LOCTITE®

Maintenance, Repair and Overhaul Solutions Guide & Product Selector

Henkel Excellence is our Passion

Making The Right Choice...

For every industrial maintenance, repair and overhaul challenge, Loctite® products have the right solution.

Designed to extend equipment life, increase production reliability and prevent common failures, the Loctite® product range is a maintenance professionals most valuable tool.

Proven with over 50 years industrial experience, typical product applications include;

- Securely lock any threaded fastener or fitting against vibration and shock load.
- Seal and protect threaded joints and components from corrosion.
- Instantly replace gaskets of any size or shape.
- Retain bearings, bushes and cylindrical parts into housings or onto shafts - even if worn.
- Protect metal parts from corrosion, galling and seizing.
- Permanently and quickly bond a wide variety of materials.
- Make emergency repairs to burst pipes and tanks.
- Clean, degrease and convert rust.

More Than A Product...

Our highly experienced Loctite® Application Engineers are committed to providing the highest level of technical and product support in the industry.

Working closely with our local industrial suppliers, our Application Engineers provide full process support from problem solving to onsite maintenance and product training.

Within this Solutions Guide & Product Selector you will find everything you need to know about Loctite® brand industrial grade products. Whether for an emergency repair or preventative maintenance, you will find it easy to select the Loctite® product you need. For further information visit our website www.loctite.com.au or call the Loctite® Customer Support Line 1300 88 55 56.

Committed To Innovation...

From its founding in 1953, based on the world's first anaerobic product, Loctite® has achieved success through innovation. An unrelenting commitment to continuous research and development has resulted in the most technically advanced range of industrial maintenance products available today. Products that increase equipment reliability, reduce costs and improve quality throughout industry. Here are some of our newest innovations featured throughout this catalogue.

Loctite® Sticks

The quality and performance you trust in a new and more convenient semi-solid stick formula. These patented new stick products offer greater flexibility for tougher applications, especially overhead, under or around machinery, and on components that can not be moved. They're compact, making them easy to carry from job to job and easy to store in a tool box, tool belt or pocket. The semi-solid formula means that they won't spill or leak. Now available in an expanded range including two threadlockers, a pipe sealant, an anti-seize and primer.

Loctite® Reliability with a twist!

Threadlockers and Thread Sealants

Introducing the Loctite® 243 and Loctite® 263. Formulated to deliver best performance on active and passive metals, increased oil tolerance and improved high temperature performance.

Loctite® Freeze & Release

The solution for releasing seized or corroded parts – SHOCK FREEZE. Loctite® Freeze & Release instantly chills seized and rusted parts (bolts, nuts, studs). The exceptional shock freeze effect causes microscopic cracks in the layer of rust, allowing the lubricating ingredient to wick directly into the rust by capillary action. The assembly can be easily dismantled after allowing 1-2 minutes reaction time. Released parts remain lubricated and protected from corrosion. (Refer to page 26 for more details).

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THREADLOCKING

Locking of threaded fasteners

» PREVENTS LOOSENING FROM SHOCK AND VIBRATION
» SINGLE COMPONENT – CLEAN AND EASY TO APPLY
» CAN BE USED ON VARIOUS SIZES OF FASTENERS – REDUCES INVENTORY COSTS
» SEALS THREADS
» STOPS RUST AND CORROSION

ARE THE PARTS ALREADY ASSEMBLED?

	Low – Purple	Medium – Blue	
	Easy Disassembly	Improved Oil Tolerance	Stick Applicator
		Use on all Metals	Overhead Applications
HENKEL SOLUTIONS	**LOCTITE® 222**	**LOCTITE® 243**	**LOCTITE® 248**
Fastener Size	Up to 36mm (M12)	Up to 36mm (M36)	Up to 20mm (M20)
Colour	Purple	Blue	Blue
Strength	Low	Medium	Medium
Fixture Time#	20 min	10 min	5 min
Full Strength#	24 hrs	24 hrs	24 hrs
Breakloose Torque# Nm (lb.in.)	14 (120)	24 (210)	20 (177)
Prevailing Torque# Nm (lb.in.)	14 (120)	4 (35)	-
Temperature Range	-54°C to +150°C	-54°C to +180°C	-54°C to +150°C
Recommended Primer	7471/7088	7649/7088	7649/7471
Disassembly Method	Hand Tool	Hand Tool	Hand Tool
Package Size & IDH	10 ml bottle - 471660 50 ml bottle - 231499 250 ml bottle - 1496888	10 ml bottle - 1311375 50 ml bottle - 1311321 250 ml bottle - 1311323	19 g stick - 933728

 # M10 steel nut & bolt, cured for 24 hours @ 22°C and pre-torqued to 5Nm.
** Breakaway torque. For further information refer to product Technical data Sheet.*
[1] Prevailing Torque measured as per ISO 10964

Recommended for low strength threadlocking of adjusting screws, counter sunk head screws and set screws; on collars, pulleys, tool holders, and controllers.

High performance on various metals, even without use of a primer. Improved reliability in high temperature applications and on oil contaminated surfaces.

Medium strength semi-solid stick applicator ideal for hard to reach applications. Recommended for fastener applications where removal is required.

Refer to page 31 for Application Procedures.

What strength do you require?

NO				YES
High - Red			Very High - Red	Medium/High - Green
Improved Oil Tolerance	**Stick Applicator**	**High Thermal Stability**	**Very High Strength**	**Wicking Grade**
Use on all Metals	**No Mess**		**High Chemical Resistance**	**Fills Porosity in Welds / Castings**
LOCTITE® 263	**LOCTITE® 268**	**LOCTITE® 272**	**LOCTITE® 277**	**LOCTITE® 290**
Up to 36mm (M36)	Up to 20mm (M20)	Up to 36mm (M36)	M25 and larger	Up to 12mm (M12)
Red	Red	Red / Orange	Red	Green
High	High	High	High	Medium/High
10 min	5 min	60 min	30 min	20 min
24 hrs	72 hrs	24 hrs	24 hrs	6 hrs
39 (345)	37 (330)	23 (200)*	38 (340)	30 (270)
25 (220)[1]	-	25 (220)*	40 (350)	40 (350)
-54°C to +180°C	-54°C to +150°C	-54°C to +232°C	-54°C to +150°C	-54°C to +150°C
7471	7471	7649/7471	7649	7649
Direct Heat	Direct Heat	Direct Heat	Direct Heat	Direct Heat
10 ml bottle - 1374241 50 ml bottle - 1331618 250 ml bottle - 1331536	19 g stick - 933730	50 ml bottle - 88442	50 ml bottle - 232658 250 ml bottle - 1496860	10 ml bottle - 1175229 50 ml bottle - 1496855 250 ml bottle - 1225613
				
High performance on various metals, even without use of a primer. Improved reliability in high temperature applications and on oil contaminated surfaces.	High strength semi-solid stick applicator ideal for hard to reach places. Recommended for heavy duty applications such as transmission bolts and construction equipment.	High temperature threadlocker with outstanding chemical resistance. Suitable for sealing most refrigerants.	Very high strength threadlocker with outstanding chemical resistance.	Recommended for locking pre-assembled fasteners such as instrument screws, electrical connectors and setscrews.

THREADLOCKING

Invented as a revolutionary method to lock and seal threaded fasteners, Loctite® brand anaerobic threadlockers have found wide acceptance in a range of applications – from delicate electronic components to heavy construction equipment. Loctite® brand threadlockers are available in varying viscosities and strengths for virtually any application, including exposure to extreme environments.

FEATURES & BENEFITS

Prevents Loosening of Fasteners – Sets to a thermoset plastic that fills microscopic gaps between interfacing threads preventing any movement.

Seals Against Corrosion – Seals the joint preventing ingress of moisture and other corrosive gases, chemicals and fluids.

Provides Correct Lubricity – Lubrication properties yield controlled torque tension curves - ideal for assembly of equipment to specified torque values.

Controlled Strengths – Available in varied controlled strengths to suit all applications – low, medium and high.

Suitable for all Fastener Sizes – Eliminates the need to hold stock of expensive mechanical fasteners.

Easy to Apply – Simply apply to the thread and assemble. Excess will not cure and can be easily wiped away.

DID YOU KNOW?

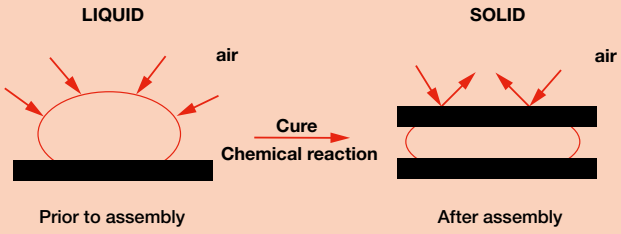
How does an Anaerobic Adhesive work?

Anaerobic adhesives are single-component materials which cure at room temperature when deprived of contact with oxygen.

Curing begins when the two metal parts are mated together and any adhesive outside of the joint or thread remains liquid.

The capillary effect of the anaerobic liquid adhesive carries it into even the smallest gaps to fill the joint.

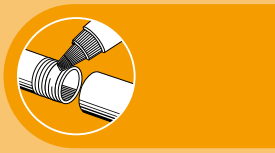
The cured adhesive is then 'keyed' to the surface roughness of the parts forming a tough thermoset plastic, which bonds the components and seals against moisture or chemical attack.



Refer to page 31 for Application Procedures.

THREAD SEALING

Loctite® brand liquid thread sealants seal and secure metal pipes and fittings, filling the space between threaded metal parts and curing to prevent leakage. Designed for low and high pressure applications, liquid thread sealants seal instantly for low pressure testing. When fully cured, they seal to the burst strength of most piping systems.



FEATURES & BENEFITS

Complete Seal – Fills voids between threads creating a 100% seal, preventing leakage caused by vibrational loosening, temperature cycling, corrosion and extreme pressures.

Locks & Seals in any Position – Seals independent of assembly torque allowing correct alignment of fittings.

Does Not Block Pipe System – Uncured anaerobic sealant is completely soluble in hydraulic fluid, diesel oils, petrols and most industrial chemicals.

Instant Low Pressure Seal – Suitable for immediate operation or low pressure testing of newly sealed threads.

Lubricates During Assembly – Eliminates risk of overstressing fittings or castings, common with alternative thread sealing methods.

Easy Application & Disassembly – Simply apply directly to the thread and assemble. Excess sealant can be wiped away without solvents or chemicals. Disassembled with hand tools.

Replaces most tapes and hemp/paste combinations.

DID YOU KNOW?

Industry loses millions of dollars annually due to leakage of fluids through pipe and tubing. Loctite® brand sealants prevent fluid loss, minimising cost of wastage, maintenance and down-time.

The table below details the significant potential cost of a leaking hydraulic fitting over a one year period.

Leakage Rate	Loss per Day (ltr)	Loss per Year (ltr)	Annual Cost ($/Year)
One drop in 10 sec.	0.56	204.98	$1,025
One drop in 5 sec.	1.12	409.97	$2,050
One drop per sec.	5.62	2049.84	$10,250

Based on Hydraulic Fluid: $5.00 / litre

Refer to page 32 for Application Procedures.

