

THE **ADHESIVE MAINTENANCE**GUIDE

BEYOND THE BOND

Expert solutions to all bonding, sealing and cleaning challenges.



LOCTITE® BEYOND THE BOND

Starting with reliable top-performance adhesive solutions, we are your partner in identifying best ways of working, sharing our expertise from across multiple industries to help optimize your maintenance processes, driving innovation and sustainable growth.

SOLUTIONS FOR MAINTENANCE **EXPERTS**



At Henkel, we understand the challenges you face in maintaining and repairing industrial equipment. To make sure your operations run smoothly, you need the right people - and the right tools.

LOCTITE® offers maintenance experts solutions for all bonding. sealing, cleaning and lubricating tasks. Whatever your task is - you make it work with LOCTITE®.

MAKING THE RIGHT CHOICE

This Maintenance Expert Guide has been developed to make your product selection quick, easy and right at the first time. It covers the most relevant products you need in your everyday maintenance work.

- Search by product category or by task
- Get useful application hints in the "How to apply" sections

To discover our full product portfolio visit https://next.henkel-adhesives.com/uk/en.html or contact your Henkel Engineer.

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PROTECT EQUIPMENT AGAINST ABRASION AND CORROSION



PROTECTIVE COATINGS AND COMPOUNDS



REMOVE OIL, GREASE AND DIRT



CLEANERS



PREVENT SEIZING AND CORROSION OF MOVING PARTS





LUBRICANTS



PROTECT SURFACES AGAINST EXTERNAL INFLUENCES





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EMERGENCY REPAIR PRODUCTS



EASY AND ACCURATE ADHESIVE DISPENSING

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EQUIPMENT

PRODUCT APPROVALS

Within certain industries, product approvals are required and have to be considered for product selection. Some of the most important approvals are:

Available approvals are listed for each product on the respective pages.

For further details please visit www. LOCTITE.com or contact your Henkel Technical Service Team.

- WRAS Potable water approval, United Kingdom
- KTW Potable water approval, Germany
- DVGW Gas approval, Germany
- NSF Food and potable water approvals, United States
- VDI 6022 Anti-fungus approval, Germany







LOCTITE® MAINTENANCE HEROES



Loose threads, leaking pipes - many repair tasks occur unexpectedly. Be prepared - with our LOCTITE® Maintenance Heroes; products every maintenance expert should have at hand.



LOCTITE® 243

- Medium strength threadlocker
- Oil tolerant



LOCTITE® 55

- Thread sealing cord
- Allow reliable re-adjustments



LOCTITE® SI 5980

- Ready-to-use flange sealant
- Oil resistant



LOCTITE® 3090

- Gap filling instant adhesive
- Bonds variety of substrates



LOCTITE® 401

- General purpose instant adhesive
- Excellent adhesion on multiple substrates



LOCTITE® EA 3463

- Steel-filled kneedable stick
- Ideal for emergency sealing of tanks and pipes



LOCTITE® SF 7063

- Parts cleaner
- Degrease and clean surfaces prior to bonding



LOCTITE® LB 8201

Multi-purpose oil



LOCTITE® LB 8150

- Aluminium anti-seize
- Protect against seizing and corrosion

HEALTH & **SAFETY** PRODUCTS



Henkel's Health & Safety products improve your safety at work while ensuring exceptional performance.



ANAEROBIC PRODUCTS

- White SDS*
- No hazard symbols, risk or safety phrases
- Proven performance

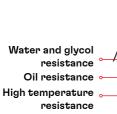


INSTANT ADHESIVES

- No Health & Safety related risk phrases in the SDS
- Classified as non-irritant
- · Low odour, low bloom
- Improved product performance

^{*}No entries in section 2, 3, 15 & 16 of Material Safety Data Sheet acc. to (EC) No. 1907/2006 - ISO 11014-1.







GASKETING PRODUCTS

- No hazard symbols
- Low odour

HEAVY-DUTY MAINTENANCE CLEANERS

- No or limited hazardous substances
- Low toxicity to water organisms and biodegradable surfactants
- Low volatile organic substances (VOC)

Fountain cleaning	BONDERITE C-MC 1030
Floor cleaning	BONDERITE C-MC 80
High pressure cleaning	BONDERITE C-MC 3000
Spray cleaning	BONDERITE C-MC 352
Hand cleaning	LOCTITE SF 7850

THREADLOCKING ADHESIVES

WHAT STRENGTH DO YOU REQUIRE?



