply, resulting in improved plant safety and increased production output. Both manufacturers substantially reduced materials cost as well.

BENEFITS

LOCTITE® Teroson® MS 930™ Flexible Adhesive:

- Silane modified polymer technology that meets all local health and safety requirements
- Disperses joint load distribution over the entire flange versus spot weld contact points
- Reduces plant power consumption compared to welding
- Does not deform the metal surface and eliminates refinishing required after welding operations
- Improves plant safety by eliminating flammable solvent primer
- Increases production output by up to 90% with faster dispensing speed and assembly
- Provides material cost savings of as much as 27% compared to adhesive tape

LIGHT CURE ADHESIVES

Strength.
Transparency.
Rapid curing.
**For faster
process speeds.**



PROBLEM

Without light cure adhesives: Longer cure times and slower processing.

SOLUTION

With light cure adhesives: High speed cure on demand.

Excellent bonding. **Fast processing.**

Light cure adhesives are ideal for applications requiring fast production speeds and are commonly used in the assembly of glassware, loudspeakers, optical instruments, electrical components, and disposable medical devices. To help select the best product for your application, key considerations include the ability of the assembled parts to transmit the UV/visible light to the bond line, whether a rigid or flexible bond line is required, and the types of substrates being bonded.



How to choose a light cure adhesive.



LIGHT TRANSPARENT SUBSTRATE vs. OPAQUE

Use visible light cure adhesives for UV-stabilized, transparent substrates. For opaque substrates, dual cure adhesives expand the benefits of light cure technology to non-transparent substrates and other application areas.



BOND TYPE

FLEXIBLE

Highly flexible bonds that offer high thermal cycle resistance and are suitable for elastic bonding, sealing and leak-proofing.

RIGID

High-strength adhesives that cure quickly and provide tough bond lines that are suitable for bonding rigid plastics and metals.



SUBSTRATE

Many light cure adhesives are specially formulated to provide optimum performance on specific substrates, so the adhesive is best suited for the intended application.

LOCTITE® AA 326™

General Purpose, Anaerobic/Activator Cure

LOCTITE® AA 326 is a general purpose structural adhesive that is used for fast cure and high shear strength. Typical applications include bonding ferrites to plated materials in electric motors, loudspeaker hardware and jewelry where fast fixturing is required.



Bond: Rigid



Substrate: Metal



LOCTITE® SI 5088™

Glass Bonding

LOCTITE® SI 5088 is a translucent, straw-colored, UV light and atmospheric moisture-cured, highly viscous alkoxy silicone adhesive which forms a soft, highly flexible elastomer. Excellent choice for elastic bonding, sealing and leak-proofing. Ideal for glass, metals and ceramics and also suited to plastics.



Bond: Highly Flexible



Substrate: Glass, Metals,
Ceramicl

LOCTITE® 4310™

Light Cure, Low Viscosity, ISO 10993

LOCTITE® 4310™ is designed for bonding applications that require very rapid fixturing, fillet cure or surface cure. The UV light cure properties facilitate rapid curing of exposed surface areas thereby minimizing blooming and providing an alternative to solvent borne accelerators. Suitable for use in the assembly of disposable medical devices.

 **Bond:** Rigid

 **Substrate:** Plastics, Rubbers, Metals



LOCTITE® 4311™

Light Cure, Medium Viscosity, ISO 10993

LOCTITE® 4311™ is designed for bonding applications that require very rapid fixturing, fillet cure or surface cure. Medium viscosity for better gap filling. Suitable for use in the assembly of disposable medical devices.

 **Bond:** Rigid

 **Substrate:** Plastics, Rubbers, Metals



LOCTITE® AA 3494™

Glass Bonding

LOCTITE® AA 3494™ is a clear, medium viscosity, acrylic-based adhesive that sets in seconds when exposed to the proper UV/visible light intensity. The adhesive is ideal for bonding glass, plastic and metal parts, and provides an impact resistant bond that withstands

 **Bond:** Semi-rigid

 **Substrate:** Glass



Equipment DISPENSING



Manual Syringe Dispenser, 30 ml

1544934

A hand-held, manually operated dispenser, for any product packaged in a standard 30 ml syringe. This dispenser provides a convenient, cost-effective method to apply product.



SD10 Digital Syringe Dispenser

1514629

The LOCTITE® SD10 Digital Syringe Dispenser is a semi-automatic dispensing system designed to dispense LOCTITE adhesives and fluids packaged in 3, 5, 10, 30, and 55 ml syringes, and 300 ml cartridges. The unit has digital timing control for increased precision over typical pressure/time systems.

ADDITIONAL EQUIPMENT

Dual Channel Integrated Reservoir

1390321/1390322

Pneumatic Handheld Applicator

88643

Stationary Applicator Valve

88644/88645

Light Cure Dispense Valve

218280

EQ VA20 Volumetric Valve

2084141

Equipment CURING



EQ CL32 LED Spot

2182207/2182210

A high powered, portable LED light source that offers a high level of flexibility for all UV or visible light curing needs. The light weight, compact design helps minimize operator fatigue, while its small size and long focus length make it perfect for applications in crowded areas and hard to reach bond areas.



EQ CL40 LED Spot System

- CL40 LED Spot Curing Quad Controller, 2804936
- CL40 LED Spot Curing Light Source, 405 nm, 2804937
- CL40 LED Spot Curing Light Source, 365 nm, 2804938

ADDITIONAL EQUIPMENT

EQ CL28 CureJet® LED Spot System

- Single CureJet® Controller, 1364033
- Quad CureJet® Controller, 1180632
- EQ CL28 CureJet® 405 nm Spot Head, 2183340
- EQ CL28, CureJet® 380 nm Spot Head, 2183339

EQ CL42 LED Flood System

- CL42 LED Flood Curing Light Source, 365mm, 2804955
- CL42 LED Flood Curing Light Source, 405mm, 2804956
- CL42 LED Flood Curing Controller, 2804957
- CL42 LED Flood Curing Chamber, 2804959

EQ CL15 UV Wand System

- EQ CL15 UV Wand System Controller, 1661548
- EQ CL15 Light Guide, 1M Single Pole, 376745

SEE THE FULL LINE OF LIGHT CURE ADHESIVES:



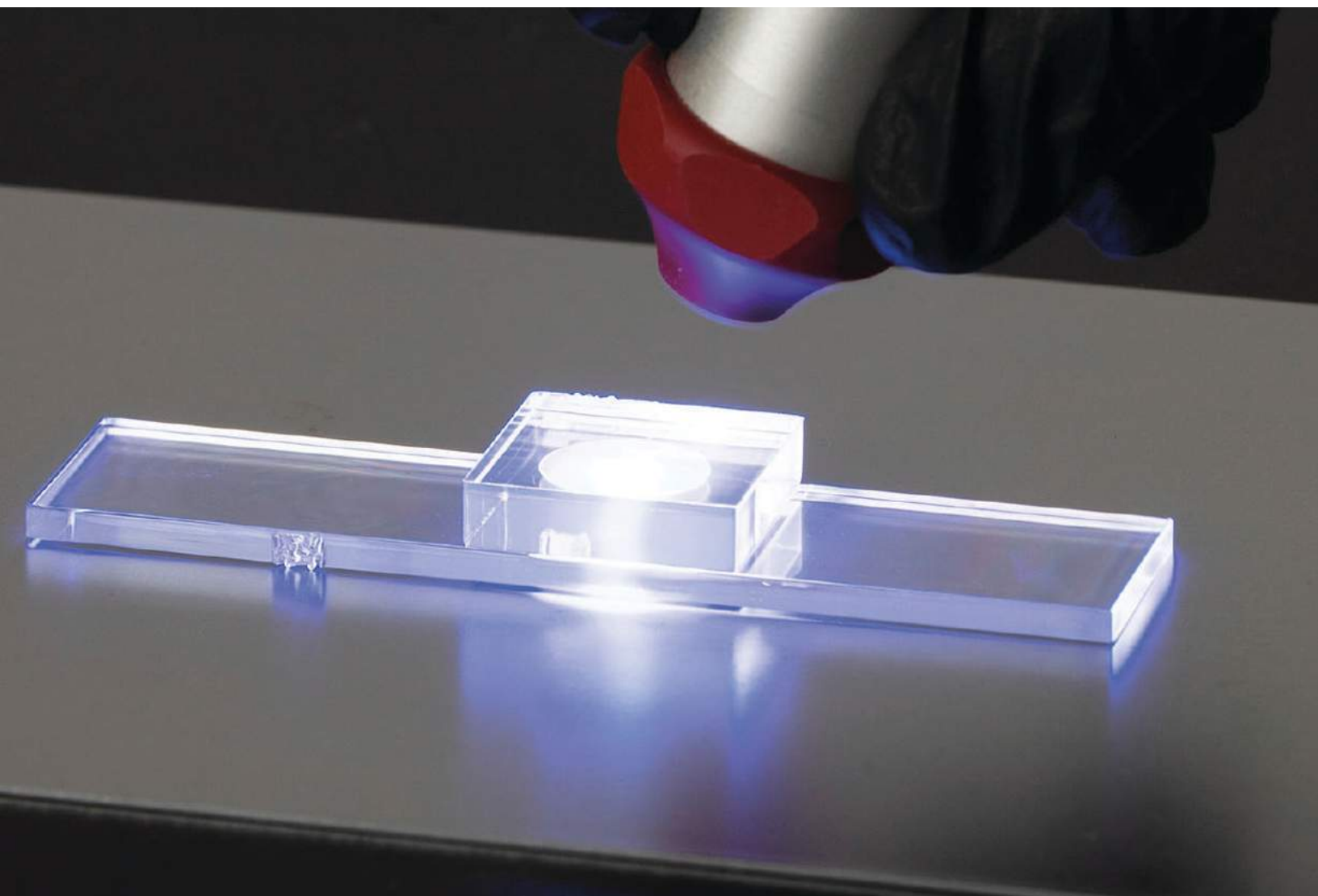
LIGHT CURE ADHESIVES

Product	Item Number	Pack Size	Appearance	Cure Type	Key Substrates	Viscosity, mPa-s [cP]	Temperature Range	Hardness	Block Shear Strength, PC
4310™	1401792	1 oz	Transparent, light yellow-green to dark blue-green liquid	Dual Cure (UV/VIS*, Humidity)	Plastic, Rubber, Metal	175 (Cone & Plate)	-54°C to 149°C (-65°F to 300°F)	D 84	9 N/mm² [1,300 psi]
4311™	1401791	1 oz	Transparent, light yellow-green to dark blue-green liquid	Dual Cure (UV/VIS*, Humidity)	Plastic, Rubber, Metal	1,050 (Cone & Plate)	-54°C to 93°C (-65°F to 200°F)	D 84	22 N/mm² [3,200 psi]
AA 326™	378217	1 oz	Transparent, yellow to light amber liquid	Dual Cure (Anaerobic, Activator)	Metal	18,000 (Brookfield RVT)	-54°C to 149°C (-65°F to 300°F)	N/A	15.2 N/mm² [2,200 psi]**
AA 3494™	235070	25 ml	Transparent liquid	Single Cure (UV/VIS*)	Glass	6,000 (Brookfield RVT)	-54°C to 149°C (-65°F to 300°F)	D 65	5 N/mm² [680 psi]
SI 5088	863791	300 ml	Straw colored liquid	Dual Cure (UV, Moisture)	Metal	65,000 (Brookfield RVT)	-60°C to 200°C (-75°F to 390°F)	A 25	1 N/mm² [145 psi]***

* Ultra Violet / Visible Light

** Lap shear strength, ISO 4587, grit blasted steel

*** Lap Shear Strength, ISO 4587, steel to glass





Light Cure Bonding Process Improves Product Quality and Output.



“LOCTITE’s Engineering Solutions Expert helped us design a new production process that met all of our requirements and improved our quality and output.”

An ink cartridge remanufacturer was having trouble finding a product that passed their adhesion and pressure test requirements. They had previously tested another adhesive alternative but it had poor bond strength to ABS and failed pull tests. The solution: **LOCTITE® 4311™** Light Cure Adhesive, which dispenses precisely and cures quickly, and **LOCTITE® 770™** Primer. With the help of a LOCTITE® Engineering Solutions

Expert, the team redesigned their assembly process by brushing **LOCTITE® 770™** Primer onto the ABS part, then dispensing **LOCTITE® 4311™** onto the bond area using the existing LOCTITE® 200D Benchtop Robot and curing it with exposure to the **LOCTITE® 4311™** light source for several seconds. The new process bonded well, passed repeated pull tests and improved ink cartridge quality and production output.

BENEFITS

LOCTITE® 4311™ Light Cure Adhesive:

- Cures completely in several seconds beneath the LOCTITE® 7411 UV™ Flood System
- Meets all manufacturing requirements without additional capital investment

LOCTITE® 770™ Primer:

- Increases the bond strength of LOCTITE® 4311™ to pass all strength requirements

CLEANERS





Over 60 years of
experience with cleaners
and degreasers.

**For safe, effective
cleaning.**

PROBLEM

Without cleaners and degreasers: Contaminants, soils and oils on components cause performance failures in production and plant operations.

SOLUTION

With cleaners and degreasers: Cleaner components increase production quality, help to decrease operating costs, and maximize performance of LOCTITE® Adhesives.

Clean parts, hands and **mechanical equipment**

LOCTITE® cleaners and degreasers provide highly effective water- and solvent-based cleaning of components, worktops, floors, parts and hands. The major factors to consider are drying time, residue, odor and substrate compatibility.



How to choose the right cleaner.

DEGREASING/PARTS CLEANING

For removing dirt, resins, metal filings, lacquer, oils and greases from components.

HAND CLEANING

Available with and without abrasives for removing dirt, grease, grime, oil and adhesives from hands.



BEST SELLER

SF 790™

Cleaner

LOCTITE® SF 790™ is a grey to off-white methylene chloride liquid solvent in an aerosol spray designed to remove baked-on chemical gaskets, gasket cements and conventional gasket materials from metal surfaces. It works by removing pre-cut conventional gasket cements and formed-in-place chemical gaskets. Its aerosol spray form enables spray application onto intricate shapes with maximum penetration.



BEST SELLER

SF 7063™

ODC-Free Cleaner/Degreaser

LOCTITE® SF 7063 is a non-CFC solvent based formulation for cleaning and degreasing of surfaces to be bonded with LOCTITE® adhesives. The product can also be used for cleaning and degreasing machine components during maintenance operations.



Find the right product for your application



Degreasers / Parts Cleaners

LOCTITE® SF 7063™
LOCTITE® SF 7200™
LOCTITE® SF 768™
LOCTITE® SF 790™
LOCTITE® SF 7840™

Hand Cleaners

LOCTITE® SF 7850™

Degreasers & Parts Cleaners



SF 7063™
Cleaner

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.



SF 7200™
Cleaner

Designed to aid removal of cured chemical gaskets by softening the gasket material on the flanges, eliminating excessive scraping. Once applied, the product develops a foam-like layer on the gasket, preventing it from running off the desired location, thus allowing it to work for the required duration. Typical applications include removal of all types of chemical gaskets from metal flanges.



SF 7840™
Water-based

Parts Cleaner - general purpose. Biodegradable cleaner and degreaser. Can be diluted with water.



SF 790™
Parts Cleaner

A gray to off-white methylene chloride liquid solvent in an aerosol spray designed to remove baked-on chemical gaskets, gasket cements and conventional gasket materials from metal surfaces. Its aerosol spray form enables spray application on to intricate shapes with maximum penetration.



SF 768™
Clean-Up Solvent

A solvent blend designed to remove cured cyanoacrylate/instant adhesive or debond parts assembled with instant adhesive. Can also be used for cleanup of dispensing equipment.

SEE OUR FULL LINE OF
CLEANING PRODUCTS:



Hand Cleaners



SF 7850™
Hand Cleaner

A natural hand cleaner containing no petroleum solvents. It cleans without water and can remove grease, grime, inks, soil, paint, gasket cements, epoxies and glues. It contains extra fine abrasives which cleans deep into pores.

CLEANERS

Product	Item Number	Package Size	Drying Time	Residue/Rinsability	Odor
DEGREASERS					
SF 7063	2098749	400 ml	< 60 seconds	No rinse. Wipe surfaces when still wet with a clean cloth to remove all heavy contamination.	Solvent
SF 7200	2099006	400 ml	Leave on surface for 10 to 15 minutes (30 minutes for silicone gasket). Wipe/scrape clean.	Oily residue	Solvent
SF 768	235018	1.75 fl. oz.	< 30 seconds	No rinse and no residue	Solvent
SF 790	135544	18 oz.	Leave on surface for 5 to 10 minutes. Wipe/scrape clean.	Oily residue	Solvent
SF 7840	2046047	1 gallon	Equivalent to the evaporation rate of water. Wiping or blowers will accelerate dry time.	Rinses residue-free with water	Cherry scent
HAND CLEANER					
SF 7850	367218	4 L	N/A	Wipe dry or rinse with water	Fresh citrus scent



A photograph of industrial machinery, possibly a valve or pump assembly, with a prominent pressure gauge. The entire image is overlaid with a red tint. The pressure gauge has a white face with black markings and a needle pointing towards the 0.8 mark. The text "WEAR PREVENTION" is centered over the image in a large, white, sans-serif font.

WEAR PREVENTION

Fight abrasion, erosion,
corrosion, chemical
attack and wear.