THREAD SEALING

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

ARE THE PIPE THREADS METAL OR PLASTIC?	Plastic (or Metal & Plastic)		
WHAT WILL FLOW THROUGH PIPES?	Water only		Hydraulic /
WILL OPERATING PRESSURE EXCEED 300KPA?	Yes	No	
ARE THE THREADS FINE OR COARSE?	Up to 100mm (4”)		Fine - up to 19mm (3/4”)
WHAT APPROVALS ARE REQUIRED?	Potable Water/Gas		Gas
UNIQUE FEATURES	Allows Back off to Align Fittings	Hot & Cold Water	Will not contaminate critical assembles
HENKEL SOLUTIONS	LOCTITE® 55	LOCTITE® 5331	LOCTITE® 569
Description	Cord	White Paste	Brown Liquid
Maximum Thread Size	100mm (4”)	76mm (3”)	19mm (3/4”)
Instant Low Pressure Seal	Yes	Yes (up to 50kPa)	No
Temperature Range	-54°C to +150°C	-54°C to +150°C	-54°C to +150°C
Disassembly Strength	Low	Low	Low
Recommended Primer	-	-	7471/7649
Package Size & IDH	150 m spool - 473136	100 ml tube - 142492	50 ml bottle - 234473 250 ml bottle - 234475

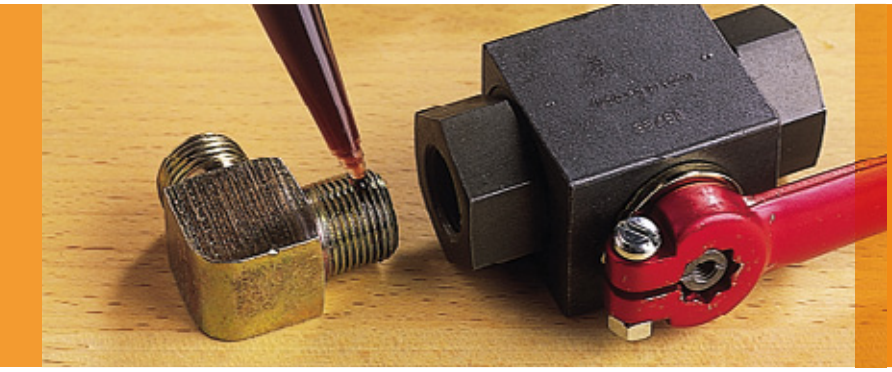
**For further information refer to product Technical data Sheet.*

Faster, more versatile pipe sealant which out-dates traditional tapes and hemp/pastes combinations. Provides an instant seal and allows back-off to align fittings.
Approvals
- Plumbing Safety License AS/NZS 4020:2002 Cert No. 8638 (Potable Water)
- AGA Certificate 6007 to 2400kPa (Gas).

Recommended for use on low pressure threaded plastic or plastic/metal fittings carrying hot or cold water.
Approvals
- German DVGW No 96.07e125 (Gas & Potable Water)
- German KTW (Potable Water)
- WRC approved to 85°C (Potable Water)

Recommended for fine threaded fittings as used in hydraulic and pneumatic applications.
Approvals
- AGA Certificate 3375 to 1050kPa (Gas)

Refer to page 32 for Application Procedures.



Metal Only				
Pneumatic	General Use			Steam/Gas
Yes				
Coarse - up to 25mm (1”)	Coarse - up to 25mm (1”)	Coarse - up to 76mm (3”)		76mm (3”)
No	No	Potable Water/Gas	Gas	No
Locks Threads (25Nm)	Overhead Applications	Locks Thread (17Nm)	High Temperature +204°C	For Steam Applications, high temperature
LOCTITE® 542	LOCTITE® 561	LOCTITE® 577	LOCTITE® 567 PST™	LOCTITE® 5770
Brown	Off White	Yellow	White	Off White
25mm (1”)	25mm (1”)	76mm (3”)	76mm (3”)	76mm (3”)
No	Yes	Yes	Yes	Yes
-54°C to +150°C	-54°C to +150°C	-54°C to +150°C	-54°C to +204°C	-54°C to +280°C
Medium	Medium	Medium	Low	High
7471/7649	7471/7649	7649	7649/7471	7471
10 ml bottle - 470771 50 ml bottle - 1560050	19 g stick - 943428	50 ml tube - 229930 250 ml tube - 281823	6 ml tube - 234451 50 ml bottle - 473168 250 ml bottle - 234453	50 ml tube - 1365034
				
Recommended for threaded fittings as used in hydraulic and pneumatic installations. Approvals • German DVGW No 96.02e125 (Gas & Potable Water) • BS 6956 Type A (Gas) • WRC approved to 85°C (Potable Water)	Semi-solid stick formula offers added convenience and portability. Formulated for fast, reliable curing on metal, tapered pipe threads and fittings. Provides high pressure sealing at operating temperatures up to 150°C.	Recommended for all coarse metal threads. Suitable for applications at low temperatures requiring fast cure. Approvals • Plumbing Safety License AS/ NZS 4020:2002 Cert No. 20079 (Potable Water) • AGA Certificate 4787 to 2600kPa (Gas)	Recommended for all coarse metal threads where slow cure is required to prolong time frame for adjusting valves and fittings. Approvals • AGA Certificate 3207 to 1050kPa (Gas)	High temperature thread sealant, designed to seal threaded pipe fittings in applications requiring continuous heat resistance of up to 280°C.

GASKETING
Sealing and Flanges

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

WHAT SIZE IS THE GAP?

	Less that 0.25mm (Anaerobic Sealants)		
IS THE FLANGE RIGID OR FLEXIBLE?	Rigid (Metal to Metal)		
WHAT IS THE FLANGE MATERIAL?	Steel	Alloy/Aluminium	All Metals
MAXIMUM TEMPERATURE	150°C	150°C	200°C
UNIQUE FEATURES	Use with Shims	Easy Disassembly	High Chemical Resistance
HENKEL SOLUTIONS	LOCTITE® 515	LOCTITE® 518	LOCTITE® 510
Gasket Type	Formed in Place	Formed in Place	Formed in Place
Flange Type (Elongation)	Rigid	Rigid	Rigid
Tack Free Time*	-	-	-
Low Pressure Seal	30 min	20 min	30 min
Temperature Range	-54°C to +150°C	-54°C to +150°C	-54°C to +200°C
Oil Resistance	Excellent	Excellent	Excellent
Water/Glycol Resistance	Good	Good	Excellent
Sensor Safe	Yes	Yes	Yes
Neutral Cure	-	-	-
Recommended Primer	7649/7471	7649/7471	7649
Package Size & IDH	6 ml tube - 209756 50 ml tube - 473169 300 ml cartridge - 265605	6 ml tube - 209759 25 ml syringe - 1329465 50 ml tube - 472904 300 ml cartridge - 135482	50 ml tube - 1496856 250 ml tube - 1496883

** Varies with substrate. For further information refer to product Technical data Sheet.*

Recommended for coating and re-using gaskets to improve sealing.
Approvals
- AGA certificate 2590 to 690kPa (Gas)

Recommended for use on rigid iron, steel and aluminium flanges e.g. aluminium gearbox and engine castings, etc.

Recommended for use on rigid metal parts e.g. cast iron components and pump housings, etc. operating at high temperatures.
Approvals
- AGA certificate 2590 to 690kPa (Gas)

Refer to page 33 for Application Procedures.

Up to 6.0mm (Silicone Sealants)

Flexible (Stamped Metal Assemblies)

Metal or Non-Metals

200°C		260°C		315°C
Fast Cure	**Highly Flexible**	**Hot Oil Resistance**	**Good Electrical Insulator**	**High Temperature Resistance**
LOCTITE® 5699 Grey Maxx®	**LOCTITE® 598 Black Maxx®**	**LOCTITE® 587 Blue Maxx®**	**LOCTITE® 5920 Copper Maxx®**	**LOCTITE® Superflex Red**
Formed in Place	Formed in Place	Formed in Place	Formed in Place	Formed in Place
Flexible (100%)	Flexible (300%)	Flexible (350%)	Flexible (350%)	Flexible (300%)
30 min	25 min	30 min	40 min	30 min
30 min	40 min	30 min	40 min	30 min
-60°C to +200°C	-54°C to +260°C	-60°C to +260°C	-60°C to +316°C	-60°C to +315°C
Good	Excellent	Excellent	Good	Good
Good	Good	Good	Good	Good
Yes	Yes	Yes	Yes	Yes
Yes	Yes	Yes	Yes	No
-	-	-	-	-
95 g tube - 287301 300 ml cartridge - 473152	95 g tube - 640172	95 g tube - 332651 300 ml tube - 333949	85 g tube - 287437	80 ml tube - 135507 300 ml cartridge - 198817
				
Designed for high torque applications. Remains flexible and withstands high vibration. Outstanding oil and shop fluid resistance. Non-corrosive, low odour.	Replacement for cork and paper cut gaskets on flanges and stamped sheet metal covers. Recommended for use where high vibration or flexing occurs. Can also be used with plastic parts. Oxygen sensor safe.	Recommended for sealing all types of flanges including stamped sheet metal where high flexibility and high oil or water glycol resistance is required. Oxygen sensor safe.	Single component RTV non-sag silicone paste for low volatility applications. Adheres to metal, glass, natural and synthetic fibres, wood, ceramics, and many plastic substrates. Oxygen sensor safe.	Recommended for sealing all of flanges including stamped sheet metal where high temperature resistance is required, e.g. assembly and repair of industrial furnaces, ovens, boilers, exhaust stacks and high temperature ducting.

GASKETING

Loctite® brand Anaerobic and Silicone gasketing solutions are suitable for small and large gap flange assemblies. Formed-in-place, they can be applied to any shape and offer improved seal reliability compared to traditional pre-cut compression gaskets.

FEATURES & BENEFITS

Anaerobic Gaskets

Loctite® brand anaerobic gaskets remain liquid when exposed to air, but cure when confined between mating flanges. Anaerobic gasketing products are best suited for small gap applications and rigid metal-to-metal assemblies.

Features and Benefits;

- ✓ No Shimming Effect - controlled tolerances, no need for re-torquing.
- ✓ Fills all voids reducing the need for fine surface finish on flanges.
- ✓ Does not shrink when cured.
- ✓ Parts can be easily disassembled even after extended service.
- ✓ Resists high pressure when fully cured.

Silicone Sealants

Loctite® brand silicone gasketing materials include unique products with excellent fluid and high temperature resistance. They are best suited for large gap applications and stamped metal assemblies where flange flexing occurs.

Features and Benefits;

- ✓ High gap fill and flexibility.
- ✓ High temperature and chemical resistance*.

*Refer to Technical Data Sheet

DID YOU KNOW?

What is a Formed-In-Place Gasket?

Formed-in-place gaskets are applied as a fluid sealant to one of the flange surfaces before the parts are assembled. When the parts are assembled the sealant spreads between the flanges, filling gaps, voids, scratches and surface irregularities.

After assembly the gasket cures and forms a durable seal.

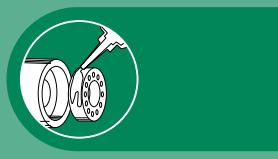
Formed-in-place gaskets eliminate the inventory expense of stocking countless pre-cut gaskets.

How do you remove baked-on gasket material?

Loctite® Chisel® Paint Stripper easily removes pre-cut gasket cement and formed-in-place gaskets in 10-15 minutes. Simply spray on, then wipe or scrap off residual gasketing material.

(Refer to page 26 for further details).

RETAINING



Accepted as a standard method for assembling press and slip parts, Loctite® anaerobic retaining compounds fill the 'inner space' between components and cure to form a strong precision assembly. Formulated in a wide variety of viscosities, gap fills, flexibility and strength characteristics, Loctite® anaerobic retaining compounds are suitable for a broad range of industrial maintenance applications.

FEATURES & BENEFITS

Increased Assembly & Product Reliability – Prevents damage caused by press or shrink fits such as wallowing, backlash and fretting corrosion.

Fills all Voids & Ensures 100% Contact – Fills infinite microscopic imperfections that exists on even the most precisely machined surfaces, thereby providing 100% contact between mating parts, ensuring load and stress is distributed evenly over the joint.

Creates Stronger Industrial Assemblies – Increases shear strength of mechanical assemblies and is suitable for a wider range of industrial applications from securing a metal locating pin to large diameter shaft bearings.

Seals Against Corrosion – Seals the assembly preventing ingress of moisture and other corrosive gases, chemicals and fluids.

Replaces or Augments Mechanical Assemblies – Reduces need for close tolerances, additional securing components and elaborate assembly methods, therefore reducing maintenance cost.

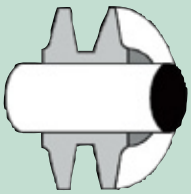
Controlled Strengths – Available in high & moderate strengths formulations to suit all applications. Parts can be disassembled using regular processes.

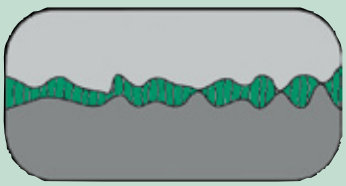
DID YOU KNOW?

Interference fits typically have only 20-40% effective contact area!

Typically the contact area is limited to the peaks left behind by machining processes. Micro-movement during dynamic loading can shear these away, allowing the joint to fail. Tightening the machining tolerances to avoid this is a very expensive solution.