Size of thread (up to) M36

Service temperature range (°C) -55 to +150

Approvals P1 NSF

Comments

- Good when low disassembly torque is required
- Slow curing longer adjustment time

TECHNOLOGY BENEFITS

- Resist vibration loosening
- Threads are completely sealed eliminating fretting corrosion
- Clean and easy to apply
- Replace mechanical threadlocking devices lower costs and inventory



MEDIUM HIGH LOCTITE' 248 STICK LOCTITE' 243 LOCTITE" 270 The Allrounder **Non Dripping** Permanent Locking M36 M50 M20 -55 to +180 -55 to +150 -55 to +180 P1 NSF P1 NSF General purpose Easy-to-use stick For permanent

For overhead

applications

Good performance

Oil tolerant

also on passive metals

locking if regular

maintenance is not

removal for

required

THREADLOCKING ADHESIVES

HOW TO APPLY LOCTITE® 222, 243, 248, 270

PREPARATION

CLEANING

It is recommended to use LOCTITE® SF 7063 to degrease and clean surfaces prior to applying the adhesive.



If cure speed is too slow due to passive metals or low temperature (below 5 °C), use activator LOCTITE® SF 7240 or LOCTITE® SF 7649 (see cure speed vs. activator graph in the TDS).





APPLICATION

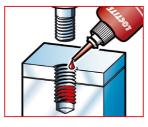
A LOCTITE® 222, 243, 270

Apply liquid threadlocker on the targeted area.



Through hole:

Assemble bolt first and then apply threadlocker.



Blind hole:

Apply into lower third of blind hole.



Post assembly:

Assemble nut and bolt and dispense product at the edge of nut and bolt.

EQUIPMENT

Recommended dispensing equipment: IDH 608966, IDH 88631 or IDH 2564842 (see chapter Equipment).

APPLICATION

B LOCTITE® 248

Apply threadlocker on the targeted area.



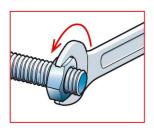


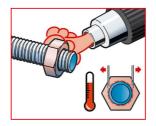
- Twist stick to the amount required
- Apply sufficient product around the thread of the bolt

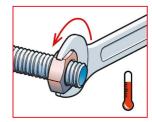
ASSEMBLY

- Assemble and tighten
- If several bolts are pre-tightened first, fully tighten them within the fixture time of the product or use a slow curing product

DISASSEMBLY







- Disassemble with standard hand tools
- If not possible, apply localised heat to approximately 250 °C, dissasemble while hot
- For corroded or seized parts use LOCTITE® LB 8040 Freeze & Release

For detailed information, please refer to the Technical Datasheet or contact your Henkel Technical Service Team.

THREAD SEALANTS

ARE THE THREADS / PIPES METAL OR PLASTIC?

SOLUTION

LOCTITE® 55

Thread Sealing Cord

Max. pipe size (inch)

Service temperature range (°C)

-55 to +149

Approvals
Comments

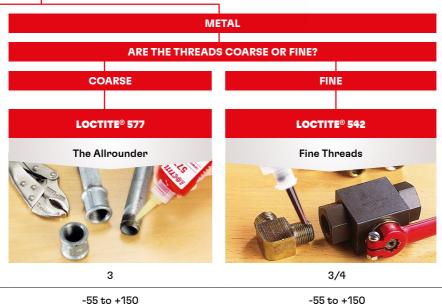
- DVGW, KTW, WRAS, KIWA GASTEC QA AR 214
 - Immediate full pressure sealing
 - Allows reliable re-adjustments

TECHNOLOGY BENEFITS

- Prevent leakage of gases and liquids
- · Resist vibration and shock loads
- Clean and easy to apply
- · Replace all tapes and hemp & paste
- Hydrogen approval
- 16 | Maintenance Pocket Guide







- General purpose
- For overhead applications

P1 NSF, DVGW

Slow curing

- For fine threads in hydraulic,
- pneumatic and general fittings

DVGW

Fast curing

THREADLOCKING SEALANTS

HOW TO APPLY LOCTITE® 577, 542

PREPARATION

CLEANING

It is recommended to use LOCTITE® SF 7063 to degrease and clean surfaces prior to applying the adhesive.

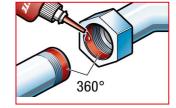


ACTIVATION

If cure speed is too slow due to passive metals or low temperature (below 5 °C), use activator LOCTITE® SF 7240 or LOCTITE® SF 7649 (see cure speed vs. activator graph in TDS).

APPLICATION

- Apply a 360° bead to the leading male thread, leaving the first thread free
- · For bigger threads, apply both on male and female thread



EQUIPMENT

Recommended dispensing equipment: IDH 608966 or IDH 88631 (see chapter Equipment).

ASSEMBLY

Assemble fittings using wrench tightening in accordance to manufacturers' recommendations.

DISASSEMBLY

- Disassemble with standard hand tools. If not possible, apply localised heat to approximately 250 °C, disassemble while hot
- For corroded or seized parts use LOCTITE® LB 8040 Freeze & Release

HOW TO APPLY LOCTITE® 55

PREPARATION

Clean threads if necessary and roughen smooth threads.



APPLICATION

- · Wind the cord onto the pipe thread in the same direction as the thread, starting from the end of the pipe. For recommended number of wraps, see label. For optimized performance apply criss-cross
- Cut off the cord with the integrated cutting tool at the top of the tube



ASSEMBLY

- Assemble using accepted trade practices
- Adjustment of 45° is possible after tightening



For detailed information, please refer to the Technical Datasheet or contact your Henkel Technical Service Team.

