



LOCTITE[®]

**LOCTITE[®]
PRODUCTS AT
WORK IN FOOD
AND BEVERAGE
PLANTS**

Henkel

LOCTITE® PRODUCTS AT WORK IN FOOD AND BEVERAGE PLANTS

LOCTITE® Solutions Above and Below the Food Line

PROVEN SOLUTIONS FOR FOOD AND BEVERAGE PLANTS

For decades, food and beverage processors have relied upon high-performance LOCTITE® products from Henkel Corporation to solve daily maintenance challenges. At Henkel, we know the food and beverage industry and understand your maintenance challenges – both above and below the conveyor line.

Our cutting-edge products offer a comprehensive breadth of the most relevant agency approvals and certifications.

Through close collaboration with our customers, we help to improve quality, reduce operating costs, and improve their ability to compete in today's demanding production environment.

LOCTITE® MAINTENANCE PRODUCTS ARE PROVEN TO:

- Extend processing equipment life
- Increase line efficiency
- Improve operator safety
- Improve product quality
- Improve plant hygiene
- Reduce operating costs

For more information about these products and the full line of high-quality LOCTITE® products for maintenance throughout your facility, visit www.henkel-adhesives.com/mro.

FDA 21 C.F.R. §175.300

Complies with the Federal Food, Drug and Cosmetic Act and all applicable food additive regulations.

Applications: Threadlocking hardware on fluid-filler valves, mixer assemblies and conveyor systems



NSF H1

Acceptable as a lubricant with incidental food contact.

Applications: Cleaning and lubricating conveyor components and process critical pumps and gearboxes



NSF / ANSI 51

Meets the standard set for use in the manufacture of food equipment.

Applications: Gasketing and sealing



NSF / ANSI 61

Meets the standard to be used in areas affecting drinking water.

Applications: Threadlocking, thread sealing, gasketing, retaining, repair, wear coating and general bonding



NSF NON-FOOD COMPOUNDS

Can be used in or around food processing areas, with no intended or expected direct food contact.

Applications: Threadlocking, gasketing, lubrication and sealing applications on plant equipment with no direct food contact



FDA 21 C.F.R. §175.300

THE ONLY THREADLOCKER COMPLIANT WITH FDA FOOD ADDITIVE REGULATIONS.

LOCTITE® 2046™ REMOVABLE THREADLOCKER

In today's high speed fluid filling lines, loose fluid filler valve head cover bolts can cause product damage, unscheduled line shutdowns, and even product contamination. Prevent these costly events and ensure your food products quality with LOCTITE® 2046™

Other applications: • Mixers and blenders • Deep fryers • Conveyor and Systems

LOCTITE® 2046™ Threadlocker may be used as a strengthening or coupling agent for joints on food processing equipment that may contact all types of food. In full compliance with the Federal Food, Drug and Cosmetic Act, and all applicable food additive regulations, including 20 C.F.R. §175.300

FEATURE AND BENEFITS

- Secures threaded fasteners and prevents growth of bacteria within the threads
- Suitable for use on food equipment
- Removable strength for easy service
- Prevents galling and seizing
- Primerless for stainless steel applications
- Withstands temperature up to 450°F (232°C)
- Endure daily wash-downs



LOCTITE® PRODUCT NAME	ITEM NUMBER	PACKAGE TYPE / SIZE	QUANTITY PER CASE	COLOR	CHEMICAL TYPE	BREAKAWAY/PREVAIL TORQUE IN./LBS.	TEMPERATURE RANGE
2046™ Threadlocker	1186840	0.40 L. oz. (12 ml)	6 dual-cartridge syringes and 3 mixing tips per syringe	Blue (mixed)	Two-part anaerobic adhesive	111 / 63	450°F (232°C)

LOCTITE® PRODUCTS AT WORK IN FOOD AND BEVERAGE PLANTS

NSF H1

LOCTITE® LB 8014™ FOOD GRADE ANTI-SEIZE

METAL-FREE formulation prevents seizure, galling, and friction in stainless steel and other metal parts up to 750°F (400°C). White in color.



LOCTITE® LB 8104™ FOOD GRADE GREASE

Extreme pressure grease with temperature resistance to 450°F (232°C). NLGI Grade 2 rated. Protects after flush-outs and steam cleaning.