A Loctite® anaerobic retaining compound assures 100% contact, as well as eliminating "fretting corrosion" within the joint.





Loctite® brand Retaining Compounds fill the microscopic peaks and valleys, ensuring maximum adhesion between mating surfaces

RETAINING
Securing Cylindrical Assemblies

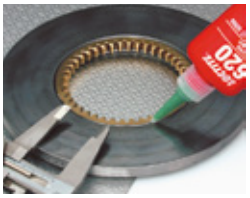
- BOND NON-THREADED CYLINDRICAL METAL ASSEMBLIES
- HIGH AND MODERATE STRENGTH PRODUCTS – CAN CARRY HIGH LOADS AND ELIMINATE FRETTING
- FILL ALL VOIDS – PREVENT CORROSION
- REDUCE THE NEED FOR CLOSE TOLERANCES
- 100% CONTACT – LOAD AND STRESS ARE DISTRIBUTED EVENLY OVER THE JOINT

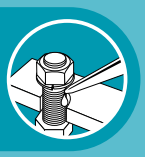
WHAT SIZE IS THE GAP?	Yes (Gaps to 0.25mm)	
WHAT STRENGTH DO YOU REQUIRE?	Medium	Medium/High
MAXIMUM TEMPERATURE	150°C	
UNIQUE FEATURES	Easy Disassembly	General Purpose
HENKEL SOLUTIONS	LOCTITE® 641	LOCTITE® 609
Colour	Yellow	Green
Strength	Medium	Medium
Fixture Time#	30 min	25 min
Full Strength#	24 hrs	24 hrs
Gap Fill# / Max Gap Fill	0.05mm# / 0.25mm	0.15mm# / 0.25mm
Compressive Shear Strength# N/mm² (psi)	6.5 (940)	15.8 (2,290)
Temperature Range	-54°C to +150°C	-54°C to +150°C
Recommended Primer	7471/7649	7649/7471
Disassembly Method	Pulley or Press	Press
Package Size & IDH	10 ml bottle - 469090 50 ml bottle - 1496859 250 ml bottle - 1496874	10 ml bottle - 471311 50 ml bottle - 234551 250 ml bottle - 234549

 # Steel pin & collar, cured for 24 hours @ 22°C.
** Steel pin & collar cured for 2 hours @ 121°C.*
For further information refer to product Technical data Sheet.

A controlled strength retaining compound, ideal for cylindrical parts that require disassembly; e.g. retention of bearings onto shafts and into housings.

Recommended as a general purpose, low viscosity retaining compound. Use to bond rotors to shafts, secure bushings and sleeves, and augment press fits.

No (Gaps to 0.25mm)				Yes (Gaps to 0.5mm)
High			Medium	High
150°C		232°C	150°C	
Slow Cure	Quick Cure	Very High Temperature	High Lubricity	Repairs Worn Parts
LOCTITE® 635	LOCTITE® 680	LOCTITE® 620	LOCTITE® 232	LOCTITE® 660
Green	Green	Green	Opaque Brown	Metallic Grey
High	High	High	Medium	Medium/High
30 min	30 min	60 min	4–6 hrs	10 min
72 hrs	24 hrs	24 hrs	72 hrs	24 hrs
0.05mm / 0.2mm	0.05mm# / 0.2mm	0.05mm# / 0.25mm	0.05mm	0.5mm (clearance)
>20 (2,900)	19.3 (2,800)	17.2 (2,495)	7.0 (1,015)	17.2 (2,490)
-54°C to +150°C	-54°C to +180°C	-54°C to +232°C	-54°C to +150°C	-54°C to +150°C
7471	7471	7649	7471/7649	7471
Press	Press	Press	Press	Press
50 ml bottle - 135516 250 ml bottle - 135517	50 ml bottle - 234950 250 ml bottle - 234952	50 ml bottle - 234776 250 ml bottle - 135515	250 ml bottle - 1381765	6 ml bottle - 473167 50 ml bottle - 473166
				
Recommended for high strength retaining of parts with a clearance or interference fit, e.g. retaining bushes, bearings, seals, fans and liners.	Gives best resistance to dynamic, axial and radial loads. Recommended for retaining shafts, gears, pulleys, and similar cylindrical parts. Approvals • Plumbing Safety License 4020:2002 Cert No. 8687 (Potable Water)	Recommended for high temperature retaining of parts with a clearance or interference fit, e.g. retaining bushes, bearings, seals, fans and liners.	Has lubricating properties to facilitate smooth assembly of heavy interference or high torque fits. Prevents galling and metal pick-up during assembly.	Used for repairing worn coaxial parts without re-machining. Enables reuse of worn bearing seats, keys, splines, tapers, or for retaining shims.



ANTI-SEIZE LUBRICANTS

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

WHAT TYPE OF ANTI-SEIZE DO YOU REQUIRE?

	General Purpose		
MAXIMUM TEMPERATURE	**870°C**	**982°C**	**1315°C**
UNIQUE FEATURES	**Graphite & Metallic Flake Fortified** **High Lubricity**	**Graphite & Copper Fortified** **High Temperature Resistance**	**Graphite & Nickel Fortified** **Extreme Chemical Resistance**
HENKEL SOLUTIONS	**LOCTITE® Silver Grade Anti-Seize**	**LOCTITE® C5-A Copper Anti-Seize**	**LOCTITE® 771 Nickel Anti-Seize**
Colour	Silver	Copper	Silver
Solid Lubricating Agent	Aluminium / Graphite	Copper / Graphite	Nickel / Graphite
Torque Coefficient (K value)*	0.18	0.16	0.13
Temperature Range	-29°C to 870°C	-29°C to 982°C	-29°C to 1315°C
Metal Free	No	No	No
Package Size & IDH	20 g stick - 944870 175 g aerosol - 471320 236 ml brushtop - 199012 250 g tube - 471321 500 g brushtop - 552091 5 kg bucket - 471322	453 g brushtop - 160796	500 g brushtop - 641488

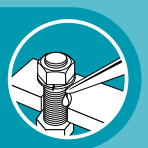
 # Varies with substrate. For further information refer to product Technical data Sheet.
** K value based on 3/8" nut and bolt in Skidmore-Wilhem apparatus and tested in a Wilhelm.*

Heavy Duty, temperature resistant, petroleum based lubricant compound fortified with graphite and metal flake. Inert, will not evaporate or harden in extreme cold or heat. For use in assemblies up to 870°C.
Recommended for:
- General purpose machine and bolt assembly.
- Close tolerance assembly
- Fine threads and snug slip fits.

Exclusive formula suspends copper and graphite in a high quality grease. Protects metal parts from rust, corrosion, galling and seizing at temperatures to 982°C.
Recommended for:
- Nuts, bolts and studs.
- Fittings and shafts, machine surfaces.
- Fittings on steam turbines, pumps and valves.
- Flanges, extruders and dies.

Copper free formulation with extreme chemical resistance, recommended for stainless steel and other metal fittings. Prevents corrosion, seizing and galling in harsh chemical environments at temperatures to 1315°C.
Recommended for:
- Chemical plants and oil refineries.
- Water and sewage plants.
- Environments where a 'clean' inert lubricant is needed.

Stainless Steel & Titanium Applications	Soft Metal Applications	Incidental Food Contact	Silicone Lubricant	Molybdenum-disulfide
1315°C	400°C	400°C	205°C	-29°C to 400°C (sliding) -29°C to 1315°C (anti-seize)
Metal Free	High Corrosion Resistance	Metal Free	Water & Steam Resistant	Heavy Duty
Extreme Temperature Resistance		NSF Approved	Electrical Resistance	Static load will not attract dirt or dust
LOCTITE® Heavy Duty Anti-Seize	**LOCTITE® Zinc Anti-Seize**	**LOCTITE® Food Grade Anti-Seize**	**LOCTITE® Silicone Lubricant**	**LOCTITE® Moly Dry Film**
Black	Dull SIlver	White	Transparent Paste	Black
Calcium / Graphite	Zinc	Calcium	Silicone	Graphite
12.7mm steel bolts (Grade 8) and nuts (Grade 5)	0.15	-	-	0.06 – 0.12
-29°C to 1315°C	-29°C to 398°C	-29°C to 400°C	-29°C to 205°C	-29°C to 400°C (sliding) -29°C to 1315°C (anti-seize)
Yes	No	Yes	Yes	Yes
510 g brushtop - 209758	454 g brushtop - 233507	226 g brushtop - 1198200	150 g tube - 234317 290 g aerosol - 231009	340 g aerosol - 473134
				
Metal free formulation provides outstanding lubrication to all metals including stainless steel, aluminum and soft metals up to 1315°C. Recommended for: • OEM specified turbine studs and bolts. • Ethylene and acetylene piping. • Petrochemical plants. • Environments prohibiting the use of copper.	Smooth mixture of zinc dust and petrolatum grease that acts like an 'internal galvaniser' for superior protection of aluminum and ferrous surfaces from seizure and corrosion up to 400°C. Recommended for: • Protecting aluminum, aluminum alloy, and ferrous metal from seizing and corrosion.	Metal free formulation provides high levels of purity and excellent lubricating properties for use on equipments with incidental food contact at temperatures up to 400°C. Recommended for: • Lubricating and protecting parts in food processing plants, breweries, packaging plants and hospitals.	Non-curing silicone paste that seals, lubricates, protects, waterproofs, and electrically insulates metal, rubber, and plastic parts. Will not tarnish paint, rubber or plastic surfaces. Recommended for: • Plug or ball valve, valve stem packing and protecting electrical contacts. • Stopping leaks.	A molybdenum-disulfide based solid film lubricant. It is a heavy-duty lubricant used for general plant maintenance, metal working trade, machinery manufacturers and manufacturers of military and commercial jet engines. Recommended for: • Maintenance. • Production. • Aerospace. • Automotive, heavy equipment. • Electrical. • Petro chemical.



ANTI-SEIZE LUBRICANTS

Loctite® brand Anti-Seize compounds are a range of premium quality products, developed to protect metal parts from corrosion, galling and seizing. They ease assembly and disassembly of slip fit and threaded joints, and reduce friction and wear. Formulated for severe environments, these products protect against high temperatures up to 1315°C, in conjunction with heavy loads and chemical corrosion.

FEATURES & BENEFITS

High Temperature Resistance – Formulated with high quality grease and solid lubricating agents for optimal temperature resistance up to 1315°C.

Reduces Friction & Wear – Reduces metal-to-metal contact resulting in less friction and wear.

Seals Against Corrosion – Displaces and seals against contact with moisture and other corrosive liquids.

Metal Free Available – For use in environments that prohibit use of copper or where dissimilar metals are used.

Convenient Packaging & Easy Use – Available in tubs, tubes, aerosols and the patented stick applicator. Tubs include a brush attached to the lid for no-mess application.

DID YOU KNOW?

Effective Anti-Seize lubricants increase assembly strength!

An anti-seize lubricant used on a bolt helps to develop greater clamp load for the same torque compared to an unlubricated bolt. However care should be taken to avoid over-stressing a bolt caused by excessive lubrication. Loctite® anti-seize products provide a controlled torque coefficient which ensures consistent clamp load when tightening.

Anti-Seize lubricants act as an 'Internal Galvaniser'!

The use of an anti-seize product is an excellent method of preventing galvanic corrosion, especially in hot, acidic, or caustic environments. Anti-seizes resist galvanic attack by sacrificing the metals in the anti-seize in preference to the metal parts under protection.

INSTANT BONDING

WILL REQUIRE AN INSTANT ADHESIVE OPENING STATEMENT

FEATURES & BENEFITS

- ✓ Convenient bonding in seconds
- ✓ High shear strength
- ✓ No mixing
- ✓ Bonds to a wide variety of materials
- ✓ Extensive range available, suitable for infinite industrial maintenance and OEM applications.

PRODUCT DESCRIPTION

Henkel Corporation, the manufacturer of Loctite® products, is the world leader of structural and instant adhesive bonding solutions. Our advanced adhesives range includes Cyanoacrylates, Epoxies, Hot Melts, Light Cure, Silicones, Urethanes and Acrylics for maintenance and OEM applications.