**For longer, more
efficient performance.**



PROBLEM

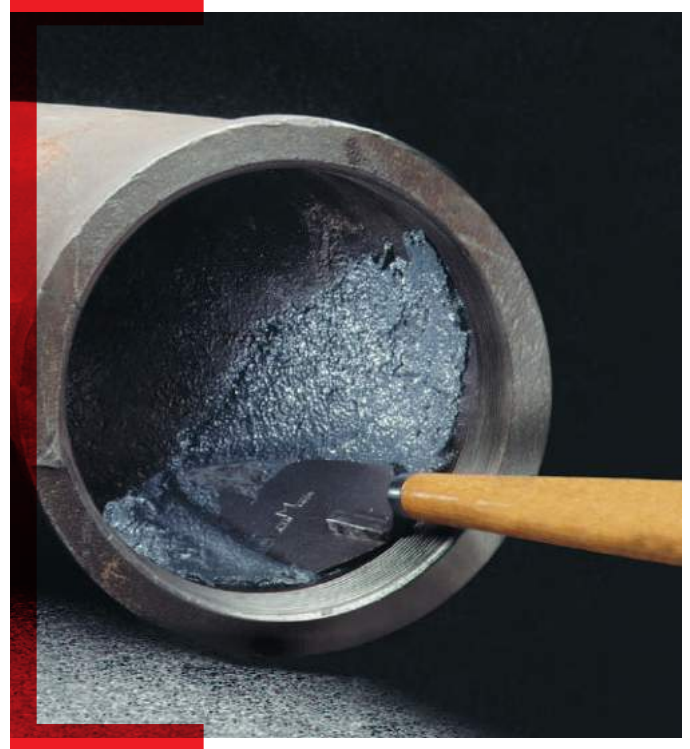
Without wear resistant coatings: Abrasion and corrosion can damage components.

SOLUTION

With wear resistant coatings: Components are protected from direct process damage and equipment life is extended.

Protect. Repair. Rebuild.

Wear prevention solutions provide a sacrificial coating on new or worn surfaces, to provide wear and impact resistance and extend the life of parts. LOCTITE® offers a range of wear prevention solutions for a range of applications.



How to choose the right wear prevention.



PARTICLE ABRASION

Trowelable, brushable and sprayable solutions for fighting abrasion from particles ranging from small to large.



FLUID EROSION

Coatings to combat the fine particles found in fluids on components such as a pump.



CHEMICAL ATTACK

Advanced epoxy products to protect equipment from extreme chemical attack and corrosion.



BEST SELLER

PC 7218™

General Purpose

LOCTITE® PC 7218™ is a 2-part, grey, ceramic-filled, trowelable, epoxy-based surface coating designed to protect parts from coarse particle abrasion or erosion on metals (with or without chemical attack). It is designed for parts such as cyclones/separator bodies, dust collectors/exhausters, pump liners/impellers, fan blades and housings, chutes/hoppers and elbows and transition points.



BEST SELLER

PC 7227™

Protective Coating

LOCTITE® PC 7227™ is an ultra-smooth, ceramic reinforced brushable epoxy coating that is solvent-free with lower viscosity for a thinner coating. It is designed to protect surfaces against turbulence, chemicals, abrasive and corrosive agents. Typical applications are rebuilding or resurfacing pump impellers, housings, pipe walls and elbows, valve bodies, repairing and protecting heat exchangers, condensers, lining tanks, chutes, resurfacing and repairing rudders and pintel housings.



Find the right product for your application



Particle Abrasion

LOCTITE® PC 7218™

Fluid Erosion

LOCTITE® PC 7226™

LOCTITE® PC 7227™

LOCTITE® PC 7332™

Chemical Attack

LOCTITE® PC 7319™

Protective Coating

LOCTITE® PC 7321

SEE THE FULL LINE OF
WEAR PREVENTION AT:



Particle Abrasion

WEAR PREVENTION



PC 7218™

General Purpose

Working Life: 30 minutes

Cure Speed: 7 hours

Temperature (max): 120°C

Color: Thick Grey Paste

Fluid Erosion

WEAR PREVENTION



PC 7227™

Brushable

Working Life: 34 to 48 minutes

Cure Speed: 24 hours

Temperature (max): 93°C

Color: Grey



PC 7332™

Fast Curing

Working Life: 30 minutes

Cure Speed: 6 hours

Temperature (max): 120°C

Color: Grey



PC 7226™

Impact Resistance

Working Life: 30 minutes

Cure Speed: 6 hours

Temperature (max): 120°C

Color: Grey

Chemical Attack



PC 7319™

Brushable

Working Life: 28 to 40 minutes

Cure Speed: 36 hours

Temperature (max): 120°C

Color: Grey Liquid

Protective Coating



PC 7321™

Brushable

IDH 2833725 Part A Light Grey - 15 kg

IDH 2809749 Part A White - 15 kg

IDH 2809748 Part A Grey - 15 kg

Working Life: 60 minutes

Cure Speed: 24 hours

Temperature (max): 70°C

Color: White, Light Grey, Grey

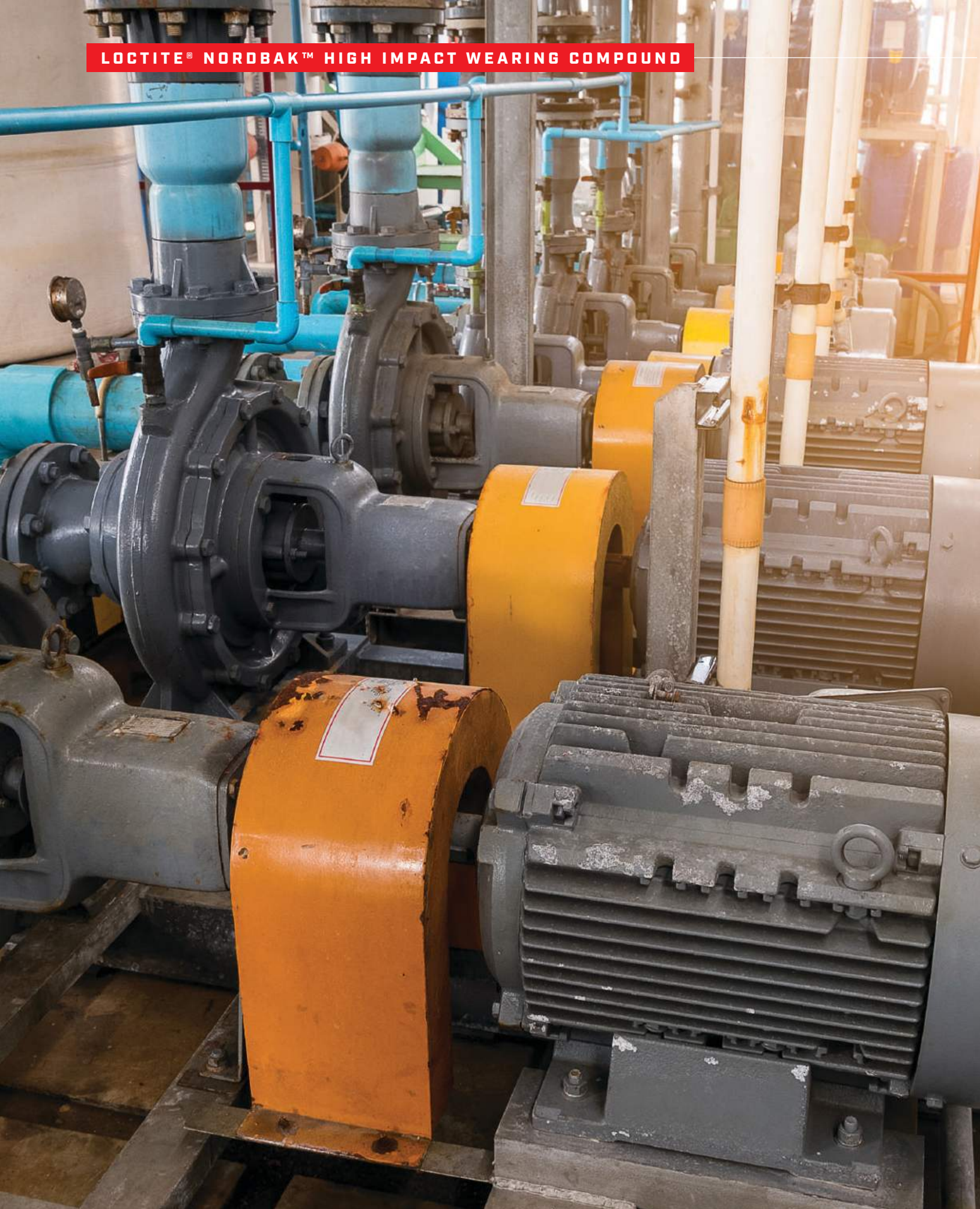
WEAR PREVENTION

Product	Item Number	Package Size	Coverage	Color	Maximum Operating Temperature	Compressive Strength	Shore Hardness	Working Time [min.]	Functional Cure [hrs.] 77F (25C)	Mix Ratio by Volume	Mix Ratio by Weight
PARTICLE ABRASION											
PC 7218™	912251	10 KG. kit	740 cm² @ 6 mm thick per 1 kg kit	Thick Grey Paste	120°C [250°F]	110.3 N/mm² [16,000 psi]	90	30	7	2:1	2:1
PC 7226	979698	10 KG	740 cm² @ 6 mm thick per 1kg	Thixotropic Grey Paste	120°C [250°F]	103.4 N/mm²	85	30	6	4:1	4:1
PC 7227	1379976	6 LB	0.55 m² @ 1 mm thick per 0.9kg	Grey	93°C [200°F]	86.1 N/mm² [2,500 psi]	85	34 to 48	24	2.75:1	4.8:1
PC 7319	1364535	5 KG	6.8 m² @ 0.5 mm thick per 5.5 kg	Grey liquid	120°C [250°F]	67.8 N/mm² [9,840 psi]	85	28 to 40	36	2.3:1	3.4:1
PC 7332	2565509	10 KG. kit	0.74 m² @ 6 mm thick per 10 kg	Grey	120°C [250°F]	96.9 N/mm² [14,000 psi]	85	30	6	4:1	4:1
PC 7321	1480135	20 L. kit	2.0 m²/L for 500 microns DFT	Grey	70°C [158°F]	N/A	N/A	60	8	1:1	1:1

LOCTITE SERVICES

**PROTECT COMPONENTS
AND EXTEND
OPERATIONAL LIFE.**

services.loctite.us



Coating against fluid erosion.



Thanks to a LOCTITE® Engineering Solutions Expert, reliability and performance has been improved.

An industrial pump repair shop needed to improve reliability and performance for a customer's municipal wastewater pumps, which were failing prematurely due to erosion and cavitation. During an on-site consultation, a LOCTITE® Technical Sales Engineer suggested **LOCTITE® EA 3478 Superior Metal** and **LOCTITE® PC 7227 Brushable Ceramic** to repair damage and protect the wetted components against the harsh conditions. The LOCTITE® Technical Sales Engineer guided the team on how to properly prepare the surface, to ensure maximum

adhesion and longevity. To fill large gaps in the pump caused by cavitation and erosion, **LOCTITE® EA 3478 Superior Metal** was used to rebuild the pump geometry, followed by the application of **LOCTITE® PC 7227 Brushable Ceramic** to coat and protect all wetted components in the pump. Once back in service, the pump's mean time between failures was greatly increased, allowing for more reliable operation and maintenance schedules.

BENEFITS

LOCTITE® EA 3478 Superior Metal and LOCTITE® PC 7255 Sprayable Ceramic

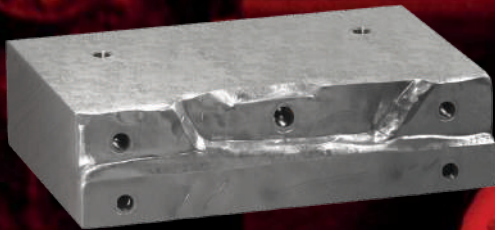
- Fills large gaps caused by cavitation and erosion.
- Coats and protects wetted components.
- Increases mean time between failure.
- Allows for more regular operation and maintenance schedules



REBUILDING

Repair shafts and
other steel, aluminum
or rubber components.

**For longer life and
better chemical
resistance.**



PROBLEM

Without rebuilding: Damaged components reduce process efficiency, add excess stress to equipment, increase safety hazards and most importantly, add costs.

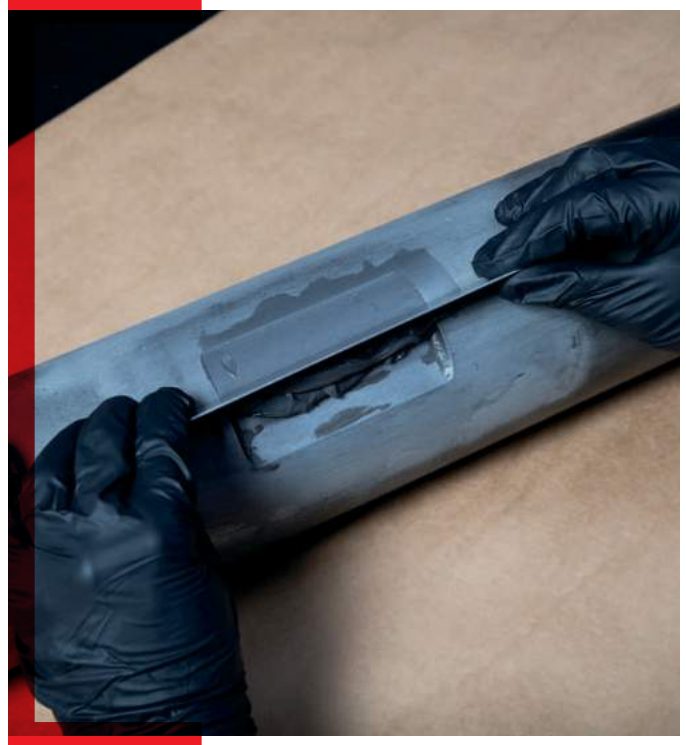


SOLUTION

With rebuilding: Equipment is repaired quickly on-site, component integrity and seals are restored, process efficiencies are enhanced, and costs are minimized through part and component salvage.

Rebuilding damaged parts.

Rebuilding solutions can be used to repair rubber, steel, aluminum and other metal components. Metal rebuilding solutions offer high compressive strength and can be machined, drilled or tapped after cure. Rubber repair solutions offer excellent abrasion resistance and outstanding adhesion to metal and rubber.



How to choose a rebuilding product.

Choose a rebuild product based on substrate type and form of solution desired. LOCTITE offers a range of rebuilding solutions from kneadable to flowable.



DAMAGED METAL PART

Trowelable or kneadable solutions for repairing, restoring or rebuilding damaged metal machinery, equipment and parts without the need for heat or welding.



DAMAGED RUBBER PART

Durable, tough and flexible repairs of conveyor belts and other damaged rubber equipment and parts, quickly and easily.



BEST SELLER

EA 3478™

High Performance

LOCTITE® EA 3478™ is a 2-part, ferro-silicon filled epoxy resin system. It is extremely resistant to corrosion, chemical attack and abrasion. Helps to restore tolerances to worn shafts, repairing worn keyways and damaged housings, filling pitted surfaces in worn machinery and restoring fit to bearing housings.



Working Time: 20 minutes



Cure Speed: 4 hours



BEST SELLER

EA 3463™

Rubber Repair

LOCTITE® EA 3463 is a two component steel filled epoxy resin system. It is ideal for restoring metal parts worn by mechanical and/or corrosion. It is applied like a putty and when cured it has a high compressive strength and good adhesion to most surfaces. Typical applications include stopping leaks in pipes and tanks, filling oversized bolt holes, smoothing welds, and repairing non-structural defects in castings holes in tanks.



Working Time: 4 minutes



Cure Speed: 10 minutes



Find the right product for your application



Damaged Metal Parts

LOCTITE® EA 3463™

LOCTITE® EA 3478™

Damaged Rubber Parts

LOCTITE® PC 7350™

LOCTITE® PC 7393™

Damaged Metal Parts



EA 3463™ Repair Epoxy Stick

Fast Repair



Working Time: 3 minutes



Cure Speed: 10 minutes

Substrate: Metal
Form: Kneadable Putty



EA 3478™ Superior Metal

High Performance



Working Time: 20 minutes



Cure Speed: 4 Hours

Substrate: Metal
Form: Trowelable

Damaged Rubber Parts



PC 7350™ Conveyor Belt Repair

Self-Leveling



Working Time: 7 minutes



Cure Speed: 2 Hours

Substrate: Rubber
Form: Self-Leveling



PC 7393™ Rapid Rubber Repair

Fast repair



Working Time: 1 minute



Cure Speed: 2 Hours

Substrate: Rubber
Form: Spreadable

SEE THE FULL PORTFOLIO
OF REBUILDING AT:



BELT REPAIR

Product	Item Number	Package Size	Coverage	Color	Tensile Strength	% Elongation	Shore A Hardness	Working Time [min.]	Functional Cure [hrs.] 15°C/ 77°F
DAMAGED METAL PARTS									
EA 3463™	209681	4 oz.	10 cm² for 6 mm thickness	Metallic Black	7,200*	18 N/mm² [2,730 psi]"	≥70 ISO 868, Shore D	2.5 to 5	10 min
EA 3478™	1336330	500 G	323 cm² for 6 mm thickness	Mixed: Grey	19,000*	3,900	86 ISO 868, Durometer D	20	4 hrs.
DAMAGED RUBBERS PARTS									
PC 7350™	2073202	400 ml	567 cm² for 6 mm thickness	Mixed: Black	11 N/mm²* [1,600 psi]	275	87	7	2
PC 7393™	428557	400 ml	567 cm² for 6 mm thickness	Mixed: Black	N/A	N/A	86	1	2

* Different ISO tests used

LOCTITE SERVICES

RESTORE COMPONENT INTEGRITY.

services.loctite.us

LOCTITE® EA 3478™, PC 7227™, SF 7611™



Restoring Worn Metal to its Near-original Dimensions.