LOCTITE® LB 8304™ HIGH PERFORMANCE SYNTHETIC GREASE

NLGI Grade 2/severe duty GC/LB grease provides superior protection for equipment exposed to a wide range of operating temperatures and environments. Use as a lubricant and protective anti-rust film on bearings, machine parts or equipment, or as a release agent on gaskets and seals.



LOCTITE® LB 8632™ HIGH PERFORMANCE SYNTHETIC GREASE - CLEAR

Lasts four times longer than petroleum-based lubricants. Withstands temperatures up to 420°F (216°C) continuous or 520°F (271°C) intermittent. Contains PTFE for added protection against friction and wear. Nonflammable. Contains no ozone-depleting compounds. NLGI Grade 2 grease. Opaque white in color.



LOCTITE® PRODUCT NAME	ITEM NUMBER	PACKAGE TYPE / SIZE	TEMPERATURE RESISTANCE
LB 8014™ Food Grade Anti-Seize	1228666	2 oz. tube	750°F (400°C)
	1167237	8 oz. brush-top can	
	1169241	2 lb. can	
	1170163	40 lb. pail	
LB 8104™ Food Grade Grease	209754	14.5 oz. cartridge	450°F (232°C)
LB 8632™ High Performance Synthetic Grease - Clear	675961	3 oz. tube	420°F (216°C) continuous 520°F (271°C) intermittent
	675962	400 g cartridge	
LB 8304™ High Performance Synthetic Grease	457456	3 oz. tube	400°F (204°C) continuous 500°F (260°C) intermittent
	457457	14 oz. cartridge	
	457458	400 g can	
	459782	30 lb. pail	
	518546	120 lb. drum	

NSF / ANSI 51 – Food Equipment Materials

LOCTITE® RTV SILICONE ADHESIVE SEALANT - CLEAR

General-purpose, one-part silicone adhesive sealant cures at room temperature to form a tough rubber seal. Will not slump in overhead or vertical applications. Formulated to withstand extreme temperature cycling, UV light and ozone. Cannot be painted.



LOCTITE® PRODUCT NAME	ITEM NUMBER	PACKAGE TYPE / SIZE	TEMPERATURE RANGE
RTV Silicone Adhesive Sealant - Clear	193999	300 ml cartridge	-65°F TO 450°F (54°C - 232°C)

NSF / ANSI 61 – Drinking Water System Components

LOCTITE® 242® THREADLOCKER

Medium Strength – Removable strength, general-purpose threadlocking adhesive well suited for fasteners between ¼" to ¾" diameter (6 mm to 20 mm). Applied to threaded components before assembly, LOCTITE® 242® Threadlocker has controlled lubricity for accurate clamp loads. Parts can be separated using hand tools.



LOCTITE® 243™ THREADLOCKER

Medium Strength / Oil Resistant – A general purpose, medium strength threadlocker with improved oil tolerance. Suitable for ¼" to ¾" diameter (6 mm to 20 mm) fasteners. Removable with hand tools.



LOCTITE® 263™ THREADLOCKER

High Strength – Primerless liquid threadlocker that reliably locks and seals metal fasteners up to 1". Engineered to cure consistently on a variety of metals, despite minor surface contaminants. Works on steel, stainless steel and most plated fasteners. Heat required for removal.



LOCTITE® 290™ THREADLOCKER

Medium Strength / Green – A low viscosity, medium strength threadlocker for pre-assembled bolts up to ½" (12 mm) to secure them in place. Seals porosities in welds and metal parts. Secures set screws and other assemblies after settings are completed. Seals welds and porous metal parts. Protects threads from rust and corrosion. Localized heating and hand tools are needed for disassembly.



LOCTITE® 480™ INSTANT ADHESIVE

Low viscosity, elastomer-modified instant adhesive. Bonds metals and rubbers. Excellent peel, impact and shear strength. NSF/ANSI 61 certified for potable water.



LOCTITE® 518™ FLANGE SEALANT

Forms a flexible, solvent-resistant seal that will not tear or decay. Seals to 300°F (149°C) and fills gaps to 0.050" (1.27 mm). Can be used on flexible metal assemblies, including aluminum surfaces. Easy disassembly and cleaning. Ideal for on-the-spot and emergency repairs, or when a conventional gasket is out of stock.