The Loctite® adhesive products shown here is a targeted selection of maintenance bonding solutions. Call the Loctite® Customer Support Line for more information on our full product range.

INSTANT BONDING

» ASSEMBLE PARTS QUICKLY AND EASILY
» PEPAIR BROKEN PARTS
» BOND DISSIMILAR MATERIALS

WHAT ARE YOU BONDING?

	Plastics/Metals/Rubber	Difficult to bond surfaces	
DO YOU REQUIRE INSTANT ADHESION?	Yes		
IS THE SURFACE POROUS?	Non-Porous		Porous
UNIQUE FEATURES	Instant Fixture	Instant Fixture Bonds Most Plastics	Instant Fixture No Run Formula
HENKEL SOLUTIONS	LOCTITE® 401	LOCTITE® 406	LOCTITE® 454
Colour	Clear	Clear	Clear
Gap Fill	0.05mm	0.05mm	0.10mm
Viscosity (CP)	90	20	Gel
Shear Strength# N/mm² (PSI)	20 (2,900)	15.5 (2,250)	20.9 (3,030)
Temperature Range	-54°C to +120°C	-54°C to +120°C	-54°C to +120°C
Fixture Time	5–20 sec	5–20 sec	30–60 sec
Full Strength	24 hrs	≥24 hrs	≥24 hrs
Recommended Primer	770	770	-
Package Size & IDH	3 g tube - 547691 25 ml bottle - 265607	25 ml bottle - 265606 100 ml bottle - 265619 500 ml bottle - 265621	3 g tube - 233998 20 g tube - 466862 200 g tube - 234004

 # Grit blasted mild steel cured for 24 hours at 22°C.

Designed for assembly of difficult-to-bond materials which require uniform stress distribution and strong tension and/or shear strength. Bonds a wide range of materials including metals, plastics and elastomers.

General purpose adhesive for difficult top bond surfaces. Bonds Santoprene® rubbers, polyolefin plastics and elastomers when used in conjunction with Loctite® 770 Polyolefin Primer.

General purpose gel for bonding metals, composite materials, wood, cork, foam, leather, card, paper, plaster and unglazed ceramics. Recommended for use on vertical or overhead surfaces. Fills gaps to 0.5mm with the use of Primer 7452.

Rubber/Metal	Plastics/Rubber	Plastics/Metals/Rubber		Plastics/Rubber
No	Yes			No
Non-Porous				Porous
Rubber Toughened	Bonds to EPDM	Rubber Toughened	Low Odor	Two-part Gap Fill
High Peel Strength		High Peel Strength	Low Bloom	
LOCTITE® 480	LOCTITE® 424	LOCTITE® 435	LOCTITE® 460	LOCTITE® 3090
Black	Clear	Clear	Clear	Clear
0.05mm	0.05mm	0.05mm	0.05mm	5mm
150	110	175	40	Gel
26 (3,800)	22 (3,200)	19 (2,700)	21 (3,060)	21 (3,045)
-54°C to +100°C	-54°C to +80°C	-54°C to +100°C	-54°C to +100°C	-54°C to +80°C
60–120 sec	5–20 sec	30–60 sec	10–30 sec	30–60 sec
≥24 hrs	≥24 hrs	≥24 hrs	≥24 hrs	≥24 hrs
770	770	770	770	770
20 g bottle - 1831562 500 ml bottle - 135253	25 ml bottle - 265609	25 ml bottle - 914156 500 ml bottle - 1055840	25 ml bottle - 473121 500 ml bottle - 937501	10 g dual syringe- 1796029

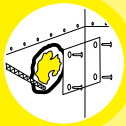
Black rubber toughened grade for bonding metal to metal and metal to rubber; especially suitable with applications where high peel strength is required and/or shock loads are present.

Excellent for bonding EPDM rubber. Loctite® 424 provides enhanced performance on EPDM and elastomers.

Rubber toughened adhesive with increased flexibility and peel strength along with enhanced resistance to shock. The product provides rapid bonding on a wide range of materials including metals, plastics and elastomers, as well as porous and absorbent materials like wood, leather and fabric.

Low odour and low blooming properties and is particularly suitable for applications where vapour control is difficult. This product provides rapid bonding of a wide range of materials including metals, plastics and elastomers. Loctite® 460 is particularly suited for bonding porous or absorbent materials such as wood, paper, leather and fabric.

Two component, fast curing, gap filling adhesive with excellent bonding characteristics to a variety of substrates including plastics, rubbers and metals. Loctite® 3090 is designed for the assembly of parts with varying or undefined band gaps. Loctite® 3090 is also suitable for bonding porous materials such as wood, paper, leather and fabric.



STRUCTURAL BONDING

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

WHAT ARE YOU BONDING?

	General Purpose	
	Gap-fill (0.50mm)	Gap-fill (0.20mm)
	Non-Porous	Porous
UNIQUE FEATURES	Allows Gap Fill Multi-Purpose	High Chemical Resistance

HENKEL SOLUTIONS

	LOCTITE® 330	LOCTITE® 3801
Colour	Amber	Amber
Gap Fill	0.50mm	0.20mm
Viscosity	Gel	Syrup
Shear Strength# N/mm² (PSI)	23 (3,300)	16 (2,300)
Temperature Range	-54°C to +120°C	-54°C to +82°C
Fixture Time	3–5 min	4–6 min
Full Strength	24 hrs	24 hrs
Recommended Activator/Primer	7387	-
Package Size & IDH	50 ml kit - 882799 300 ml cartridge - 929330	29.5 ml dual syringe - 168330

*# Grit blasted steel cured for 24 hours at 22°C. *Applied @ 22°C / 50% relative humidity. For further information refer to product Technical data Sheet.*

This multi-purpose adhesive suits most bonding needs including metal bonding, ID plates and signage. Two part, no mix, fast curing and toughened with good moisture, impact resistance and peel strength. *(50ml kit includes 7387 Activator 25gm).*

Conventional dual syringe, two-part epoxy. Ideal for emergency repairs or where fast cure time is required. Sets in 5 minutes. Resistant to a wide range of chemicals and solvents, and acts as an excellent electrical insulator.

General Purpose	Metal	Plastics/Metals
Gap-fill (0.20mm)	Gap-fill (0.50mm)	Gap-fill (0.25mm)
Non-Porous	Non-Porous	Non-Porous
High Temperature Resistance	Toughened	Toughened
Electrical Insulator	High Peel Strength	
LOCTITE® 3805	**LOCTITE® 324**	**LOCTITE® E20HP**
Grey	Yellow	Off-white
0.20mm	0.50mm	0.25mm
Heavy Paste	Syrup	Syrup
21 (3,000)	25 (3,300)	23 (3,300)
-54°C to +150°C	135°C	80°C
10–15 min	5–10 min	3 hrs
16 hrs	72 hrs	24 hrs
-	7075	-
56 g kit - 459312	50 ml bottle - 88478	50 ml tube - 237107 400 ml cartridge - 237109

Fast setting, two-component adhesive and filler system. Once mixed, the epoxy cures at room temperature, and forms a high strength, grey bondline.
When fully cured, the epoxy is resistant to a wide range of chemicals and solvents, and acts as an excellent electrical insulator.

Especially suitable for joining dissimilar materials eg. ferrite to plated materials in electric motors, loudspeakers etc. This product is specifically formulated for toughness and impact strength. Loctite® 324 cures when confined between close fitting parts with the aid of an activator.

Toughened, medium-viscosity, industrial grade epoxy adhesive with a medium work life. Once mixed, the two-component epoxy cures at room temperature to form a tough, off-white, bondline that provides high peel resistance and high shear strengths. The fully cured epoxy is resistant to a wide range of chemicals and solvents, and acts as an excellent electrical insulator.

PRIMERS & ACTIVATORS

» ACTIVATES INACTIVE SURFACES AND SPEEDS CURE TIME
» SPEEDS CURE THROUGH LARGER GAPS AND DEEP THREADS

DO YOU NEED AN ACTIVATOR OR PRIMER?

	Accelerate Cure or Promote Cure	
WHAT TYPE OF PRODUCT ARE YOU USING?	Anaerobic Threadlocking, Thread Sealing, Gasketing,	
WHICH PRODUCT ARE YOU USING?	222, 232, 243, 248, 268, 515, 518, 542, 561, 569, 609, 635, 660, 680	232, 248, 263, 268, 272, 277, 290, 510, 515, 518, 542, 561, 567, 569, 577, 620, 641
HENKEL SOLUTIONS	LOCTITE® 7471	LOCTITE® 7649
Description	Activator	Activator
Base Solvent	Acetone / Isoproponal	Acetone
Drying Time at 20°C	30 to 70 secs	30 to 70 secs
On-Part Life	7 days	30 days
Package Size & IDH	133 ml aerosol - 1553340 3.78 ltr can - 990061	100 ml pump - 991076 3.78 ltr can - 990024

*# Grit blasted steel cured for 24 hours at 22°C. *Applied @ 22°C / 50% relative humidity.For further information refer to product Technical data Sheet.*

Use to increase the cure speed of Loctite® brand anaerobic products, especially at low temperatures, in applications with passive metals or inert surfaces, or where large gaps are involved.

Use to increase the cure speed of Loctite® brand anaerobic products, especially at low temperatures, in applications with passive metals or inert surfaces, or where large gaps are involved.

FEATURES & BENEFITS

- ✓ Activates inactive surfaces and speeds cure time
- ✓ Speeds cure through larger gaps and deep threads

Metals

Active Surfaces bronze, iron, (Activator optional)	Brass, copper, soft steel
Inactive Surface stainless steel, (Activator required)	Aluminium, magnesium, zinc, black oxide, cadmium, titanium, nickel, others
	PE, PP, Acetyl

Activators in Large Gaps or at Low Temperature <5°C

Retaining

324, 325

LOCTITE® 7075

Activator
Acetone
≥ 70 secs
120 mins
100 ml pump pack - 990065

Activate reaction of Loctite®324 or Loctite® 325. No mixing required.

Cyanoacrylate Adhesive

Post Cure Only
(Refer to your Loctite® Sales Engineer for further details)

LOCTITE® 7452

Activator
Acetone
30 secs
≤60 secs
20 g aerosol - 471307 946 ml can - 990062

Apply post bonding applications to cure excess Loctite® brand cyanoacrylate adhesives. Typical applications include securing wires to coils or PCB's and tamperproofing adjustments and mounting edge guides or stiffeners.

Primer
Improve adhesion to difficult to bond surfaces

All Loctite® cyanoacrylate adhesives

LOCTITE® 770

Polyolefin Primer
Heptane
30 secs
8 hrs
100 ml pump - 990067 946 ml can - 990068

Helps to provide strong reliable bonds with Loctite® brand cyanoacrylates on "impossible" substrates like polypropylene, polyethylene, PTFE and thermoplastic rubber.

RUST TREATMENT & CLEANING

» STABILIZE EXISTING RUST
» GUARD AGAINST CORROSION
» PREVENT ELECTROCHEMICAL CORROSION
» INCREASE BELT FRICTION

WHAT IS YOUR TASK?

	Releases Corroded & Rusted Parts	Lubricates & Protects	Gasket Removal
WHAT ARE YOU CLEANING?	-	-	-
UNIQUE FEATURES	**Shock Freeze**	**Two spray options** **Prevents corrosion**	**Rapid Removal** **Minimises Flange Damage**

HENKEL SOLUTIONS

	LOCTITE® Freeze & Release	LOCTITE® ML-11	LOCTITE® Chisel Paint Stripper
Appearance	Clear Liquid	Slightly Brown	White Liquid
Dry Time	-	-	-
Package Size & IDH	310 g aerosol - 1024403	360 ml aerosol - 1827849	510 m aerosol - 642664

Note: Varies with substrate. For further information refer to product Technical data Sheet.

Shock-freezes seized and rusted parts, causing microscopic cracks in the rust and allowing the lubricant to penetrate. The assembly can be easily dismantled after allowing 1-2 minutes and parts remain lubricated and protected from corrosion.
Recommended for:
• Seized and or rusted components.

A light, semi-drying oil type spray that penetrates, lubricates, displaces water, cleans surfaces and provides protection to metal surfaces, to prevent corrosion.