“We went from replacing 2 impellers a year to almost never replacing impellers, thanks to LOCTITE®.”

A water treatment plant with 25 mixer impellers was searching for a way to avoid the high cost of OEM replacement parts. The plant was replacing at least 2 impellers each year at a cost of \$6,000 per unit, plus the cost of renting a crane to remove the impellers. They had tried competitive wear resistant coatings previously, but they failed after only a few months of use. **LOCTITE® EA 3478™ Superior Metal** and **LOCTITE® PC 7227™ Brushable Ceramic** were an ideal solution for restoring the impellers. After the impellers were removed from service and grit blasted to leave

a bare metal surface, a LOCTITE® Engineering Solutions Expert showed the team how to first clean with **LOCTITE® SF 7611™ Pro Strength Parts Cleaner** to remove any oil or grease residues and apply **LOCTITE® EA 3478™ Superior Metal** to restore eroded surfaces to a near-original surface dimension, grinding the cured product as needed to optimize impeller efficiency. Finally, a primary coat of **LOCTITE® PC 7227™ Brushable Ceramic** blue was applied, followed by a top coat of the same material in gray. As the gray coating wears away and the blue shows through,

re-coating during the next downtime can be scheduled. The result: the plant has eliminated almost all impeller replacement costs while reducing downtime expenses substantially.

BENEFITS

LOCTITE® EA 3478™ Superior Metal:

- Restores impeller original dimensions to improve pumping efficiency.

LOCTITE® PC 7227™ Brushable Ceramic:

- Protects metal from abrasion to prolong impeller service life.



LUBRICANTS

Long-lasting lubrication. **For longer component life and performance.**



PROBLEM

Without lubricants:
Moving parts can
corrode and seize.

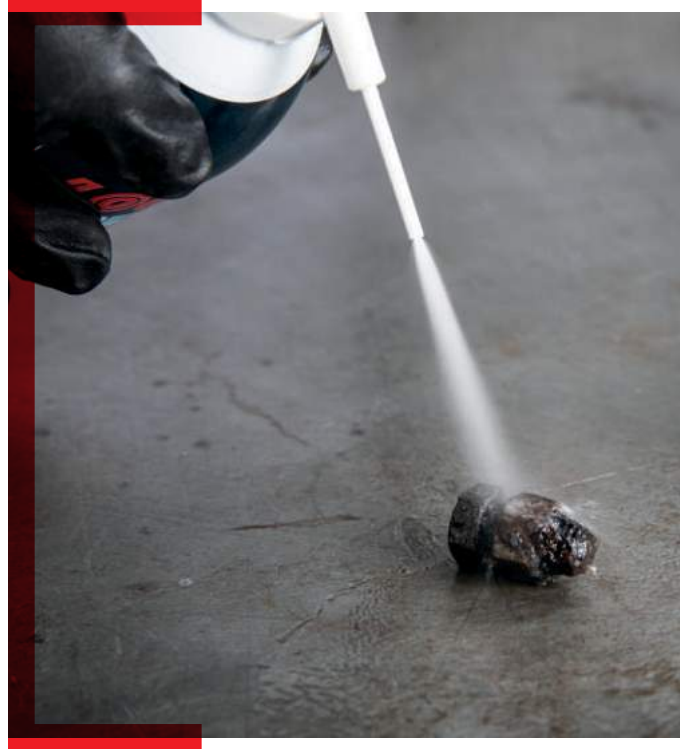


SOLUTION

With lubricants:
Assemblies maintain
performance longer.

Keep moving **parts moving.**

Lubricants can be used for everything from releasing seized parts to providing long-lasting lubrication of moving parts. LOCTITE® offers lubricants that can address and protect against a wide range of temperature, pressure and thermal stability needs.





BEST SELLER

LB ML-11™

General Purpose

LOCTITE® LB ML-11 is a general purpose lubricant with a blend of lubricants and diluted solvent to form a thin and long-lasting anti-rust layer on metal surfaces. It has a powerful moisture displacement to form an anti-rust layer against acid and alkali, with a strong cleansing effect. Typical applications includes electric motors, contacts, communication assemblies, tools, dies, fasteners, ignitions, hardware, hinges, springs, machinery, heat treated parts, welds, machined surfaces, automotive parts, instruments and gears.





ANTI-SEIZE PRODUCTS

Prevent seizing. **Even in extreme environments.**



PROBLEM

Without anti-seize lubricants: Parts seize at extreme temperatures or in corrosive environments.

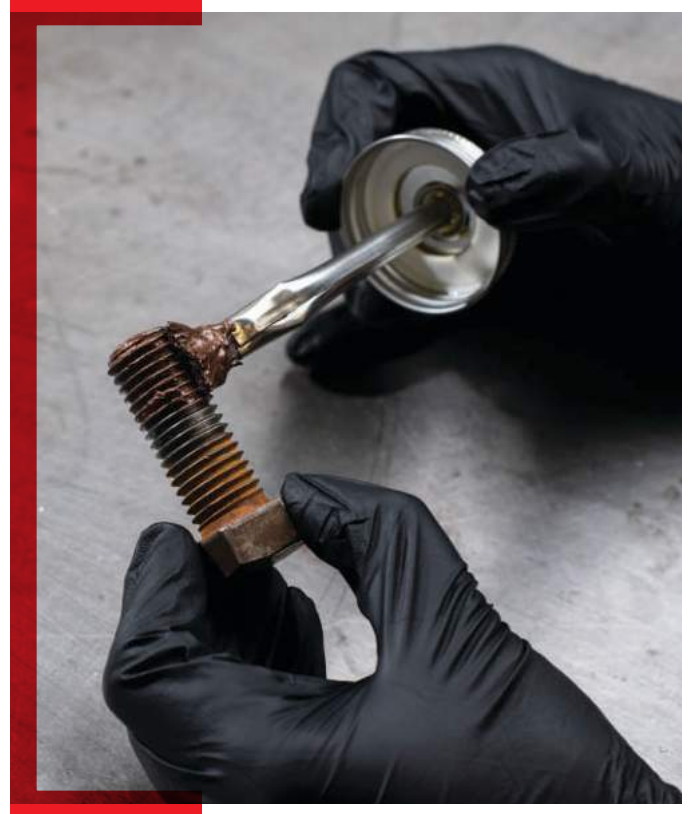


SOLUTION

With anti-seize lubricants: Assemblies maintain operation in all types of extreme conditions with more reliable removal and on-torque performance.

Keep assemblies from seizing.

Anti-seize lubricants are used in harsh environments to keep assemblies from seizing. They also protect against rust, corrosion and galling even in extreme temperature conditions. Temperature is a key consideration when choosing a LOCTITE® anti-seize lubricant, along with substrate material and contamination restrictions.



How to choose the right anti-seize product.



TEMPERATURE

LOCTITE® anti-seize lubricants are designed to protect your equipment from a wide range of temperatures, which allows for a wide range of applications. To choose the right anti-seize lubricant, choose the conditions in which your equipment operates, from -30°C to 1315°C.



METAL FREE

LOCTITE® METAL-FREE FORMULATIONS – A growing concern for all types of industries is the dispersal of “heavy” metals like lead, nickel, zinc and others, into the environment. Metal-free formulations offer the same performance as traditional products without heavy metals.



LOCTITE LB 8150™

Copper-based

LOCTITE® LB 8150™ is an anti-seize lubricant to protect threaded connections exposed to high temperatures up to 870°C to prevent seizing and corrosion. This product prevents seizing or jamming in joints exposed to high temperatures (e.g. exhausts of combustion engines and fittings or oil and gas burners).



Temperature Resistance: 870°C



Metal Free: No



LOCTITE LB 771™

Nickel-based

Copper-free. Recommended for stainless steel and other metal fittings. For preventing corrosion, seizing and galling in harsh chemical environments and temperatures to 2400°F.