GASKETING PRODUCTS

IS YOUR FLANGE RIGID OR FLEXIBLE? **RIGID** SOLUTION LOCTITE® 518 The Allrounder Substrate to be sealed Metal Max. gap (mm) 0.25 Service temperature range (°C) -55 to +150 **Approvals** Comments General purpose Excellent chemical resistance Oil tolerant

TECHNOLOGY BENEFITS

- Prevent leakage and failure by filling all voids
- No need for re-torquing
- One product fits all shapes low costs and inventory



FLEXIBLE LOCTITE® 510 LOCTITE® SI 5980 LOCTITE® SI 5990 **High Temperature** The All rounder **High Temperature** Metal Metal, plastic or both Metal, plastic or both 0,25 1 1 -55 to +200 -55 to +200 -55 to +350P1 NSF For high temperature General purpose For high applications temperature Oil resistant applications Easy dispensing Easy dispensing Leading in Health & Leading in Health & Safety Safety

GASKETING PRODUCTS

HOW TO APPLY LOCTITE® 518, 510, SI 5980, SI 5990

PREPARATION

CLEANING

- Apply LOCTITE® SF 7200 on old gasketing adhesive and use a wood or plastic scraper to remove residues. Remove burrs
- It is recommended to use LOCTITE® SF 7063 to degrease and clean surfaces prior to applying the adhesive



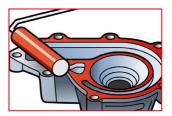
ACTIVATION

- If cure speed of LOCTITE® 518 and LOCTITE® 510 is too slow due to passive metals and low temperature (below 5 °C), use activator LOCTITE® SF 7240 or LOCTITE® SF 7649 (see cure speed vs. activator graph in the TDS)
- LOCTITE® SI 5980 and LOCTITE® SI 5990 do not need an activator

APPLICATION

- Apply as a continuous closed bead onto one flange surface. Place the bead close to the inner rim of the flange and encircle all holes. Small scratches can be filled by the adhesive
- LOCTITE® 510 and LOCTITE® 518 can also be applied by roller onto large flanges





EOUIPMENT

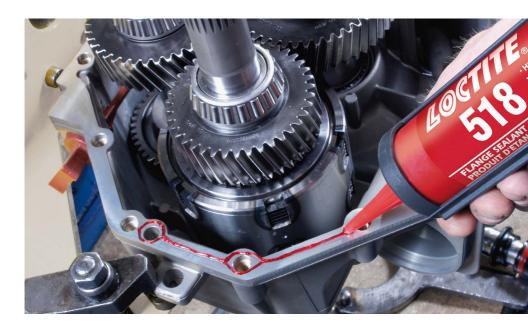
Recommended dispensing equipment: IDH 363544 or IDH 142240 (see chapter Equipment).

ASSEMBLY

Assemble flanges and tighten bolts as soon as possible.

DISASSEMBLY

- Disassemble with standard hand tools
- Use lifting-screws, casted-on bosses or recesses to lift flanges apart
- For corroded or seized parts, use LOCTITE® 8040 Freeze & Release



For detailed information, please refer to the Technical Datasheet or contact your Henkel Technical Service Team.

RETAINING **COMPOUNDS**

HOW LARGE IS THE GAP?



Service temperature range (°C)

-55 to +150

Approvals

P1 NSF, WRAS

Comments

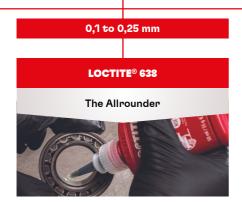
- For use on cylindrical fitting parts with tight gaps
- High oil tolerance

TECHNOLOGY BENEFITS

- Fill all voids to prevent loosening, corrosion and fretting
- Suitable for high loads even with existing design
- 100 % contact even stress distribution across the joint

¹ At room temperature on steel joints.





0,25 to 0,5 mm LOCTITE® 660 Gap Filling

4 15

-55 to +180 -55 to +150

P1 NSF, WRAS

- General purpose
- Fast curing

P1 NSF

- For repair of worn out seats, keys, splines, bearings or tapers without remachining
- To be used with activator LOCTITE® 7240 or 7649

RETAINING COMPOUNDS

HOW TO APPLY LOCTITE® 603, 638, 660

PREPARATION

CLEANING

- Use I OCTITE® SF 7200 for easier removal of residues in case of old retaining adhesive
- It is recommended to use LOCTITE® SF 7063 to degrease and clean surfaces prior to applying the adhesive
- For larger gaps than 0,5 mm or worn out shafts, bearing seats or keyways, use LOCTITE® metal- illed compounds (see chapter Metalilled Compounds)





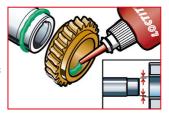
ACTIVATION

If cure speed is too slow due to passive metals or low temperature (below 5 °C), use activator LOCTITE® SF 7240 or LOCTITE® SF 7649 (see cure speed vs. activator graph in the TDS).