Removes backed on gaskets from any type of assembly in 10 to 15 minutes. Prepares metal parts for new gaskets, eliminating scraping and sanding. Suitable for wood and is non-corrosive to aluminium. Not for use with plastics, linoleum or synthetic fibres.

FEATURES & BENEFITS

✓ Effective rust converter formula for surface preparation of all metals

✓ Fast acting and noncorrosive gasket remover eliminates need for scraping and sanding

✓ Fast and effective industrial grade cleaners

✓ Premium-grade hand cleaner with skin conditioners to soothe and protect hands

Clean & Degrease	Clean & Degrease	Rust Treatment	Clean & Degrease		
Metal Parts	All Parts		Large Surfaces	Hands	Hands
Non-chlorinated	Non-Corrosive	Converts Rust	Biodegradable	Effective on all Stains	Pre-moistened waterlesstowels
	ODC Free	Protects Surface	Non-Toxic	Conditions Skin	Leaves no residues
		Up to 121°C	Non-Flammable	Orange Scented	Fortified with emollients and natural oils
Non-Chlorinated Parts Cleaner	**LOCTITE® 7070**	**LOCTITE® Extend® Rust Treatment**	**LOCTITE® Natural Blue®**	**LOCTITE® Yuk-Off®**	**LOCTITE® Hand Wipes**
Clear Liquid	Clear Liquid	Milky Liquid	Blue Liquid	White Lotion	Textured Towel
30 secs	5–20 mins	30 min	-	-	-
420 g aerosol - 1506652	473 g aerosol - 661976	946 ml bottle - 234981 3.78 ltr bottle - 160802	709 ml bottle - 235502 3.78 ltr bottle - 209804 18.9 ltr bucket - 235503	400 ml bottle - 366943 4 ltr pump - 367218 15 ltr bucket - 367217	75 pck tub - 337637 130 pk bucket - 337638
					
• Aggressively penetrates and dissolves • Dries fast with no residue • Eliminates the need to disassemble parts • VOC compliant • No chlorinated solvent run-off Applications: Formulated to remove oil, grease, fluids, oxidised oils (gum) and asphalt from all types of metal parts.	General purpose parts cleaner and degreaser which contains no ozone depleting chemicals. Prepares surface for bonding and is non-corrosive and plastic compatible. Removes grease, oil and dirt from electrical parts, tools, bearings, controls, and precision equipment.	Converts existing rust into a stable base. Cured product acts as a primer ready for painting. Protects surfaces from corrosion . Use on metal pipes, valves, fittings, storage tanks, fences, guard rails, conveyors, construction and agricultural equipment.	A biodegradable, allpurpose, industrial strength, concentrated cleaner and degreaser, Natural Blue® contains no hazardous solvents. Formulated for wipe down, pressure spraying and immersion cleaning processes, Natural Blue® can be economically diluted with water at room temperature or heated, to meet a wide range of industrial cleaning applications. ODC free, non flammable, non-toxic and pine scented. *(709ml is diluted 1:1 ready for use).*	Contains premium-grade cleansing agents that quickly dissolve dirt, grease, resin, ink, paint, glue, tile cements and other stubborn stains. Citrusbased, smooth formula is pH balanced and fortified with skin conditioners lanolin, aloe vera, Vitamin E, jojoba and wheat germ extract to soothe and protect raw, rough hands.	Premoistened with a powerful cleaning formula, the abrasive, yet non-scratching fabric removes tar, grease, wax, ink, paint, lubricants and adhesives.

SPECIALTY AND EMERGENCY REPAIR KITS

» ENABLES RAPID REPAIR OF DAMAGED OR BURST PIPES
» WILL SEAL LEAKS IN TANKS AND OTHER CONTAINMENT VESSELS IN ADDITION TO REPARING METAL PARTS
» INCLUDES A KIT FOR REPAIRING OR REPLACING DAMAGED O-RING SEALS

INDUSTRIAL MAINTENANCE KITS

	20 x Products	13 x Products	
EMERGENCY REPAIR KITS			Replace or Repair O-Ring Seals
FEATURES & BENEFITS	Comprehensive Free Tool Box	Loctite® Core Products Free Tool Box	Water & Oil Resistant Permanent Replacement
HENKEL SOLUTIONS	Top Line Kit	MRO Kit	O-Ring Kit
Kits contents	Threadlockers - 243, 263, 290 50ml Retaining Compounds - 609, 641, 660, 680 50ml Thread Sealants - 515, 567, 569 50ml Bonding Adhesives - 406 25ml, 454 20g, 3805 56g Anti-Seize Lubricants - Silver Grade, 771 Nickel 500g Primers - 7471 127g, 7649 100ml Others - 790 Chisel® Paint Stripper 510g Metal Magic Repair 113g	Threadlockers - 243.263 50ml Retaining Compound - 609, 660 50ml Gaskets - 515,587 50ml Bonding Adhesives - 401 25ml Thread Sealants - 567, 569 50ml Anti-Seize Lubricants - Silver Grade stick 20g Primer - 7649 133ml Others - ML-11 360ml Metal Magic Repair 113g Loctite® 7414 - 50ml	406 Instant Adhesive O-Ring Splicing Fixture Cutting Blade 1.6mm, 2.4mm, 3.0mm, 5.7mm, 8.4mm Cord (Metric Kit) or Loctite® Clean-up Solvent Loctite® Waterproofing Solution 3/32", 1/8", 3/16", 1/4" Cord (Imperial Kit)
Package Size & IDH	Kit - 496749	Kit - 1575818	Metric - 473153 Imperial - 473154
			

FEATURES & BENEFITS

Tool Kits

✓ Contains essential tools for industrial maintenance and repair

Emergency Repair Products

✓ Easy to use – does not require specialised equipment

✓ Enable rapid repair of damaged equipment

Contain all the essential tools for industrial maintenance reliability including Threadlocking, Retaining Compounds, Thread Sealing, Bonding Adhesives, Anti-Seize Lubricants and Primers.

Packaged in an easy-to-carry, rugged and lockable toolbox. The kit conveniently packages an assortment of popular Loctite® solutions for every MRO need.

Contains all of the materials necessary to produce stationary o-rings on the spot. Saves time by allowing o-ring replacement without disassembling machinery. Eliminates the need for inventory of different sized o-rings.

Stop Pipe Leaks	Repair Metal Surfaces	Tamper proofing	
30 Minute Cure	10 Minute Cure		
Cures Wet or Underwater	Metal-Like Finish		
Pipe Repair	**Metal Magic**	**LOCTITE® 7414**	**LOCTITE® Insulating & Sealing Wrap**
Urethane-Impregnated Fiberglass Tape Metal Magic Steel Stick Protective Gloves	Putty stick (pre-measured resin & hardener. Simply cut off desired amount, knead and apply)	Solvent paste adhesive	Self fusing silicone tape
50mm x 1.8m kit - 473162	113 g stick - 645440	50 ml tube - 1606544	3.05 m roll - 1540599
			
Recommended for reliable, temporary repairs of metal, plastic and composite pipes. Easy to use - no tools are required and can be applied to odd shapes as required. Cures in 30 minutes and can be sanded or painted.	Easy to use, steel-filled compound designed for emergency maintenance repairs on damp, dry or underwater surfaces. Cures to a metal-like finish in less than 10 minutes under typical temperatures of -30°C to + 121°C	Loctite® 7414 is a fast drying paste to be used in production to visually detect any movement in the adjustment of parts. Loctite® 7414 has been developed for use on compression fittings, studs, nuts, parts and assemblies after they have been set to proper tension or position.	Self-fusing, silicone rubber wrap that is recommended for reliable, temporary repairs on a variety of substrates. Typical applications includes flexible hose repair, pipe repair, tool handle wrap, and electrical insulative wrap.

TECHNICAL REFERENCES
Ten Points About Liquid Threadlockers

BY RICK SKIBBA
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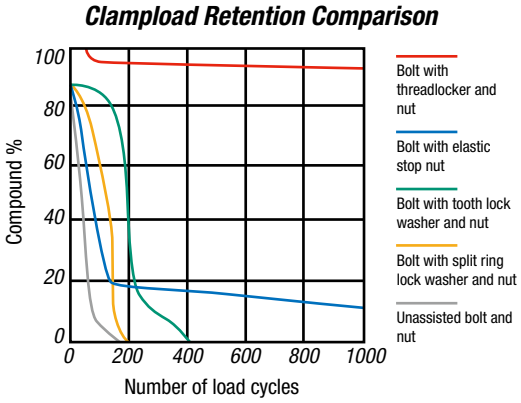
Bolts, studs, set screws and other threaded fasteners are the "ties that bond" industrial equipment together. Considering that fastener loosening is a leading cause of catastrophic failure in machinery, maintaining proper clamping forces is an important element in fastening effectiveness.

Liquid anaerobic threadlockers are an excellent method of keeping fasteners firmly in place. Listed here are ten points that plant personnel should know about using liquid anaerobic threadlockers:

It's not just a bolt. The real function of nuts and bolts is to provide clamping force to hold two components together. If that clamping force decreases, the fastener begins to slip, and failure becomes inevitable.

Thread space is the enemy. There can be as little as 15% metal-to-metal contact between the thread of a nut and bolt. The empty space leaves room for movement that leads to self-loosening and loss of clamping force.

Side movement causes failure. Fasteners work loose for complex reasons, but a key cause is sideways movement. Bolted surfaces can slide sideways as a result of thermal expansion, bending of the assembly, impact or vibration. As this happens, the bolt takes on a rocking motion that causes the threads to wear against each other. In time, the bolt becomes almost frictionless, and the threads can unwind.



In test on transverse shock and vibration machines, liquid threadlockers drastically outperformed mechanical locking devices

Threadlockers stop all kinds of movement. Liquid anaerobic threadlockers attack the root cause of loosening by filling spaces between the threads. The result is a secure, one-piece assembly that will not loosen under stress.

Sealing stops corrosion. By sealing between thread spaces, threadlockers keep out air and moisture that can cause corrosion – another common cause of fastener failure. Because of their chemical resistance, threadlockers seal effectively in contact with most fluids, gases, and solvents used in industry.
(Refer to Fluid Compatibility Chart - pg 34-35).

Threadlockers hold better. In test on transverse shock and vibration machines, liquid threadlockers drastically outperformed mechanical devices (see graph). Bolts secured with threadlocker retained nearly all their clamping force after more than 1,000 cycles. Mechanical devices began to fail almost immediately.

Better performance cost less. Mechanical locking methods are effective to some degree, but are difficult to justify based on cost. A special nut or washer can cost more than four time as much as an application of liquid threadlocker. Mechanical devices also require extensive and costly inventories to keep the range of sizes on hand. Three or four grades of threadlocker – easy to carry and colour-coded, serve the same purpose.

It will come out. All threadlocked fasteners can be disassembled. Different grades of threadlockers can be used depending on the job. Fasteners secured with low and medium strength grades can be removed with common hand tools. Those secured with high strength grades can be removed by applying heat for a specified time.

Threadlockers ease assembly and disassembly. The thixotropic property of Loctite® anaerobics is conducive when applied to threads of fasteners and fittings: they become less viscous when put under stress (being shaken, stirred or dispensed) and return to their original state when stress is removed.

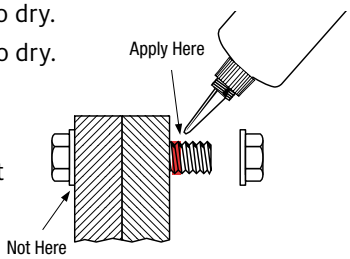
When wet, threadlockers lubricate fasteners, allowing proper, consistent assembly tightening and torque. When cured in place, threadlockers stop corrosion, thus preventing seizure and allowing for ease in disassembly.

There is no "downside". Liquid threadlockers are not just for certain specialized uses. They perform effectively on fasteners and threaded assemblies of any type and size, in any kind of equipment.