Temperature Resistance: 1315°C



Metal Free: No



Find the right product for your application



Up to 870°C

LOCTITE® LB 8150™

Up to 980°C

LOCTITE® LB 8008™

Up to 1315°C

LOCTITE® LB 771™

LOCTITE® LB 8809™

SEE THE FULL LINE
OF OUR ANTI-SEIZE
PRODUCTS AT:



Up to 870°C

ANTI-SEIZE PRODUCTS



**LOCTITE
LB 8150™**
Silver



Temperature Range:
-23°C to 870°C



Metal Free: No

Color: Silver
Solid Lubricating Agent: Graphite/
Aluminum

Up to 980°C

ANTI-SEIZE PRODUCTS



**LOCTITE
LB 8008™**
Copper



Temperature Range:
-23°C to 980°C



Metal Free: No

Color: Copper
Solid Lubricating Agent: Copper/
Graphite

Up to 1315°C

ANTI-SEIZE PRODUCTS



**LOCTITE
LB 771™**
Nickel



Temperature Range:
-23°C to 1315°C



Metal Free: No

Color: Silver
Solid Lubricating Agent: Nickel/Graphite



**LOCTITE
LB 8809™**
High Performance/
Heavy Duty



Temperature Range:
-23°C to 1315°C

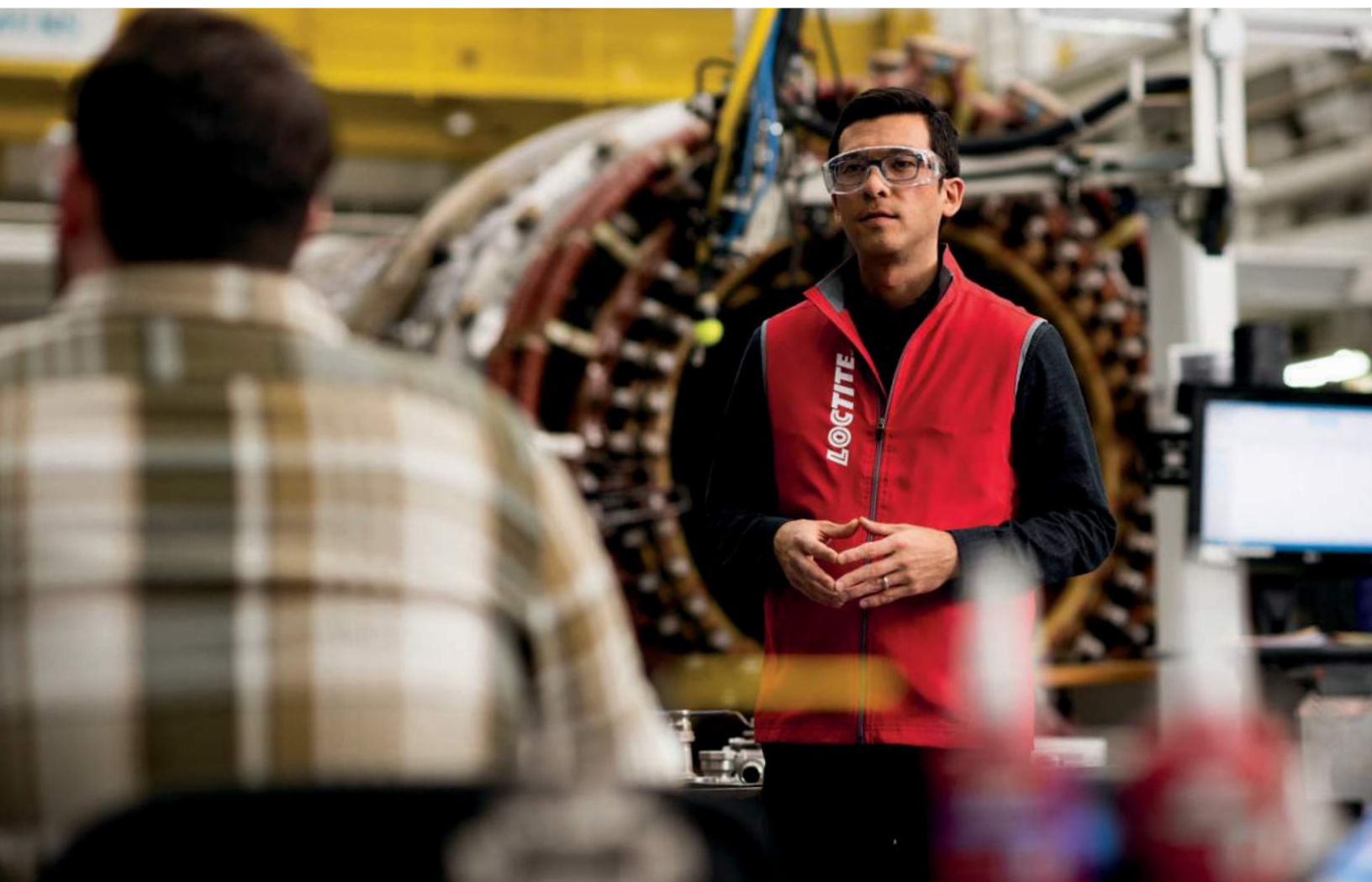


Metal Free: Yes

Color: Grey
Solid Lubricating Agent: Graphite/
Calcium Fluoride

ANTI-SEIZE PRODUCTS

Product	Item Number	Package Size	Temperature Resistance	Color	Torque Coefficient	Metal-Free
UP TO 870°C (1,600°F)						
LB 8150™	235005	1 lb. brushtop bottle	870 °C (1,600°F)	Silver	0.18	No
UP TO 980°C (1,800°F)						
LB 8008™	160796	1 lb. brushtop bottle	980°C (1,800°F)	Copper	0.16	No
UP TO 1,315°C (2,400°F)						
LB 771™	135543	1 lb. brushtop bottle	1,315°C (2,400°F)	Silver	0.13	No
LB 8009™	209758	18 oz. brushtop bottle	1,315°C (2,400°F)	Grey	0.16	Yes



A close-up photograph of industrial machinery, possibly a large metal component or a valve, with a strong red color overlay. The text "SPECIALTY MAINTENANCE TECHNOLOGIES" is superimposed in white, outlined letters.

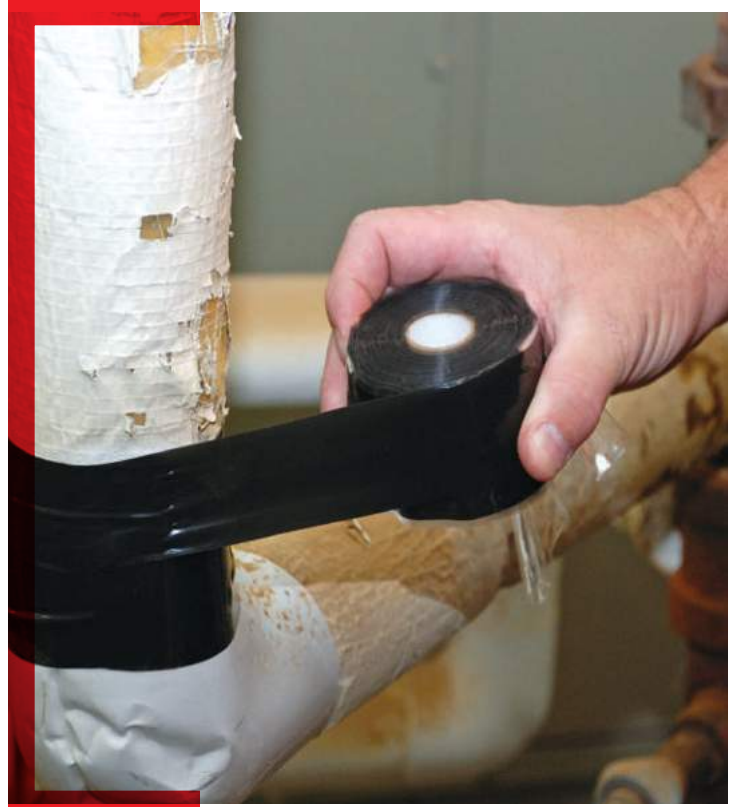
SPECIALTY MAINTENANCE TECHNOLOGIES



Solutions for
any situation.
**Even
unexpected
ones.**

For a wide range of specialized maintenance and repair scenarios.

With deep expertise in industrial maintenance and repair, LOCTITE® has been able to develop a wide range of technologies suitable for solving nearly situation.



PIPE REPAIR SYSTEM

Composite repair system to repair and protect metal pipes.

GROUTING & CONCRETE REPAIR

Self-leveling, non-shrinking grouting that is stronger than concrete, and chemical and corrosion resistant.

RUST PREVENTION & CONVERSION

Stabilizes existing rust, guards against corrosion, prevents electrochemical corrosion and provides protection against flash rust.

WELDING PROTECTION

Protects welding equipment against metal spatter for 8 hours without reapplication.

INSULATING & SEALING

Self-fusing silicone wrap for electrical insulation and sealing applications even for pipes under pressure.

O-RING SEALS REPLACEMENT OR REPAIR

Eliminates the need to inventory different sized O-rings, creating strong joints that resist water and oil.