LOCTITE® 561™ PIPE SEALANT STICK

Semisolid stick form is convenient, portable and less messy. Formulated for fast, reliable curing on metal, tapered pipe threads and fittings. Provides high pressure sealing and withstands continuous operating temperatures of -65°F to 300°F (-54°C to 150°C).



LOCTITE® 565™ THREAD SEALANT

Controlled Strength – Formulated specifically for metal tapered pipe thread fittings, this product cures rapidly to provide immediate low pressure sealing. Controlled lubricity prevents galling and protects from rust and corrosion. Can be used on fittings up to 2" (50 mm) in diameter.



LOCTITE® PRODUCTS AT WORK IN FOOD AND BEVERAGE PLANTS

LOCTITE® 567™ THREAD SEALANT

High Temperature – This product has excellent solvent resistance, allows easy assembly, prevents galling and can withstand temperatures up to 400°F (204°C). Excellent for high pressure applications: locks and seals tapered metal, pipe threads and fittings. Ideal for stainless steel, aluminum, galvanized metal and other inert metals. Disassembles with hand tools.



LOCTITE® 648™ RETAINING COMPOUND

Press Fit / High Strength – Best performance for clearance or interference fit parts. Excellent performance for dynamic, axial and radial loads. Bonds through contaminants including oils, cutting and corrosion protection fluids. Primerless cure.



LOCTITE® 680™ RETAINING COMPOUND

Slip Fit / High Strength – A high strength, high viscosity, room temperature curing adhesive used to join fitted cylindrical parts. It fixtures in 10 minutes and provides a shear strength of 4,000 psi after 24 hours. Capable of filling diametral gaps up to 0.015" (0.27 mm). LOCTITE® 680™ allows relaxed machining tolerances and replaces clamp rings, set screws and snap rings.



LOCTITE® AA H3101™ STRUCTURAL ADHESIVE

2-part, highly thixotropic, room temperature curing, 1:1 mix ratio, methacrylate adhesive system. It is formulated to provide fixturing strength within 20 – 25 min, requiring little or no surface preparation. This adhesive forms resilient bonds and maintains its strength over a wide range of temperatures.



LOCTITE® EA 3463™ METAL MAGIC STEEL™

Steel epoxy in stick form. Cut off a section, knead and apply to leaking pipes or damaged equipment. Cures in 10 minutes.



LOCTITE® SF 7649™ PRIMER

For use with threadlockers, thread sealants and retaining compounds. Activate inactive surfaces. Speed cure times for faster return to service. Speed curing through larger gaps and deep threads. Substantially speed cure times on cold parts.



LOCTITE® PC 7227™ NORDBAK® BRUSHABLE CERAMIC – GREY

Brushes on to form a smooth, corrosion-resistant coating. Protects against turbulence, abrasion and cavitation. Resists temperatures up to 200°F (93°C).



TIP:

Primer is optional with: Active surfaces – brass, copper, bronze, iron, soft steel.

Primer is required with: Inactive surfaces – aluminum, stainless steel, magnesium, zinc, black oxide, cadmium, titanium, nickel, others.

NSF / ANSI 61 – Drinking Water System Components

LOCTITE® PRODUCT NAME	ITEM NUMBER†	PACKAGE TYPE / SIZE	COLOR	TYPICAL USE	VISCOSITY (cP)	TORQUE IN./ LBS. (M10 STEEL NUTS & BOLTS) BREAK/ PREVAIL	TEMPERATURE RANGE
242™ Threadlocker	135356 209729	250 ml bottle 1 liter bottle	Blue	For ¼" to ¾" (6 mm to 20 mm) bolts	1,200 / 5,000 Thixotropic	110 / 43*	-65°F to 300°F (-54°C to 150°C)
243™ Threadlocker	1329505 1330333	250 ml bottle 1 liter bottle	Blue	For ¼" to ¾" (6 mm to 20 mm) bolts with light oil contamination	1,300 / 3,000 Thixotropic	230 / 40	-65°F to 360°F (-54°C to 182°C)
263™ Threadlocker	1330335 1330334	250 ml bottle 1 liter bottle	Red	For bolts up to ¾" (20 mm) with light oil contamination	400 / 600	275 / 290	-65°F to 360°F (-54°C to 182°C)
290™ Threadlocker	135393 209745	250 ml bottle 1 liter bottle	Green	Wicking grade for pre-assembled parts	25 / 55	90 / 260	-65°F to 300°F (-54°C to 150°C)