APPLICATION PROCEDURES
Threadlocking

THROUGH HOLE (BOLTS AND NUTS)

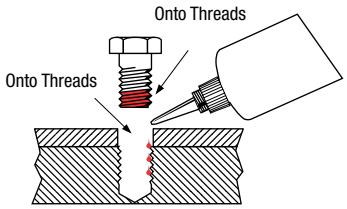
1. Clean all threads (bolt and nut) with Loctite® ODC-Free Cleaner & Degreaser. Allow to dry.
2. If necessary, spray all threads with Loctite® Primer (Refer to Technical Data). Allow to dry.
3. Select the proper strength Loctite® Threadlocker product.
4. Insert bolt into through hole assembly.
5. Apply several drops of Threadlocker onto bolt at targeted tightened nut engagement area. Avoid touching bottle tip to metal.
6. Assemble and tighten nut as usual.



BLIND HOLES (CAP SCREWS, ETC.)

1. Clean all threads (bolt and hole) with Loctite® ODC-Free Cleaner & Degreaser. Allow to dry.
2. If necessary, spray (bolt and hole) with Primer (Refer to Technical data). Allow to dry.
3. Select the proper strength Threadlocking product.
4. Squirt several drops down the sides of the female threads.
5. Apply several drops to bolt. Avoid touching bottle tip to metal.
6. Tighten as usual.

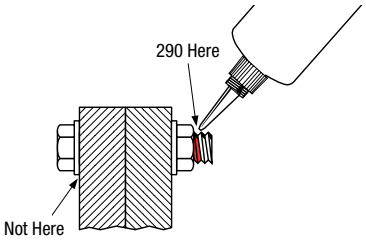
Note: Using Loctite® Threadlockers will virtually eliminate stripped threads in aluminium or magnesium housings caused by galvanic corrosion.



PRE-ASSEMBLED FASTENERS

1. Clean bolts and nuts with Loctite® ODC-Free Cleaner & Degreaser.
2. Assemble components.
3. Tighten nuts.
4. Apply drops of Loctite® 290 Threadlocker at the nut and bolt juncture.
5. Avoid touching bottle tip to metal.

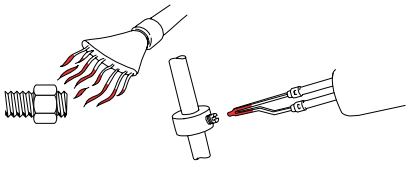
Note: For preventive maintenance on existing equipment: RETIGHTEN nuts and apply Loctite® 290 Threadlocker at the nut and bolt juncture.



HIGH STRENGTH DISASSEMBLY

1. Apply localised heat to nut or stud (260°C for 5 minutes).
2. Disassemble while HOT.

Note: Use standard hand tools for disassembly of low and medium strength Threadlockers.

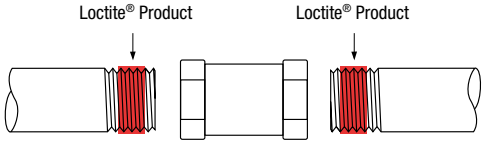


Localised Heating Methods

APPLICATION PROCEDURES
Thread Sealing

STANDARD FITTINGS — PIPE, HYDRAULICS, POTABLE WATER OR AIR

1. Clean parts of contamination with ODC-Free Cleaner & Degreaser. If necessary, spray Loctite® Primer (Refer to Technical Data) onto threaded parts (male and female). Allow to dry. Note: Primer is not required for brass parts.
2. Apply a band of Loctite Product to male threads starting one to two threads from end of pipe.
3. Assemble parts snugly. Do not overtighten.
4. If initial pressure exceeds 6.9 MPa*, wait 30 minutes before pressurizing.

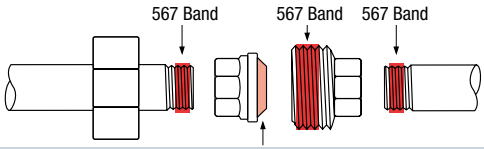


Note: • If sealing chemicals or strong acids/bases, refer to Fluid Compatibility Chart (pg 34-35).
• Do not use on oxygen or strong oxidisers (chlorine).
• Refer to Loctite® Thread Sealing selector Chart (pg 8-9) for correct product selection

**Depending on conditions*

METAL PIPE UNIONS

1. Disassemble and if necessary, spray all components with Loctite® 7649 Primer. Allow to dry.
2. Apply a thin coating of 567 PST® Pipe Sealant to union face.
3. Apply a band of 567 PST® Pipe Sealant to male threads.
4. Assemble parts snugly.

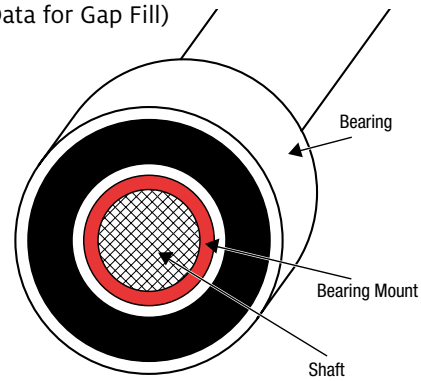


Shaft Mounted Components

SLIP FIT — LIGHT DUTY

ORIGINAL

1. Clean all parts with Loctite® ODC-Free Cleaner & Degreaser. 2. Spray all parts (I.D. and O.D.) with Loctite® Primer (Refer Technical Data).
3. Apply Loctite® 641 dabs around shaft at engagement area. (Refer to Technical Data for Gap Fill)
4. Assemble parts as normal.
5. Wipe off excess.
6. Allow 20 minutes cure time prior to service.



WORN SHAFT

Follow directions above except:

1. Determine radial gap.
2. If radial gap exceeds 0.1mm, Loctite® Primer must be used.
3. Take steps to maintain concentricity with large gaps.
4. Larger gaps require longer cure times (30-60 minutes).
5. Loctite® Quick Metal® 660 is NOT recommended for radial gaps exceeding 0.5mm.

Note: Loctite® Quick Metal® 660 is very fast fixturing (30 seconds or less) with Loctite® 7471 Primer (T).

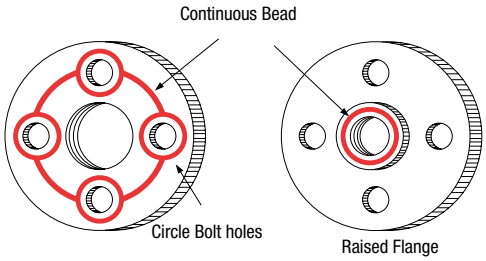
APPLICATION PROCEDURES
Formed–in–place Gasketing

SEALING CAST RIGID FLANGES

1. Remove old gasketing material and other heavy contaminants with Loctite® Chisel® Gasket Remover. use mechanical removal technique if required.

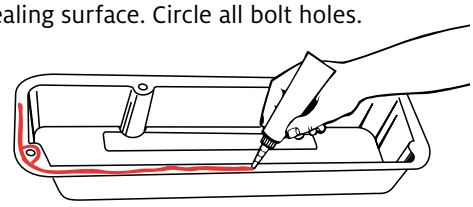
Note: Avoid grinding.

2. Clean both flanges with Loctite® ODC-Free Cleaner & Degreaser.
3. Spray Loctite® Primer (Refer Technical data) on only one surface. Allow to dry.
4. Apply a continuous bead of SELECTED LOCTITE® GASKETING PRODUCT to the other surface. **Note:** Circle all bolt holes with sealant, if appropriate.
5. Mate Parts. Assemble and tighten as required. **Note:** Immediate assembly not required; however avoid delays over 45 minutes (assemble immediately if primer is used).
6. Allow to cure:
   a. No pressure – immediate service
   b. Low pressure (up to 3.45mPa) – 30 to 45 minutes
   c. High pressure (3.45 to 17.2mPa) – 4 hours
   d. Extreme high pressure (17.2 to 34.45mPa) – 24 hours



STAMPED OR SHEET METAL FLANGES

1. Remove old gasketing material and other heavy contaminants with Loctite® Chisel® Gasket Remover.
2. Clean both flanges with Loctite® ODC-Free Cleaner & Degreaser.
3. Apply a continuous bead of the selected Loctite® MAXX® SILICONE to sealing surface. Circle all bolt holes.
   Note:
   • Use proper bead diameter to seal flange width and depth.
   • Minimize excessive material “squeeze in”.
4. Assemble within 10 minutes by pressing together. Tighten as required.
5. Clean up any excess.
6. Cure times will vary with temperature, humidity, and gap. Typical full cure time is 24 hours



REFER TO LOCTITE® DO IT RIGHT USERS GUIDE FOR FURTHER APPLICATION PROCEDURES SUCH AS;

Threadlocking
• Blind Holes (Studs, etc)
• Adjustment Screws
• Stripped Thread Repair

Thread Sealing
• Compression Fittings
• Flared / Swaged Fittings
• Hose Ends – Air & Hydraulic

Puncture Sealing
• Tanks, Vessels, etc

Porosity Sealing
• Porosity in Welds and Castings

Gasket dressing
• Sealing Flanges with Gasket

Strengthen Keyed Assemblies
• Keyed Assemblies – Standard & Heavy Duty
• Repair Badly Wallowed Keys

Shaft Mounted Components
• Repair Badly Worn Shaft
• Slip Fit – Heavy Duty
• Press Fit

Housed Components
• Slip Fit – Light & Heavy Duty
• Retaining (Large Gaps)

And More….

FLUID COMPATABILITY CHART

LIQUIDS, SOLUTIONS & SUSPENSIONS

(FOR METAL THREADED FITTINGS SEALED WITH LOCTITE® SEALANTS)

LEGEND:
- ● All Loctite® Anaerobic Sealants are Compatible Including # 243, 542, 567, 569, 577
- † Use Loctite® 277
- ✖ Not Recommended
- ❑ < 10% (same as ●)
  > 10% (same as †)
- ☆ < 5% (same as ●)
  > 5% (same as †)
- ❖ Use Loctite® # 243, 290