TOOL KITS

Compact kits containing an assortment of technologies to solve the most common mechanical failures.

REPAIR ADHESIVES

To meet tough, on-the-job, requirements, LOCTITE® specialty repair adhesives provide a combination of cure speed, strength and environmental resistance to get the job done.



BEST SELLER

FREKOTE 770-NC™

Mold Release Agent

LOCTITE® FREKOTE 770-NC™ offers excellent release for various molding applications. LOCTITE® FREKOTE 770-NC™ can be used for the release of epoxies, polyester resins, vinyl ester resins, thermoplastics, adhesives, and rotationally molded plastics.



Find the right product for your application



Pipe Repair System

LOCTITE® PC 7210™
LOCTITE® PC 5085™

Grouting & Concrete Repair

LOCTITE® PC 9410™

Mold release agent

LOCTITE® FREKOTE 770-NC™

Freeze & Release

LOCTITE® LB 8040™

Welding Protection

LOCTITE® SF 7900™

Replace or Repair O-Ring Seals

LOCTITE® O-Ring Making Kit

Needle variety kit

Showcase Needle Variety Kit

Pipe Repair System

The pipe repair system of LOCTITE® PC 7210™ and LOCTITE® PC 5085™ is certified according to ISO TS 24817. Used where high strength reinforcement, corrosion protection and chemical resistance is required.



PC 7210™
Toughened Epoxy
2079209

Toughened epoxy resin paste used in combination with LOCTITE® PC 5085™, a glass-carbon fiber tape, as a composite repair system. It can be used where high strength, corrosion protection and chemical resistance is required.



PC 5085™
Glass-carbon Fiber Tape
2081663

Composite fabric used in combination with resins, as a composite repair system to repair and protect metal pipes where high strength, corrosion protection or chemical resistance is required.

Grouting & Concrete Repair



PC 9410™
Magna-Crete Concrete Repair
235573

Two-component magnesium phosphate cement that sets rapidly and has a very high early strength. Ideal for road and aircraft runway repairs. It bonds to new and old concrete, as well as most construction materials including wood, glass and steel.

Mold Release Agent



FREKOTE 770-NC™
Room Temperature Cure

Product is particularly well suited for tougher to release processes such as filament winding and non gel coated polyester and fiberglass molding.

Freeze & Release



LB 8040™ Rust Treatment

The shock-freezing effect from a stream of lubricant at -43°C will instantly cool parts and cause microscopic cracks in the layer of rust. This allows the lubricating ingredients to wick directly into the rust by capillary action. Released parts remain lubricated and protected from corrosion.

Welding Protection



SF 7900™ Ceramishield 1616692

Innovative ceramic coating that protects welding equipment against metal spatter for eight hours without reapplication. Minimizes equipment cleaning and eliminates downtime, reducing cost and enhancing productivity.

Replace or Repair O-Ring Seals



O-Ring Making Kit™ 228171

Eliminates the need for an inventory of different sized O-rings. Joints resist water and oil and are as strong as the rubber itself.

Tool Kits



LOCTITE® Quick Service Toolkit™ 302892

This compact kit contains everything needed to solve the most common mechanical failures.



LOCTITE® Toolbox™ 618144

Containing the best LOCTITE® technologies to solve some of the most common mechanical problems, this kit has everything a professional needs to increase reliability at the base component level.

Needle variety kit



LOCTITE® Showcase Needle Variety Kit™

This Kit contains five (5) each of an assortment of high precision dispense needles that have helical thread, Luer-lok® hubs for reliable locking capabilities.

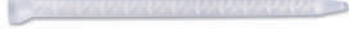
STRUCTURAL BONDING
EPOXIES / POLYURETHANES

Product Image	Item Number	Cartridge Size	Package Qty.	Description
	720225	50 ml	10	50 ml Mix Nozzle, Luer Tip, 6.0" overall length, 6.35 mm inner diameter, 21 elements; 1:1, 2:1, 4:1 mix ratios.
	720230	50 ml	10	50 ml Mix Nozzle, Stepped Tip; 6.0 mm overall length, 6.3 mm inner diameter, 21 elements; 1:1, 2:1, 4:1 mix ratios.
	720173	400 ml	10	200/400 ml Mix Nozzle, Stepped Tip, 7.3" overall length, 6.3 mm inner diameter, 24 elements; 1:1, 2:1 mix ratios.
	720174	400 ml	10	200/400 ml Round Mix Nozzle, Stepped Tip, 8.8 inch overall length, 8 mm inner diameter, 24 elements; 1:1, 2:1 mix ratios.

ACRYLICS

	1034575	50 ml	10	50 ml Mix Nozzle, Stepped Tip, 6.2" overall length, 6.5 mm inner diameter, 20 elements; 1:1, 2:1 mix ratios - B Cartridges.
	1573149	50 ml	10	50 ml Static Mix Nozzle, Stepped Tip; 6.18 inches long; 6.5 mm inner diameter; 20 elements; 1:1, 2:1 mix ratios.
	1084092	400 ml	10	490 ml Mix Nozzle, Stepped Tip; 11.2 inch overall length, 10 mm inner diameter; 24 elements, 10:1 mix ratio.
	1573135	400 ml	10	200/400 ml Mix Nozzle, Stepped Tip; 7.6 in. overall length, 6.3 mm inner diameter, 24 elements; 1:1, 2:1 mix ratio.
	1573138	400 ml	10	200/400 ml Mix Nozzle, Stepped Tip; 9.2 in. overall length, 8.0 mm inner diameter, 24 elements; 1:1, 2:1 mix ratio.
	1084255	490 ml	10	490 ml Mix Nozzle, Stepped Tip; 9.1 in. overall length, 8 mm inner diameter, 24 elements; 10:1 mix ratio.

FLEXIBLE BONDING AND SEALING
EPOXIES

	874905	400 ml	10	200/400 ml Square Mix Nozzle, Threaded Bell End, 114.5 mm inner dimension, 187 mm overall length, 24 elements; 1:1, 2:1 mix ratios.
	720174	400 ml	10	200/400 ml Round Mix Nozzle, Stepped Tip, 8.8 inch overall length, 8 mm inner diameter, 24 elements; 1:1, 2:1 mix ratios.

LIGHT CURE TIPS

1/2" HIGH PRECISION STAINLESS STEEL DISPENSE TIPS - HELICAL THREAD

Product Image	Item Number	1 Package Qty.	Hub Color	Gauge
	88664	50	Amber	15
	88665	50	Green	18
	88666	50	Pink	20
	570587	50	Purple	21
	693474	50	Blue	22
	570588	50	Orange	23
	88667	50	Red	25
	585650	50	Light Grey	30

TAPERED DISPENSE TIPS - 1 1/4" POLYETHYLENE TAPERED TIPS, HELICAL THREAD & UV LIGHT BLOCK ADDITIVE

Product Image	Item Number	1 Package Qty.	Hub Color	Gauge
	553444	50	White	14
	88660	50	Grey	16
	88661	50	Green	18
	88662	50	Pink	20
	88663	50	Blue	22
	862838	50	Red	25

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INDEX BY ITEM NUMBER				
Item No.	Product No.	Product Name	Package Size	Page Number
1311320	243	LOCTITE 243 Threadlockers	50 ml	8
525715	248	LOCTITE 248 Threadlockers	19 g	9
235226	290	LOCTITE 290 Threadlockers	250 ml	9
228581	222	LOCTITE 222 Threadlockers	50 ml	9
1307415	263	LOCTITE 263 Threadlockers	50 ml	10
232083	277	LOCTITE 277 Threadlockers	250 ml	10
232095	545	LOCTITE 545 Thread Sealants	50 ml	18
463973	561	LOCTITE 561 Thread Sealants	19 g	19
2099597	567	LOCTITE 567 Thread Sealants	250 ml	19
232097	577	LOCTITE 577 Thread Sealants	50 ml	18
2061031	SI 5331	LOCTITE SI 5331 Thread Sealants	100 ml	19
483282	55	LOCTITE 55 Thread Sealants	50 m	19
235255	510	LOCTITE 510 Gasketing Products	50 ml	27
231695	515	LOCTITE 515 Gasketing Products	50 ml	26
2099618	518	LOCTITE 518 Gasketing Products	300 ml	27
231567	596	LOCTITE 596 Gasketing Products	300 ml	27
578867	SI 5900	LOCTITE SI 5900 Gasketing Products	300 ml	27
652996	SI 5910	LOCTITE SI 5910 Gasketing Products	300 ml	27
491982	SI 5699	LOCTITE SI 5699 Gasketing Products	80 ml	26
232100	609	LOCTITE 609 Retaining Compounds	50 ml	35
387885	641	LOCTITE 641 Retaining Compounds	50 ml	35
1800518	648	LOCTITE 648 Retaining Compounds	50 ml	34
235288	620	LOCTITE 620 Retaining Compounds	50 ml	35
1800356	638	LOCTITE 638 Retaining Compounds	50 ml	34
231699	660	LOCTITE 660 Retaining Compounds	50 ml	35
235144	401	LOCTITE 401 Instant Adhesives	500 g	42
231474	406	LOCTITE 406 Instant Adhesives	20 g	43
195678	454	LOCTITE 454 Instant Adhesives	20 g	43
231478	495	LOCTITE 495 Instant Adhesives	20 g	42
840057	435	LOCTITE 435 Instant Adhesives	20 g	44
852269	480	LOCTITE 480 Instant Adhesives	20 g	44
2714623	402	LOCTITE 402 Instant Adhesives	20 g	44
1875841	4902	LOCTITE 4902 Instant Adhesives	20 g	44
255299	403	LOCTITE 403 Instant Adhesives	20 g	44
271857	460	LOCTITE 460 Instant Adhesives	20 g	44
1379599	3090	LOCTITE 3090 Instant Adhesives	11 g	44
1401792	4310	LOCTITE 4310 Instant Adhesives	1 oz.	44
1401791	4311	LOCTITE 4311 Instant Adhesives	1 oz.	44