APPLICATION

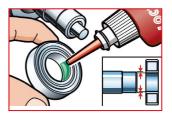
A FOR SLIP FITTED ASSEMBLIES: LOCTITE® 603, 638, 660

Apply adhesive around the leading edge of the male component and the inside of the female component and use rotating motion during assembly to ensure good coverage.



B FOR PRESS FITTED ASSEMBLIES: LOCTITE® 603

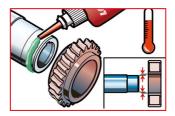
Apply adhesive thoroughly to both bond surfaces and assemble at high press on rates.



APPLICATION

C FOR SHRINK FITTED ASSEMBLIES:

Apply the adhesive onto the pin, heat the collar to create sufficient clearance for free assembly. For product selection, contact your Henkel Technical Service Team.



EQUIPMENT

Recommended dispensing equipment: IDH 608966 or IDH 88631 (see chapter Equipment).

DISASSEMBLY

- Apply localised heat to approximately 250° C, dissasemble while hot
- For corroded or seized parts, use LOCTITE® LB 8040 Freeze & Release



For detailed information, please refer to the Technical Datasheet or contact your Henkel Technical Service Team.

INSTANT ADHESIVES

DO YOU NEED A NON-DRIP / NON-RUN PRODUCT?



rixture time (sec.) 3 – 10

Service termperature range (°C) -40 to +120

Approvals P1 NSF

Comments • General purpose

Low viscosity

TECHNOLOGY BENEFITS

- Excellent adhesion on multiple substrates especially plastics and rubbers
- Very fast positioning and fixturing of parts
- Small parts bonding



- High viscosity gel
- For overhead applications

- Multi-purpose
- Highly gap filling
- For cosmetic aspects and low bloom applications

INSTANT ADHESIVES

HOW TO APPLY LOCTITE® 401, 454, 3090

PREPARATION

CLEANING

It is recommended to use LOCTITE® SF 7063 to degrease and clean surfaces prior to applying the adhesive.



PRIMING

To improve adhesion on difficult to bond plastic surfaces, apply LOCTITE® SF 7239 or LOCTITE® SF 770 to the bond area by brushing or dipping. Avoid applying excess primer. Allow the primer to dry.



ACTIVATION

If cure speed is too slow, use appropriate activator LOCTITE® SF 7458 (see cure speed vs. activator graph in the TDS). Apply activator to one bond surface by spray, brush or dipping (not to primed surfaces). Allow the activator to dry.



MIXING

Mixing with static mixer (LOCTITE® 3090):

Before mounting the static mixer onto the cartridge, push out small amount of product to equalize pistons. Mount static mixer and push some mixed product out until a uniform color is reached, then the static mixer provides a well mixed product.



APPLICATION

Apply adhesive by drop or bead to one of the bond surfaces (not to activated surfaces).



EOUIPMENT

Recommended dispensing equipment: (see chapter Equipment)

- For precise dispensing of small amounts of adhesive use dispensing needles
- Spare static mixers for LOCTITE® 3090: IDH 1453183

DISASSEMBLY

Assemble the parts immediately. The parts should be accurately located, as the short fixture time leaves little opportunity for adjustment. Bond should be held fixed or clamped until the adhesive has fixtured.



HINT:

If necessary excess product can be cured by activator LOCTITE® SF 7455. Spray or drop activator on excess product.

For detailed information, please refer to the Technical Datasheet or contact your Henkel Technical Service Team.

UNIVERSAL BONDERS

DO YOU NEED AN ULTRA FAST CURE?







TECHNOLOGY BENEFITS

- Bonds a wide variety of substrates
- Very fast positioning and fixturing of parts
- Tough and impact resistant bonds



SOLUTION



YES LOCTITE® HY 4070 Ultra Fast and Versatile

NO **LOCTITE® HY 4090** Impact and temperature resistant

Fixture time (sec.)	<1	3-5 +150°C Slightly cloudy to light yellow gel	
Service termperature range (°C)	+120°C		
Approvals	Slightly cloudy to light yellow gel		
Comments	 Ultra-fast fixture– reduces maintenance down time High gap filling capability–excellent for universal repairs 	 Good moisture, temperature (up to 150°C) and chemical resistance Impact and vibration resistant 	
	Suitable for a variety of substrates, including metals, most plastics and rubbers—opening up your design possibilities	 Suitable for a variety of substrates, including metals, most plastics and rubbers—opening up your design possibilities 	

STRUCTURAL BONDING - ACRYLICS AND **POLYURETHANES**

What is your focus?