Abrasive Coolant	●
Acetaldehyde	●
Acetate Solvents	●
Acetimide	●
Acetic Acid	●
Acetic Acid	❑
Acetic Acid - glacial	●
Acetic Anhydride	●
Acetone	●
Acetyl Chloride	●
Acetylene (Liquid Phase)	●
Acid Clay	●
Acrylic Acid	●
Acrylonitrile	●
Activated Alumina	●
Activated Carbon	●
Activated Silica	●
Alcohol-Allyl	●
Alcohol-Amyl	●
Alcohol-Benzyl	●
Alcohol-Butyl	●
Alcohol-Ethyl	●
Alcohol-Furfuryl	●
Alcohol-Hexyl	●
Alcohol-Isopropyl	●
Alcohol-Methyl	●
Alcohol-Propyl	●
Alum-Ammonium	●
Alum-Chrome	●
Alum-Potassium	●
Alum-Sodium	●
Alumina	●
Aluminium Acetate	●
Aluminium Bicarbonate	●
Aluminium Bifluoride	●
Aluminium Chloride	●
Aluminium Sulfate	●
Ammonia Anhydrous	✖
Ammonia Solutions	✖
Ammonium Bisulfite	●
Ammonium Borate	●
Ammonium Bromide	●
Ammonium Carbonate	●
Ammonium Chloride	●
Ammonium Chromate	●
Ammonium Fluoride	●
Ammonium Fluorosilicate	●
Ammonium Formate	●
Ammonium Hydroxide	✖
Ammonium Hyposulfite	●
Ammonium Iodide	●
Ammonium Molybdate	●
Ammonium Nitrate	●
Ammonium Oxalate	●
Ammonium Persulfate	●
Ammonium Phosphate	●
Ammonium Picrate	●
Ammonium Sulfate	●
Ammonium Sulfate Scrubber	●
Ammonium Sulfide	●
Ammonium Thiocyanate	●
Amyl Acetate	●
Amyl Amine	●
Amyl Chloride	●
Aniline	●
Aniline Dyes	●
Anodizing Bath	●
Antichlor Solution	●
Antimony Acid Salts	●
Antimony Oxide	●
Antioxidant Gasoline	●
Aqua Regia	✖
Argon	●
Armeen §	●
Arochlor §	●
Aromatic Gasoline	●
Aromatic Solvents	●
Arsenic Acid	●
Asbestos Slurry	●
Ash Slurry	●
Asphalt Emulsions	●
Asphalt Molten	●
Bagasse Fibers	●
Barium Acetate	●
Barium Carbonate	●
Barium Chloride	●
Barium Hydroxide	❑
Barium Sulfate	●
Battery Acid	❑
Battery Diffuser Juice	●
Bauxite (See Alumina)	●
Bentonite	●
Benzaldehyde	●
Benzene	●
Benzene Hexachloride	●
Benzene in Hydrochloric Acid	...
Benzoic Acid	●
Benzotriazole	●
Beryllium Sulfate	●
Bicarbonate Liquor	●
Bilge Lines	●
Bleach Liquor	●
Bleached Pulps	●
Borax § Liquors	●
Boric Acid	●
Brake Fluids	●
Brine Chlorinated	●
Brine (cold)	●
Bromine Solution	†
Butadiene	●
Butyl Acetate	●
Butyl Alcohol	●
Butyl Amine	●
Butyl Cellosolve §	●
Butyl Chloride	●
Butyl Ether (Dry)	●
Butyl Lactate	●
Butyral Resin	●
Butyraldehyde	●
Butyric Acid	●
Cadmium Chloride	●
Cadmium Plating Bath	●
Cadmium Sulfate	●
Calcium Acetate	●
Calcium Bisulfate	●
Calcium Carbonate	●
Calcium Chlorate	●
Calcium Chloride	●
Calcium Chloride Brine	●
Calcium Citrate	●
Calcium Ferrocyanide	●
Calcium Formate	●
Calcium Hydroxide	●
Calcium Lactate	●
Calcium Nitrate	●
Calcium Phosphate	●
Calcium Silicate	●
Calcium Sulfamate	●
Calcium Sulfate	●
Calcium Sulfite	●
Camphor	●
Carbitol	●
Carbolic Acid (phenol)	●
Carbon Bisulfide	●
Carbon Black	●
Carbon Tetrachloride	●
Carbonic Acid	●
Carbowax §	●
Carboxymethyl Cellulose	●
Carnauba Wax	●
Casein	●
Casein Water Paint	●
Celite	●
Cellosolve §	●
Cellulose Pulp	●
Cellulose Xanthate	●
Cement Dry/Air Blown	●
Cement Grout	●
Cement Slurry	●
Ceramic Enamel	●
Ceric Oxide	●
Chalk	●
Chemical Pulp	●
Chestnut Tanning	●
China Clay	●
Chloral Alcoholate	●
Chloramine	●
Chlorinated Hydrocarbons	●
Chlorinated Paperstock	●
Chlorinated Solvents	●
Chlorinated Sulphuric Acids	●
Chlorinated Wax	●
Chlorine Dioxide	✖
Chlorine Liquid	✖
Chlorine (Dry)	✖
Chloroacetic Acid	❑
Chlorobenzene (Dry)	●
Chloroform (Dry)	●
Chloroformate Methyl	●
Chlorosulfonic Acid	✖
Chrome Acid Cleaning	❑
Chrome Liquor	❑
Chrome Plating Bath	❑
Chromic Acid 10%	●
Chromic Acid 50% (cold)	✖
Chromic Acid 50% (hot)	✖
Chromium Acetate	●
Chromium Chloride	●
Chromium Sulfate	●
Classifier	●
Clay	●
Coal Slurry	●
Coal Tar	●
Cobalt Chloride	●
Copper Ammonium Formate	●
Copper Chloride	●
Copper Cyanide	●
Copper Liquor	●
Copper Naphthenate	●
Copper Plating (Acid Process)	●
Copper Plating (Alk. Process)	●
Copper Sulfate	●
Core Oil	●
Corundum	●
Creosote	❑
Creosote-Cresylic Acid	●
Cyanide Solution	●
Cyanuric Chloride	●
Cyclohexane	●
Cylinder Oils	●
De-Ionized Water	●
De-Ionized Water Low Conductivity	●
Detergents	●
Developer, photographic	●
Dextrin	●
Diacetone Alcohol	●
Diammonium Phosphate	●
Diamylamine	●
Diatomaceaus Earth Slurry	●
Diazo Acetate	●
Dibutyl Phthalate	●
Dichlorophenol	●
Dichloro Ethyl Ether	●
Dicyandamide	●
Dielectric Fluid	●
Diester Lubricants	●
Diethyl Ether Dry	❑
Diethyl Sulfate	●
Diethylamine	●
Diethylene Glycol	●
Diglycolic Acid	❑
Dimethyl Formamide	●
Dimethyl Sulfoxide	●
Dioxane Dry	●
Dioxidene	●
Dipentene-Pinene	●
Diphenyl	●
Distilled Water (Industrial)	●
Dowtherm §	●
Drying Oil	●
Dust-Flue (Dry)	●
Dye Liquors	●
Emery-Slurry	●
Emulsified Oils	●
Enamel Frit Slip	●
Esters General	●
Ethyl Acetate	●
Ethyl Alcohol	●
Ethyl Amine	●
Ethyl Bromide	●
Ethyl Cellosolve §	●
Ethyl Cellosolve Slurry §	●
Ethyl Formate	●
Ethyl Silicate	●
Ethylene Diamine	●
Ethylene Dibromide	●
Ethylene Dichloride	●
Ethylene Glycol	●
Ethylenediamine Tetramine	●
Fatty Acids	●
Fatty Acids Amine	●
Fatty Alcohol	●
Ferric-Floc	●
Ferric Chloride	●
Ferric Nitrate	●
Ferric Sulfate	●
Ferrocence-Oil Sol	●
Ferrous Chloride	●
Ferrous Oxalate	●
Ferrous Sulfate10%	●
Ferrous Sulfate (Sat)	●
Fertilizer Sol	●
Flotation Concentrates	●
Fluoride Salts	●
Fluorine, Gaseous or Liquid	●
Fluorolube	●
Fluosilic Acid	●
Flux Soldering	●
Fly Ash Dry	●
Foam Latex Mix	●
Foamite	●
Formaldehyde (cold)	●
Formaldehyde (hot)	†
Formic Acid (Dil cold)	●
Formic Acid (Dil hot)	†
Formic Acid (cold)	●
Formic Acid (hot)	†
Freon §	†
Fuel Oil	●
Fuming Nitric Red	✖
Fuming Sulfuric	✖
Fuming Oleum	✖
Furfural	●
Gallic Acid	☆
Gallium Sulfate	●
Gasoline-Acid Wash	●
Gasoline-Alk. Wash	●
Gasoline Aviation	●
Gasoline Copper Chloride	●
Gasoline Ethyl	●
Gasoline Motor	●
Gasoline Sour	●
Gasoline White	●
Gluconic Acid	●
Glue-Animal Gelatin	●
Glue-Plywood	●
Glutamic Acid	●
Glycerine Lye-Brine	✖
Glycerol	●
Glycine	●
Glycine Hydrochloride	●
Glycol Amine	●
Glycolic Acid	●
Glyoxal	●
Gold Chloride	●
Gold Cyanide	●
Granodine	●
Grape Pomace Graphite	●
Grease Lubricating	●
Green Soap	●
Grinding Lubricant	●
Grit Steel	●
Gritty Water	●
Groundwood Stock	●
GRS Latex	●
Gum Paste	●
Gum Turpentine	●
Gypsum	●
Halane Sol	●
Halogen Tin Plating	●
Halowax §	●
Harvel-Trans Oil	●
Heptane	●
Hexachlorobenzene	●
Hexadiene	●
Hexamethylene Tetramine	●
Hexane	●
Hydrazine	●
Hydrazine Hydrate	●
Hydrobromic Acid	●
Hydrochloric Acid	●
Hydrocyanic Acid	●
Hydroflouric Acid	●
Hydrogen Peroxide (dil)	●
Hydrogen Peroxide (con)	●
Hydroponic Sol	●
Hydroquinone	●
Hydroxyacetic Acid	●
Hypo	●
Hypochlorous Acid	●
Ink	●
Ink in Solvent-Printing	●
Iodine in Alcohol	●
Iodine-Potassium Iodide	●
Iodine Solutions	●
Ion Exchange Service	●
Ion Exclusion Glycol	●
Irish Moss Slurry	●
Iron Ore Taconite	●
Iron Oxide	●
Isobutyl Alcohol	●
Isobutyraldehyde	●
Isooctane	●
Isopropyl Alcohol	●
Isocyanate Resin	●
Isopropyl Acetate	†
Isopropyl Ether	●
Itaconic Acid	●
Jet Fuels	●
Jeweler's Rouge	†
Jig Table Slurry	●
Kaolin-China Clay §	●
Kelp Slurry	●
Kerosene	●
Kerosene Chlorinated	●
Ketone	☆
Lacquer Thinner	●
Lactic Acid	●
Lapping Compound	●
Latex-Natural	●
Latex-Synthetic	●
Latex Synthetic Raw	●
Laundry Wash Water	●
Laundry Bleach	●
Laundry Blue	●
Laundry Soda	●
Lead Arsenate	●
Lead Oxide	●
Lead Sulfate	●
Lignin Extract	●
Lime Slaked	●
Lime Sulfur Mix	●
Liquid Ion Exchange	●
Lithium Chloride	●
LOX (Liquid O_2)	●
Ludox	●
Lye	●
Machine Coating Color	●
Magnesite Slurry	●
Magnesite	●
Magnesium Bisulfite	●
Magnesium Carbonate	●
Magnesium Chloride	●
Magnesium Hydroxide	●
Magnesium Sulfate	●
Maleic Acid	●
Maleic Anhydride	●
Manganese Chloride	●
Manganese Sulfate	●
Melamine Resin	●
Menthol	●
Mercaptans	●
Mercuric Chloride	●
Mercuric Nitrate	●
Mercury	●
Mercury Dry	●
Methane	●
Methyl Alcohol	●
Methyl Acetate	●
Methyl Bromide	●
Methyl Carbitol	●
Methyl Cellosolve §	●
Methyl Chloride	●
Methyl Ethyl Ketone	●
Methyl Isobutyl Ketone	●
Methyl Lactate	●
Methyl Orange	●
Methylamine	●
Methylene Chloride	●
Mineral Spirits	●
Mixed Acid, Nitric/Sulfuric	✖
Monochloracetic Acid	●
Morpholine	●
Mud	●
Nalco Sol.	●
Naphtha	●
Naphthalene	●
Naval Stores Solvent	●
Nematocide	●
Neoprene Emulsion	●
Neoprene Latex	●
Nickel Acetate	●
Nickel Ammonium Sulfate	●
Nickel Chloride	●
Nickel Cyanide	●
Nickel Fluoborate	●
Nickel Ore Fines	●
Nickel Plating Bright	●
Nickel Sulfate	●
Nicotinic Acid	❑
Nitrate Sol.	●
Nitration Acid(s)	✖
Nitric Acid	✖
Nitric Acid10%	❑
Nitric Acid 20%	†
Nitric Acid Anhydrous	✖
Nitric Acid Fuming	✖
Nitro Aryl Sulfonic Acid	●
Nitrobenezene-Dry	●
Nitrocellulose	●
Nitrofurane	●
Nitroguanidine	●
Nitroparaffins-Dry	●
Nitrosyl Chloride	●
Norite Carbon	●
Nuchar	●
Oakite § Compound	●
Oil, Creosote	●
Oil, Emulsified	●
Oil, Fuel	●
Oil, Lubricating	●
Oil, Soluble	●
Oleic Acid (hot)	●
Oleic Acid (cold)	●
Ore Fines-Flotation	●
Ore Pulp	●
Organic Dyes	●
Oxalic Acid (cold)	●
Ozone (wet)	✖
Paint-Linseed Base	●
Paint-Water Base	●
Paint-Remover-Sol. Type	●
Paint-Vehicles	●
Palmitic Acid	●
Paper Board Mill Waste	●
Paper Coating Slurry	●
Paper Pulp	●
Paper Pulp with Amun.	●

FLUID COMPATABILITY CHART

LIQUIDS, SOLUTIONS & SUSPENSIONS

(FOR METAL THREADED FITTINGS SEALED WITH LOCTITE® SEALANTS)