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Item No.	Product No.	Product Name	Package Size	Page Number
2143579	HY 4070	LOCTITE HY 4070 Universal Bonders	11 g	54
2183468	HY 4090	LOCTITE HY 4090 Universal Bonders	50 g	54
2422268	HY 4090	LOCTITE HY 4090 Universal Bonders	50 g	54
2113520	HY 4090	LOCTITE HY 4090 Universal Bonders	50 g	54
2422274	HY 4090 GY	LOCTITE HY 4090 GY Universal Bonders	50 g	54
1690727	AA 330	LOCTITE AA 330 Structural Adhesives	25 ml	61
257239	AA 352	LOCTITE AA 352 Structural Adhesives	1 L	61
237107	EA E-20HP	LOCTITE EA E-20HP Structural Adhesives	50 ml	60
237110	EA E-60HP	LOCTITE EA E-60HP Structural Adhesives	50 ml	63
1403943	EA E-120HP	LOCTITE EA E-120HP Structural Adhesives	50 ml	62
2057343	EA 9466	LOCTITE EA 9466 Structural Adhesives	400 ml	62
2065585	EA 9514	LOCTITE EA 9514 Structural Adhesives	300 ml	62
237099	EA E-05CL	LOCTITE EA E-05CL Structural Adhesives	50 ml	63
160794	AA 332	LOCTITE AA 332 Structural Adhesives	1 L	63
231560	AA 326	LOCTITE AA 326 Structural Adhesives	50 ml	60
237116	EA E-30CL	LOCTITE EA E-30CL Structural Adhesives	50 ml	63
237113	EA E-60NC	LOCTITE EA E-60NC Structural Adhesives	50ml	63
2496647	MS 930 WH	TEROSON MS 930 WH Flexible Adhesives and Sealants	310 ml	74
2496651	MS 930 GY	TEROSON MS 930 GY Flexible Adhesives and Sealants	310 ml	72
2447722	MS 939 GY	TEROSON MS 939 GY Flexible Adhesives and Sealants	290 ml	72
231482	SI 587	LOCTITE SI 587 Flexible Adhesives and Sealants	85 g	72
1401792	4310	LOCTITE 4310 Light Cure Adhesives	1 oz.	78
1401791	4311	LOCTITE 4311 Light Cure Adhesives	1 oz.	78
378217	AA 326	LOCTITE AA 326 Light Cure Adhesives	1 L	79
235070	AA 3494	LOCTITE AA 3494 Light Cure Adhesives	25 ml	80
863791	SI 5088	LOCTITE SI 5088 Light Cure Adhesives	300 ml	79
2098749	SF 7063	LOCTITE SF 7063 Cleaners	400 ml	11
2099006	SF 7200	LOCTITE SF 7200 Cleaners	400 ml	91
235018	SF 768	LOCTITE SF 768 Cleaners	52 ml	91
135544	SF 790	LOCTITE SF 790 Cleaners	18 oz.	90
2046047	SF 7840	LOCTITE SF 7840 Cleaners	1 gal.	91
367218	SF 7850	LOCTITE SF 7850 Cleaners	4 L	91
912251	PC 7218	LOCTITE PC 7218 Wear Prevention	10 kg	94
979698	PC 7226	LOCTITE PC 7226 Wear Prevention	10 kg	95
1379976	PC 7227	LOCTITE PC 7227 Wear Prevention	6 lb	94
1364535	PC 7319	LOCTITE PC 7319 Wear Prevention	5 kg	94
2565509	PC 7332	LOCTITE PC 7332 Wear Prevention	10 kg, kit	93
2833725	PC 7321 A	LOCTITE PC 7321 A Wear Prevention	15 kg	94

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Item No.	Product No.	Product Name	Package Size	Page Number
2809749	PC 7321 A	LOCTITE PC 7321 A Wear Prevention	15 kg	94
2809748	PC 7321 A	LOCTITE PC 7321 A Wear Prevention	15 kg	94
2833726	PC 7321 B	LOCTITE PC 7321 B Wear Prevention	15 kg	94
1480135	PS	LOCTITE PS Wear Prevention	20 L	95
209681	EA 3463	LOCTITE EA 3463 Rebuilding	4 oz.	102
1336330	EA 3478	LOCTITE EA 3478 Rebuilding	500 g	102
2073202	PC 7350	LOCTITE PC 7350 Rebuilding	400 ml	103
428557	PC 7393	LOCTITE PC 7393 Rebuilding	400 ml	103
2065962	LB ML-11	LOCTITE LB ML-11 Lubricants	360 ml	110
235005	LB 8150 SV A/S	LOCTITE LB 8150 SV A/S Anti-Seize Products	1 lb	114
160796	LB 8008 C5-A	LOCTITE LB 8008 C5-A Anti-Seize Products	1 lb	115
135543	LB 771	LOCTITE LB 771 Anti-Seize Products	1 lb	114
209758	LB 8009	LOCTITE LB 8009 Anti-Seize Products	18 oz.	115
2015138	PC 7210	LOCTITE PC 7210 Specialty Maintenance Technologies	1 kg	121
2102082	PC 5085	LOCTITE PC 5085 Specialty Maintenance Technologies	30 m	121
235573	PC 9410	LOCTITE PC 9410 Specialty Maintenance Technologies	5 gal	121
416032	FROKOTE 770-NC	LOCTITE FROKOTE 770-NC Specialty Maintenance Technologies	1 gal.	120
1024403	LB 8040	LOCTITE LB 8040 Specialty Maintenance Technologies	310 g	121
1238883	SF 7900	LOCTITE SF 7900 Specialty Maintenance Technologies	400 ml	121
135286	SF 7649	LOCTITE SF 7649	52 ml	11
135336	SF 7109	LOCTITE SF 7109	1.75 oz.	45
2759219	SF 770	LOCTITE SF 770	52 ml	45



SINGAPORE

Henkel (Singapore) Pte Ltd

401 Commonwealth Drive
#03-01/02
Haw Par Technocentre
Singapore 149598
Email: adhesives-mysg@henkel.com
Website: www.henkel-adhesives.com.sg

THAILAND

Henkel (Thailand) Ltd

700/349 M.6 Amata Nakorn Industrial
Estate, Bangna-Trad Km.57,
Nongmadaeng, Muang,
Chonburi, 20000, Thailand
Email: loctite.th@henkel.com
Website: www.henkel-adhesives.com.th

INDONESIA

PT Henkel Indonesien

Nissi Bintaro Campus, 3rd Floor. Jl.
Tegal Rotan Raya
No.78. Bintaro - Tangerang Selatan,
Banten 15413, Indonesia
Email: loctite.indonesia@henkel.com
Website: www.henkel-adhesives.com.id

MALAYSIA

Henkel (Malaysia) Sdn Bhd

Unit 2.01, Unit 2.02, Level 2, Mercu 3,
Jalan Bangsar, KL Eco City,
59200 Kuala Lumpur, Malaysia
Email: adhesives-mysg@henkel.com
Website: www.henkel-adhesives.com.my

PHILIPPINES

Henkel Philippines, Inc.

LSL Building 2, Diode Street, Light Industry &
Science Park of the Philippines (LISPP), Brgy.
Diezmo, Cabuyao, Laguna, 4025 Philippines
Email: Marketing.Philippines@henkel.com
Website: www.henkel-adhesives.com.ph

VIETNAM

Henkel Adhesive Technologies Vietnam Co., Ltd

No 7, Road 9A, Bien Hoa II Industrial Zone, Bien
Hoa City,
Dong Nai Province, Vietnam.
Email: loctitevietnam@henkel.com
Website: www.henkel-adhesives.com.vn