LOCTITE® PRODUCT NAME	ITEM NUMBER†	PACKAGE TYPE / SIZE	COLOR	TYPICAL USE	VISCOSITY (cP)	SHEAR STRENGTH PSI (GRIT BLASTED STEEL)	TEMPERATURE RANGE
480™ Instant Adhesive	135466 234048	20 g bottle 1 lb. bottle	Black	Instant bonding with high impact and peel strength	200	3,800	-65°F to 180°F (-54°C to 82°C)
AA H3101™ Structural Adhesive	2018435 2018429	50 ml cartridge 400 ml cartridge	Cream	Structural bonding over a wide range of substrates and temperatures	75,000	2,510	N/A
648™ Retaining Compound	1835918 1835917	250 ml bottle 1 liter bottle	Green	High strength for close-fitting parts with light oil contamination	500	3,900	-65°F to 355°F (-54°C to 180°C)
680™ Retaining Compound	1835196 1835206	250 ml bottle 1 liter bottle	Green	High strength for slip-fitted parts with light oil contamination	1,250	4,000	-65°F to 355°F (-54°C to 180°C)

LOCTITE® PRODUCT NAME	ITEM NUMBER†	PACKAGE TYPE / SIZE	COLOR	TYPICAL USE	VISCOSITY (cP)	PRESSURE RESISTANCE (PSI)	TEMPERATURE RANGE
518™ Flange Sealant	135482	300 ml cartridge	Red	For all metals, including aluminum flanges	800,000 / 3,750,000 Thixotropic	N/A	-65°F to 300°F (-54°C to 150°C)
561™ Pipe Sealant with PTFE Stick	463973	19 g stick	White	General purpose, portable, for overhead use	Semisolid	10,000	-65°F to 300°F (-54°C to 150°C)
565™ Thread Sealant	88552 234448	250 ml tube 1 liter bottle	White	Controlled strength for tapered fittings	300,000	10,000	-65°F to 300°F (-54°C to 150°C)
567™ Thread Sealant	234458 234469	250 ml tube 1 liter bottle	White	For stainless steel and all other metal fittings	540,000	10,000	-65°F to 300°F (-54°C to 150°C)
7649™ Primer	135286 209715 135284	1.75 fl. oz. bottle 4.5 oz. aerosol can 1 gallon can	Clear / Green	Use with non-primerless threadlockers, thread sealants, retaining compounds	2	N/A	N/A

LOCTITE® PRODUCT NAME	ITEM NUMBER†	PACKAGE TYPE / SIZE	COLOR	TYPICAL USE	SHORE HARDNESS	COMPRESSIVE STRENGTH (PSI)	TEMPERATURE RANGE
EA 3463™ Metal Magic Steel™	209681	4 oz. stick	Grey	Kneadable metal epoxy	D 80	12,000	Max Temp 250°F (121°C)
PC 7227™ Nordbak® Brushable Ceramic - Grey	209826 209825	2 lb. kit 6 lb. kit	Grey	Wear resistant, low friction coating	D 85	10,180	Max Temp 200°F (93°C)

* ⅜ x 16" steel fasteners

† Additional package sizes available

LOCTITE® PRODUCTS AT WORK IN FOOD AND BEVERAGE PLANTS

NSF NON-FOOD COMPOUNDS

LOCTITE® 222MS™ THREADLOCKER

Low Strength / Small Screw / Purple – Ideal for fastener diameters of ¼" (6 mm) and smaller; long engagement length fasteners; an components requiring occasional adjustment. Apply to threaded parts before assembly. Controlled lubricity for accurate clamp loads. Parts can be disassembled with hand tools.



LOCTITE® 242® THREADLOCKER

Medium Strength – Removable strength, general-purpose threadlocking adhesive well suited for fasteners between ¼" to ¾" diameter (6 mm to 20 mm). Applied to threaded components before assembly, LOCTITE® 242® Threadlocker has controlled lubricity for accurate clamp loads. Parts can be separated using hand tools.