Technology	2K-PU		
Fixture time (min.)	30		
Shear strength (GBMS N/mm²)	>12		
Service temperature range (°C)	-40 to +80		
Comments	General purpose		
	Suitable for painted surfaces		
	Gap filling		

TECHNOLOGY BENEFITS

- Rigid to slightly flexible structural bonding
- High strength

Good chemical resistance

Slightly flexible

Excellent adhesion on multiple substrates





COSMETIC APPEARANCE LOCTITE® AA V5004 Clear Bondline

1K-Acrylic 2K-Acrylic > 40 3 13 21 -50 to +100 -50 to +80

- Very good adhesion to difficult to bond plastics like PE, PP
- Fast curing
- High strength
- Clear bondline

STRUCTURAL BONDING -**ACRYLICS AND POLYURETHANES**

HOW TO APPLY TEROSON PU 6700, V5004

PREPARATION

CLEANING

It is recommended to use LOCTITE® SF 7063 to degrease and clean surfaces prior to applying the adhesive.



PRIMING

To improve adhesion of TEROSON® PU 6700 on difficult to bond plastics, apply TEROSON® RB 150 to the bond area. Avoid applying excess primer. Allow the primer to dry.

MIXING

With static mixer:

Before mounting the static mixer onto the cartridge, push out small amount of product to equalize pistons. Mount static mixer and push some mixed product out until a uniform color is reached, then the static mixer provides a well mixed product.

APPLICATION

Apply product directly after mixing to the bonding area.

HINT:

After use, leave the static mixer in place and use it as a cap.



EQUIPMENT

Recommended dispensing equipment: (see chapter Equipment)

	Dispensing equipment	Mixers / nozzles
TEROSON® PU 6700	IDH 267452	IDH 1487440
LOCTITE® V5004	DH 267452	IDH 1467955

DISASSEMBLY

- · Parts should be assembled immediately
- Keep the assembled parts from moving during curing
- The joint shold be allowed to be develop full strength before subjecting to any service loads

STRUCTURAL BONDING - EPOXIES

WHAT IS YOUR FOCUS?



Colour	White
Fixture time (min.)	75
Shear strength (GBMS N/mm²)	20
Service temperature range (°C)	-55 to +180
Comments	High temperature resistance
	High chemical resistance

TECHNOLOGY BENEFITS

- Rigid structural bonding
- Very high strength
- Very good chemical resistance
- Excellent adhesion on multiple substrates



GENERAL BONDING

LOCTITE® EA 3430 The Allrounder

Ultra clear

15

22

-55 to +100

- Five-minute epoxy
- Water resistance

STRUCTURAL BONDING - EPOXIES

HOW TO APPLY LOCTITE® EA 9492, EA 3430

PREPARATION

CLEANING

It is recommended to use LOCTITE® SF 7063 to degrease and clean surfaces prior to applying the adhesive.



MIXING

Hand mixing (LOCTITE® EA 3430): Mix A and B components according to the speci ied mixing ratio. Thorougly mix the two components before use

With static mixer (LOCTITE® EA 9492):

Before mounting the static mixer onto the cartridge, push out small amount of product to equalise pistons. Mount static mixer and push some mixed product out until a uniform colour is reached, then the static mixer provides a well mixed product



APPLICATION

Apply product directly after mixing to the bonding area.

HINT:

After use, leave the static mixer in place and use it as a cap.



EOUIPMENT

- Recommended dispensing equipment for LOCTITE® EA 9492 (see chapter Equipment): IDH 267452
- Spare static mixers: IDH 1487440

ASSEMBLY

- Parts should be assembled immediately
- Keep the assembled parts from moving during curing
- The joint should be allowed to develop full strength before subjecting to any service load

HINT:

Excess of uncured product can be wiped away with LOCTITE® SF 7063.

Very high temperature

resistance

FLEXIBLE SEALING AND BONDING

WHAT IS YOUR FOCUS?

SOLUTION





Technology	1K-SMP	1K-Silicone	
Skin formation time (min.)	18	5	
Service temperature range (°C)	-40 to +80	-50 to +250	
Approvals	BSS 7239	-	
Comments	General purpose	 Transparent 	

TECHNOLOGY BENEFITS

- Withstand impact shock, vibration and bending
- Good weathering resistance
- Wide temperature range
- Excellent adhesion on multiple substrates

ELASTIC BONDING SEAM SEALING **TEROSON MS 9399** LOCTITE® SI 5616 TEROSON MS 9320 SF The Allrounder Fast Curing Sprayable Sealant 2K-SMP 1K-SMP 2K-Silicone 35 12 -40 to +100 -50 to +180 -40 to +100 ASTM E 662/E 162 VDI 6022 General purpose Very fast curing Fast curing Fast curing No cracks, no rust High temperature resistance penetration

FLEXIBLE SEALING AND BONDING

HOW TO APPLY TEROSON MS 930, LOCTITE® SI 5366, TEROSON MS 9399, LOCTITE® SI 5616, **TEROSON MS 9320 SF**

PREPARATION

CLEANING

It is recommended to use TEROSON® 450 to degrease and clean surfaces prior to applying the adhesive. It also improves adhesion on difficult to bond materials.