Paper Pulp with Dye	●
Paper Pulp, bleached	●
Paper Pulp, bleached-washed	●
Paper Pulp Chlorinated	●
Paper Groundwood	●
Paper Rag	●
Paper Stocks, Fine	●
Paradichlorobenezene	●
Paraffin Molten	●
Paraffin Oil	●
Paraformaldehyde	●
Pectin Solution Acid	●
Pentachlorethane	●
Pentaerythritol Sol.	●
Perchlorethylene (Dry)	●
Perchloric Acid	❑
Perchloromethyl Mercaptan	●
Permanganic Acid	✖
Persulfuric Acid	✖
Petroleum Ether	●
Petroleum Jelly	●
Phenol Formaldehyde Resins	●
Phenol Sulfonic Acid	●
Phenolic Glue	●
Phloroglucinol	●
Phosphate Ester	●
Phosphatic Sand	●
Phosphoric Acid 85% (hot)	✖
Phosphoric Acid 85% (cold)	†
Phosphoric Acid 50% (hot)	†
Phosphoric Acid 50% (cold)	†
Phosphoric Acid 10% (cold)	●
Phosphoric Acid 10% (hot)	†
Phosphorous Molten	●
Phosphotungstic Acid	●
Photographic Sol.	●
Phthalic Acid	●
Phytate	●
Phytate Salts	●
Pickling Acid, Sulfuric	●
Picric Acid Solutions	●
Pine Oil Finish	●
Plating Sol. as follows:	
Brass Cyanide	●
Bronze-Cyanide	●
Chromium & Cadmium	●
Cyanide	●
Cobalt Acid	●
Copper Acid	●
Copper Alk.	●
Gold Cyanide	●
Iron-Acid	●
Lead-Fluoro	●
Nickel Bright	●
Platinum	●
Silver-Cyanide	●
Tin-Acid	●
Tin Alk. Barrel	●
Zinc Acid	●
Zinc Alk. Cyanide	●
Polyacrylonitrile Slurry	●
Polypentek	●
Polysulfide Liquor	●
Polyvinyl Acetate Slurry	●
Polyvinyl Chloride	●
Porcelain Frit	●
Potash	❑
Potassium Acetate	●
Potassium Alum. Sulfate	●
Potassium Bromide	●
Potassium Carbonate	●
Potassium Chlorate	●
Potassium Chloride Sol.	●
Potassium Chromate	●
Potassium Cyanide Sol.	●
Potassium Dichromate	●
Potassium Ferricyanide	●
Potassium Hydroxide	✖
Potassium Iodide	●
Potassium Nitrate	●
Potassium Perchlorate	●
Potassium Permanganate	●
Potassium Persulfate	●
Potassium Phosphate	●
Potassium Silicate	●
Potassium Sulfate	●
Potassium Xanthate	●
Press Board Waste	●
Propionic Acid	●
Propyl Alcohol	●
Propyl Bromide	●
Propylene Glycol	●
Pumice	●
Pyranol	●
Pyridine	●
Pyrogallic Acid	●
Pyrogen Free Water	●
Pyrole	●
Pyromellitic Acid	●
Quebracho Tannin	●
Rag Stock Bleached	●
Rare Earth Salts	●
Rayon Acid Water	●
Rayon Spin Bath	●
Rayon Spin Bath spent	●
Resorcinol	●
River Water	●
Road Oil	●
Roccal	●
Rosin-Wood	●
Rosin in Alcohol	●
Rosin Size	●
Rubber Latex	●
Safrole	●
Salt Alkaline	●
Salt Electrolytic	●
Salt Refrg.	●
Sand-Air Blown Slurry	●
Sand-Air Phosphatic	●
Sea Coal	●
Sea Water	●
Selenium Chloride	●
Sequestrene	●
Sewage	●
Shellac	●
Shower Water	●
Silica Gel	●
Silica Ground	●
Silicone Tetrachloride	●
Silicone Fluids	●
Silver Cyanide	●
Silver Iodide-Aqu.	●
Silver Nitrate	●
Size Emulsion	●
Skelly Solve E, L	●
Slate to 400 Mesh	●
Soap Lye	✖
Soap Solutions (Stearates)	●
Soap Stone Air Blown	●
Soda Pulp	●
Sodium Acetate	●
Sodium Acid Fluoride	●
Sodium Aluminate	●
Sodium Arsenate	●
Sodium Benzene Sulfonate	●
Sodium Bichromate	●
Sodium Bisulfite	●
Sodium Bromide	●
Sodium Carbonate	●
Sodium Chlorate	●
Sodium Chlorite	●
Sodium Cyanide	●
Sodium Ferricyanide	●
Sodium Formate	●
Sodium Glutamate	●
Sodium Hydrogen Sulfate	●
Sodium Hydrosulfite	●
Sodium Hydrosulfide	●
Sodium Hydrochloride	●
Sodium Hydroxide	✖
Sodium Hydro. 20% (cold)	●
Sodium Hydro. 20% (hot)	†
Sodium Hydro. 50% (cold)	†
Sodium Hydro. 50% (hot)	✖
Sodium Hydro. 70% (cold)	†
Sodium Hydro. 70% (hot)	✖
Sodium Hypochlorite	●
Sodium Lignosulfonate	●
Sodium Metasilicate	●
Sodium Molten	●
Sodium Nitrate	●
Sodium Nitrite-Nitrate	●
Sodium Perborate	●
Sodium Peroxide	✖
Sodium Persulfate	●
Sodium Phosphate-Mono	●
Sodium Phosphate-Tri	●
Sodium Potassium Chloride	●
Sodium Salicylate	●
Sodium Sesquicarbonate	●
Sodium Silicate	●
Sodium Silcofluoride	●
Sodium Stannate	●
Sodium Sulfate	●
Sodium Sulfide	●
Sodium Sulfite	●
Sodium Sulfhydrate	●
Sodium Thiocyanate	●
Sodium Thiosulfate	●
Sodium Tungstate	●
Sodium Xanthate	●
Solox-Denat. Ethanol	●
Soluble Oil	●
Solvent Naphthas	●
Sorbic Acid	●
Sour Gasoline	●
Soybean Sludge-Acid	●
Spensol Solution	●
Stannic Chloride	●
Starch	●
Starch Base	●
Stearic Acid	●
Steep Water	●
Sterilization Steam	●
Stillage Distillers	●
Stoddard Solvent	●
Styrene	●
Styrene Butadiene Latex	●
Sulfamic Acid	●
Sulfan-Sulfuric Anhydride	●
Sulfathiazole	●
Sulfite Liquor	●
Sulfite Stock	●
Sulfonated Oils	●
Sulfones	●
Sulfonic Acids	●
Sulfonyl Chloride	●
Sulfur Slurry	●
Sulfur Solution in Carbon Disulfide	●
Sulphuric Acid 0-7%	†
Sulphuric Acid 7-40%	†
Sulphuric Acid 40-75%	†
Sulphuric Acid 75-95%	✖
Sulphuric Acid 95-100%	✖
Sulphurous Acid	†
Sulfuryl Chloride	●
Surfactants	●
Synthetic Latex	●
Taconite-Fines	●
Talc-Slurry	●
Tankage-Slurry	●
Tannic Acid (cold)	†
Tamin	●
Tar & Tar Oil	●
Tartaric Acid	●
Television Chemicals	●
Tergitol §	●
Terpineol	●
Tetraethyl Lead	●
Tetrahydrofuran	●
Tetranitromethane	●
Textile Dyeing	●
Textile Finishing Oil	●
Textile Printing Oil	●
Thiocyanic Acid	●
Thioglycollic Acid	●
Thionyl Chloride	●
Thiophosphoryl Chloride	●
Thiourea	●
Thorium Nitrate	●
Thymol	●
Tin Tetrachlorida	●
Tinning Sol. DuPont	●
Titania Paper Coating	●
Titanium Oxide Slurry	●
Titanium Oxy Sulfate	●
Titanium Sulfate	●
Titanium Tetrachloride	●
Toluol	●
Toluene	●
p-Toluene Sulfonic Acid	†
Transil Oil	●
Trichloracetic Acid	●
Trichlorethane 1,1,1	●
Trichlorethylene	●
Trichlorethylene-Dry	●
Tricresyl Phosphate	●
Triethanolamine	●
Triethylene Glycol	●
Trioxane	●
Tungstic Acid	●
Turpentine	●
UCON § Lube	●
Udylite Bath-Nickel	●
Undecylenic Acid	●
Unichrome Sol. Alk.	●
Uranium Salts	●
Uranyl Nitrate	●
Uranyl Sulfate	●
Urea Ammonia Liquor	●
Vacuum to 100 Micron	●
Vacuum below 100 Micron	●
Vacuum Oil	●
Vanadium Pentoxide	●
Slurry	●
Varnish	●
Varsol-Naphtha Solv.	●
Versene §	●
Vinyl Acetate Dry or Chloride Monomer	●
Vinyl Chloride Latex Emul	●
Vinyl Resin Slurry	●
Viscose	●
Vortex-Hydroclone	●
Water-Acid – Below pH7	●
Water pH7 to 8	●
Water Alkaline – Over pH8	●
Water Mine Water	●
Water Potable	❖
Water River	●
Water Sandy	●
Water "White" – low pH	●
Water "White" – high pH	●
Wax	●
Wax Chlorinated	●
Wax Emulsions	●
Weed Killer Dibromide	●
Weisberg Sulfate Plating	●
Wood ground pulp	●
Wort Lines	●
X-Ray Developing Bath	●
Xylene	●
Zelan	●
Zeolite Water	●
Zinc Acetate	●
Zinc Bromide	●
Zinc Chloride	●
Zinc Cyanide-Alk.	●
Zinc Fines Slurry	●
Zinc Flux Paste	●
Zinc Galvanizing	●
Zinc Hydrosulfite	●
Zinc Oxide in Water	●
Zinc Oxide in Oil	●
Zinc Sulfate	●
Zincolate	●
Zirconyl Nitrate	●
Zirconyl Sulfate	●

GASES

Acetylene	●
Acid & Alkali Vapors	●
Air	●
Amine	●
Ammonia	●
Butane	●
Butadiene Gas/Liquid	●
Butylene Gas/Liquid	●
By-Product Gas (Dry)	●
Carbon Dioxide	●
Carbon Disulfide	●
Carbon Monoxide	●
Chloride (Dry)	●
Chlorine (Dry)	✖
Chlorine (Wet)	✖
Coke-Oven Gas (Cold)	●
Coke-Oven Gas (Hot)	†
Cyanogen Chloride	●
Cyanogen Gas	●
Ethane	●
Ether-see Diethyl Ether	●
Ethylene	●
Ethylene Oxide	●
Freon § (11-12-21-22)	†
Furnace Gas (Cold)	†
Furnace Gas (Hot)	●
Gas Drip Oil	●
Gas Flue	●
Gas Manufacturing	●
Gas Natural	●
Helium	●
Hydrogen Gas – Cold	●
Hydrogen Chloride	●
Hydrogen Cyanide	●
Hydrogen Sulfide – Wet & Dry	●
Isobutane	●
Methane	●
Methyl Chloride	●
Natural Gas – Dry	●
Nitrogen Gas	●
Nitrous Oxide	●
Oil-Solvent Vapor	●
Oxygen	✖
Ozone	✖
Producer Gas 50 PSI	●
Propane	●
Propylene	●
Steam High Pressure (≤ 70 psi)	✖
Steam Low Pressure (≤ 70 psi)	●
Sulfur Dioxide	●
Sulfur Dioxide Dry	●
Sulfur Trioxide Gas	✖
Sulfuric Acid Vapor	●

NOTE: 1. The above information does not constitute a recommendation of sealant use. It is intended only as a guide for consideration by the purchaser with the expectation of favorable confirming test results. It is impossible to test sealant reaction with the multitude of chemicals in existence, therefore, compatibility has been estimated based on a wide variety of customer experience.

2. With the stringent action of such chemicals as Freon §, strong cold acids and caustics, thorough evaluation is suggested. Sealing of hot corrosive chemicals is not recommended.

3. Contact Henkel Corporation for use with chemicals not covered by this information.

§ Listing(s) may be Brand Name(s) or Trademarks for chemicals of Corporations other than Henkel. Freon is a reg. trademark of E.I. DuPont de Numours, Co., Inc.

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(This is a list of chemical stability only. It does not constitute approval for use in the processing of foods, drugs, cosmetics, pharmaceuticals, and ingestible chemicals.)

Loctite® sealants are not recommended for use in pure oxygen or chlorine environments or in conjunction with strong oxidising agents, an explosive reaction can result.

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