LOCTITE® 262™ THREADLOCKER

Medium to High Strength – A permanent, medium to high strength product that is applied to fasteners up to ¾" (20 mm) in diameter before assembly. High lubrication for easy assembly. Excellent for preventing rust and corrosion in extreme chemical/environmental conditions. Localized heat and hand tools are required to separate parts. Solvents will not weaken the adhesive bond.



LOCTITE® 290™ THREADLOCKER

Medium Strength / Green – A low viscosity, medium strength threadlocker for pre-assembled bolts up to ½" (12 mm) to secure them in place. Seals porosities in welds and metal parts. Secures set screws and other assemblies after settings are completed. Seals welds and porous metal parts. Protects threads from rust and corrosion. Localized heating and hand tools are needed for disassembly.



LOCTITE® 638™ RETAINING COMPOUND

Slip Fit / High Strength – Recommended for slip fit parts with larger gaps. Excellent performance for dynamic, axial and radial loads. Bonds through contaminants including oils, cutting and corrosion protection fluids. Primerless cure.



LOCTITE® SI 5900® FLANGE SEALANT

Heavy Body RTV Silicone – Superior flexibility and adhesion. Provides instant seal. Excellent fluid resistance. Noncorrosive, low odor, low volatility. Black in color.



LOCTITE® SI 587™ BLUE HIGH PERFORMANCE RTV SILICONE GASKET MAKER

Forms tough, flexible gaskets directly on the flange. Offers excellent adhesion to oily surfaces. Low odor, noncorrosive, low volatility. Withstands temperatures to 500°F (260°C) intermittent. Resistant to most chemicals and solvents. Fills gaps to 0.25" (6.35 mm).



LOCTITE® SF 7070™ ODC-FREE CLEANER & DEGREASER (NAPHTHA)

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



NSF NON-FOOD COMPOUNDS

LOCTITE® SF 7649™ PRIMER

For use with threadlockers, thread sealants and retaining compounds. Activate inactive surfaces. Speed cure times for faster return to service. Speed curing through larger gaps and deep threads. Substantially speed cure times on cold parts.



TIP:

Primer is optional with: Active surfaces – brass, copper, bronze, iron, soft steel.

Primer is required with: Inactive surfaces – aluminum, stainless steel, magnesium, zinc, black oxide, cadmium, titanium, nickel, others.

LOCTITE® PRODUCT NAME	ITEM NUMBER‡	PACKAGE TYPE / SIZE	COLOR	TYPICAL USE	VISCOSITY (cP)	TORQUE IN./LBS. (3/8" X 16 FASTENERS) BREAK/PREVAIL	TEMPERATURE RANGE
222MS™ Threadlocker	135333	10 ml bottle	Purple	Small screws under 1/4" (6 mm)	1,200 / 5,000 Thixotropic	53 / 30	-65°F to 300°F (-54°C to 150°C)
242® Threadlocker	135356 209729	250 ml bottle 1 liter bottle	Blue	For 1/4" to 3/4" (6 mm to 20 mm) bolts	1,200 / 5,000 Thixotropic	110 / 43	-65°F to 300°F (-54°C to 150°C)
262™ Threadlocker	135374 135375 231928	50 ml bottle 250 ml bottle 1 liter bottle	Red	High strength for bolts up to 3/4" (20 mm)	1,800 / 5,000 Thixotropic	189 / 275	-65°F to 300°F (-54°C to 150°C)
290™ Threadlocker	135393 209745	250 ml bottle 1 liter bottle	Green	Wicking grade for pre-assembled parts	25 / 55	90 / 260*	-65°F to 300°F (-54°C to 150°C)

LOCTITE® PRODUCT NAME	ITEM NUMBER‡	PACKAGE TYPE / SIZE	COLOR	TYPICAL USE	VISCOSITY (cP)	SHEAR STRENGTH PSI (GRIT BLASTED STEEL)	TEMPERATURE RANGE
638™ Retaining Compound	1835925 1835924	250 ml bottle 1 liter bottle	Green	High strength for slip-fitted parts with light oil contamination	2,500	4,500	-65°F to 355°F (-54°C to 180°C)