MIXING

With static mixer (LOCTITE® SI 5616, TEROSON MS 9399):

Before mounting the static mixer onto the cartridge, push out small amount of product to equalize pistons. Mount static mixer and push some mixed product out until a uniform color is reached, then the static mixer provides a well mixed product.

HINT:

If you see crumbles on the beat surface, the product is already partly cured, and the final properties will not be achieved.

APPLICATION

- Apply product with suitable dispensing
- In case full surface bonding is necessary please use 2 component products



For large area bonding applications where both substrates are non water vapour transmitting, do not cover complete bonding area with product



HINT:

- · Application on plastics such as PMMA or PC may cause stress cracking of the plastic; suitability for these materials should be tested prior to use
- After use, leave the static mixer in place and use it as a cap

EQUIPMENT

Recommended dispensing equipment: (see chapter Equipment)

	Dispensing equipment	Mixers / nozzles
TEROSON® MS 930	IDH 142240	0
LOCTITE® SI 5366	IDH 142240	0
TEROSON® MS 9399	IDH 150035	0
LOCTITE® SI 5616	IDH 142240	0
TEROSON® MS 9320 SF	IDH 142241 (for spraying) IDH 142240 (for standard bead)	IDH 547882 (for spraying) IDH 581582 (for standard bead)

METAL-FILLED COMPOUNDS

WHAT TYPE OF REPAIR?



EMERGENCY REPAIR LOCTITE® EA 3463 Metal Magic Steel™ Stick EA 3463

For emergency sealing of tanks and

Fixture time at 20 °C (min.)	10	
Compressive strength (N/mm²)	83	
Service temperature range (°C)	-30 to +120	
Comments	Steel-filled kneadable stick	

pipes

TECHNOLOGY BENEFITS

- Repair and rebuild worn metal parts
- No need to heat or weld
- Can be drilled, tapped or machined after cure



SHAFT REPAIR

GENERAL REBUILDING OF METAL PARTS

LOCTITE® EA 3478

High Compressive Strength

LOCTITE® EA 3471



LOCTITE® EA 3475

Aluminium Rebuilding



360

125 -30 to +120

70 -20 to +120

70 -20 to +120

180

- Rebuild worn steel shafts and bearings
- High compressive strength
- Repair worn steel parts
- Non-sagging putty
- Repair worn aluminium parts
- Non-sagging putty

METAL-FILLED COMPOUNDS

HOW TO APPLY LOCTITE® EA 3463

PREPARATION

- Thoroughly clean and abrade surfaces. Finally clean with LOCTITE® SF 7063
- Cut required product quantity and then remove plastic film. Twist and knead until ma-terial is smooth and colour is consistent



APPLICATION

Firmly apply to bond area and form to desired shape. For smooth finish wipe over with a wet cloth.

HOW TO APPLY LOCTITE® EA 3478

PREPARATION

Tool damaged area of shaft and reduce by minimum 3 mm compared to nominal diameter.



CLEANING

It is recommended to use LOCTITE® SF 7063 to degrease and clean surfaces prior to applying the adhesive.

MIXING

Stir each component separately. Mix A and B components according to the specified mixing ratio by volume or weight. Thorougly mix for up to two minutes until an even mix is achieved.

APPLICATION

- Turn shaft and apply a thin layer of LOCTITE® EA 3478. Then build up product layer. Apply LOCTITE® EA 3478 with an excess compared to nominal shaft diameter
- After full cure, tool repair area and reduce to nominal diameter

HOW TO APPLY LOCTITE® EA 3471, EA 3475

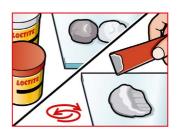
PREPARATION

CLEANING

It is recommended to use LOCTITE® SF 7063 to degrease and clean surfaces prior to applying the adhesive.

MIXING

Stir each component separately. Mix A and B components according to the specified mixing ratio by volume or weight. Thorougly mix for up to two minutes until an even mix is achieved.



APPLICATION

- Apply the product to the working area with the spatula provided
- Keep the repaired parts from moving during cure
- Full cure is achieved at room temperature after 72 hours; heating the part to 40 °C will reduce the time span to 24 hours
- Due to heat generation during the curing process larger quantities tend to cure more rapidly

PROTECTIVE COATINGS AND COMPOUNDS

PARTICLE SIZE OF ABRASIVE MATERIAL?



Mix ratio by volume / weight (A:B)

2:1 / 100:50

Recommended layer thickness (mm)

min. 6

Service temperature range (°C)

-30 to +120

Approvals

Comments

- High wear resistance
- For overhead applications

When choosing the right LOCTITE® Protective Coating or Compound, key factors such as particle size, temperature resistance, and chemical / corrosion resistance need to be considered. Please contact your Henkel Technical Engineer for consultancy.