LOCTITE® PRODUCT NAME	ITEM NUMBER‡	PACKAGE TYPE / SIZE	COLOR	TYPICAL USE	GAP FILL	CURE SPEED	TEMPERATURE RANGE
SI 587™ Blue High Performance RTV Silicone Gasket Maker	234590	300 ml cartridge	Blue	Forms tough, flexible gaskets; increased oil tolerance	0.250" (6.35 mm)	Tack-Free: 30 min. Full Cure: 24 hrs.	-75°F to 500°F (-59°C to 260°C)
SI 5900® Flange Sealant	212184	300 ml cartridge	Black	High adhesion, instant seal; increased oil resistance	0.250" (6.35 mm)	Tack-Free: 20 min. Full Cure: 24 hrs.	-65°F to 500°F (-54°C to 260°C)
SF 7649™ Primer	135286 209715 135284	1.75 fl. oz. bottle 4.5 oz. aerosol can 1 gallon can	Clear / Green	Use with non-primerless threadlockers, thread sealants, retaining compounds	N/A	N/A	N/A
SF 7070™ ODC-Free Cleaner & Degreaser	231562 135310	15 oz. aerosol can 16 fl. oz. pump spray	Clear	Cleaning and degreasing surfaces to be bonded with adhesives	N/A	N/A	N/A

* M10 steel fasteners

‡ Additional package sizes available

LOCTITE® PRODUCTS AT WORK IN FOOD AND BEVERAGE PLANTS

Proven Results: Documented Cost Savings

LOCTITE® 2046™ Food Grade Threadlocker

SITUATION

A Food Processing company had their equipment shut down because they were using PTFE Tape on their equipment. This tape could find its way into their food!

COST

\$254,280 in unplanned/unscheduled Downtime, due to equipment being shutdown.

LOCTITE SOLUTION

LOCTITE® 2046™ Removable Threadlocker is the ONLY Threadlocker compliant with FDA Food Additive Regulations.



LOCTITE® 567™ Threadlocker

SITUATION

A food and beverage company was using Teflon Tape on their steam lines and were seeing high temperature steam leaks which was costing them money to repair each time. They needed a solution to completely seal with stainless steel and would work in high temperatures.

CUSTOMER REQUIREMENTS

- High Temperature
- Ease of Disassembly
- Vibration Resistance

LOCTITE SOLUTION

They used LOCTITE® 567™ and saw prevention of high temperature steam leaks, leading to reduced maintenance and energy costs.



Reliability starts here. . .

At Henkel Corporation, we invent more than just quality LOCTITE® brand products – we provide solutions to industries' biggest challenges. We are dedicated to earning and keeping the trust of our customers. Together, with your skilled tradesmen and operators, at the base component level during installation, repair and rebuild, Henkel can help increase the reliability of the valuable equipment in your plant.

The LOCTITE® Maintenance Workshop

This hands-on training program not only identifies problems in your plant, but also teaches the mechanical basics and failure fundamentals to help empower your people with the proper tools and skills required to make your operations more efficient.

LEARN HOW THE LATEST LOCTITE® BRAND MRO PRODUCT SOLUTIONS CAN:

- Increase equipment reliability
- Reduce routine and redundant maintenance tasks
- Improve safety
- Reduce energy costs
- Reduce fluid consumption
- Reduce scrap
- Reduce inventory costs
- Increase productivity/uptime/OEE

Contact your local LOCTITE® product specialist to schedule a workshop.

In the US: 800.562.8483

In Canada: 800.263.5043

or visit us on the web at www.henkel-adhesives.com/mro



Henkel Corporation
Engineering Adhesives
www.henkel-adhesives.com/mro
www.loctite.com

U.S.A.
Henkel Corporation
Engineering Adhesives
One Henkel Way
Rocky Hill, Connecticut 06067
Tel: 1.800.LOCTITE (562.8483)
Tel: 860.571.5100
Fax: 860.571.5465

Canada
Henkel Canada Corporation
Engineering Adhesives
2515 Meadowpine Blvd.
Mississauga, Ontario L5N 6C3
Tel: 1.800.263.5043 (within Canada)
Tel: 905.814.6511
Fax: 905.814.5391