TECHNOLOGY BENEFITS

- Restore worn surfaces
- Protect parts against abrasion, erosion, chemical attack and corrosion
- Extend part life and increase part efficiency
- Save cost by avoiding part replacement and reducing spare part inventories



FINE PARTICLES

LOCTITE® PC 7255 Sprayable Ceramic

LOCTITE® PC 7117 **Brushable Ceramic**

2:1 / 100:50

3,34:1 / 100:16

min. 0.5

min. 0.5

-30 to +95

-30 to +95

WRAS

- General purpose Ultra-smooth

- General purpose
- High gloss, low friction

PROTECTIVE COATINGS AND COMPOUNDS

HOW TO APPLY LOCTITE® PC 7218, PC 7255, PC 7117

PREPARATION

CLEANING

- Thoroughly clean and abrade surfaces; if possible grit blast. Finally clean with LOCTITE® SF 7063. If necessary rebuild badly worn surfaces using trowelable metal-filled compounds
- For temporary corrosion protection for up to 48 hours, apply LOCTITE® SF 7515 after surface preparation



- If supplied in ready-to-use packages, mix the entire contents of resin and hardener
- If smaller amounts are required, mix A and B components according to the specified mixing ratio by volume or weight (for mixing ratios refer to technical product data sheet or product label)
- Thorougly mix for up to two minutes until an even mix is achieved



APPLICATION

- Apply fully mixed product to prepared surface by brush, trowel or spray
- Consider working and cure time (see selection table on previous pages)
- For LOCTITE® PC 7255 and LOCTITE® PC 7117. apply minimum 2 layers to achieve a total layer thickness

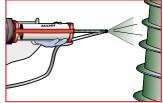


HINT:

- Pre-coating the surface by rubbing the mixed composite into the substrate helps the repair material to fill all crevices, creating a superior bond between the composite and substrate
- Smooth out the uncured product with a warm trowel for a smooth, glossy finish
- Use products with different colours when applying more than one coat. When the first coat begins to wear, the second coat will show through, providing an accurate indicator of wear

SPECIAL RECOMMENDATIONS FOR SPRAYABLE PRODUCTS (LOCTITE® PC 7255):

- Best coating results are obtained by applying the product specific layer thickness. This is especially important for spray applications on vertical surfaces. For best results also in corners and edges, it is recommended to smooth angles to a radius of 3 mm
- When using LOCTITE® PC 7255, it is recommended to heat the product prior to application to ensure easy spraying and a smoother surface



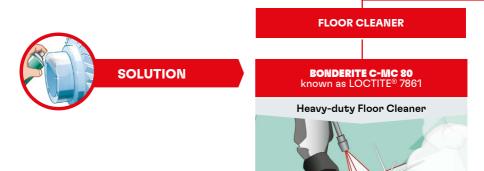
EOUIPMENT

Recommended dispensing equipment for LOCTITE® PC 7255: IDH 1175530 (see chapter Equipment)

LOCTITE BEYOND THE BOND

CLEANERS – HEAVY-DUTY MAINTENANCE CLEANERS

WHICH TYPE OF HEAVY-DUTY MAINTENANCE CLEANER IS REQUIRED?



Application concentration (g/l)

50 to 200

Service temperature range (°C)

+15 to +100

Comments

- For concrete floors
- Solvent-free

For application of heavy-duty maintenance cleaners, please refer to the Technical Data Sheet and instructions for use of your cleaning equipment.

TECHNOLOGY BENEFITS

- High quality water-based alkaline, acidic and neutral cleaners
- Clean parts and assemblies in the metalworking industry, in workshops, in the railway and boat industry
- · For metal substrates, plastics, concrete, stone, ceramics, glass, painted surfaces etc.



PARTS CLEANER

BONDERITE C-MC 1030 known as LOCTITE® 7013

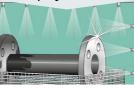
Fountain Cleaner



Ready-to-use Room temperature

C-MC 352 known as LOCTITE® 7014

Spray Cleaner



20 to 60

+50 to +75

- For dirt, oil and grease
 - For spray cleaning machines
 - Solvent-free

BONDERITE C-MC 3000 known as P3 Grato 3000

High Pressure Cleaner



20 to 200 +10 to +50

- For dirt, oil and grease
- Provide temporary rust protection
- Solvent-free
- Biodegradable

For all kind of soils

- Solvent-free
- Biodegradable

CLEANERS – PARTS AND HANDS **CLEANERS**

WHAT DO YOU WANT TO CLEAN?





Base Natural extracts

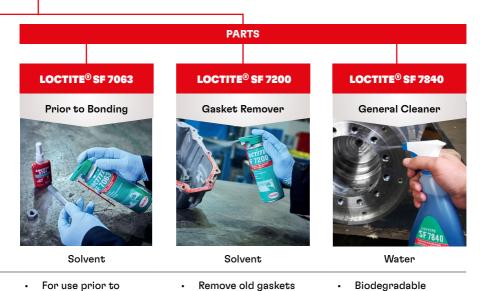
Comments

- Biodegradable
- Use with or without water

TECHNOLOGY BENEFITS

- For various cleaning demands in the workshop
- One cleaner suitable for surface preparation prior to bonding





applications Leaves no residue

bonding and sealing

- Remove old gaskets
- Minimal scrapping
- Biodegradable
- Can be diluted with water

CLEANERS - PARTS AND HANDS CLEANERS

HOW TO APPLY LOCTITE® SF 7850

APPLICATION

- Rub into dry hands until dirt or grease is dissolved
- · Wipe hands dry or rinse with water
- Repeat procedure if necessary



HOW TO APPLY LOCTITE® SF 7063

APPLICATION

- Treat surfaces to be cleaned by generously spraying with LOCTITE® SF 7063
- Wipe surface while still wet with a clean paper towel
- Repeat if necessary until contamination is removed
- · Allow solvent to evaporate until surface is completely dry



NOTE:

LOCTITE® SF 7063 can cause stress cracks on sensitive substrates.

HOW TO APPLY LOCTITE® SF 7200

APPLICATION

- Before applying, protect painted surfaces as LOCTITE® SF 7200 may attack the paint
- · Spray a heavy coat onto flange or surface. Wait 10 - 15 min for the gasket to soften (for silicone gaskets 30 min)
- Remove gasket with soft scraper and wipe flange clean
- Repeat procedure if necessary



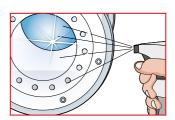
HOW TO APPLY LOCTITE® SF 7840

APPLICATION

- Dilute LOCTITE® SF 7840 with water
- Soak or spray parts and wipe or rinse clean

HINT:

Effectiveness can be enhanced by diluting with warm water



LUBRICANTS

WHAT PART MOVEMENTS / LOADS ARE YOU DEALING WITH?



SOLUTION

SLOW MOVEMENTS / HIGH LOADS

LOCTITE® LB 8150



Base Aluminium, graphite

Viscosity

-30 to +900 Service temperature range (°C)

Comments

- Protect threaded connections
- Prevent seizing and corrosion

TECHNOLOGY BENEFITS

- Protect against corrosion, friction and wear withstanding extreme pressure
- Prevent overheating







MEDIUM SPEED / MEDIUM LOADS

LOCTITE® LB 8105

Multi-purpose Grease



FAST MOVEMENTS / SMALL LOADS

LOCTITE® LB 8191

Dry Film Lubricant



LOCTITE® LB 8201

Multi-purpose Oil



Mineral oil

Mineral oil

-20 to +150

Neutral appearance

11 s (cup 4) -40 to +340 17.5 cSt (+50 °C) -20 to +120

- Odourless
- Fast-drying
- Enhance the performance of oils and greases
- Free assemblies
- Lubricate metal
- Clean parts
- Displace moisture
- Prevent corrosion

LUBRICANTS

HOW TO APPLY LOCTITE® LB: 8150, 8105, 8191, 8201

PREPARATION

CLEANING

- It is recommended to use LOCTITE® SF 7063 to degrease and clean surfaces
- · Surfaces should be free from scale, oxides and lubricant residues



APPLICATION

Shake well before use.

A LOCTITE® LB 8150

- Apply a thin layer by brushing evenly over the whole surface
- Do not dilute



B LOCTITE® LB 8105

- · Check compatibility with other grease residues
- · Apply to clean parts by brush, spatula or grease gun



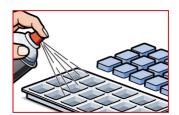
Product may be suitable for use in automatic application systems.



APPLICATION

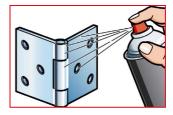
C LOCTITE® LB 8191

- Product should be sprayed on cleaned parts from a distance of about 20 cm to give a uniform coating
- · Let parts dry for 15 to 30 minutes at ambient temperature



D LOCTITE® LB 8021

- Choose between jet and spray (based on application needs)
- Spray consistently onto parts to give a uniform film

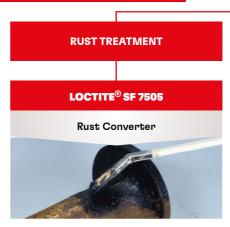


SURFACE TREATMENTAND **RUST PREVENTION**PRODUCTS

WHAT KIND OF TREATMENT DO YOU REQUIRE?



SOLUTION



Colour Matt black

Service temperature range (°C)

Comments

- Convert rust into a stable base
- Cured product acts as primer ready for painting

TECHNOLOGY BENEFITS

Solutions for all types of surface treatments or preparations







CORROSION PROTEC-TION

LOCTITE® SF 7800 Zinc Spray

PROTECTION OF WEL-DING EQUIPMENT

LOCTITE® SF 7900 **Ceramic Shield**

TAMPER PROOFING

LOCTITE® SF 7414 Movement Detector

Grey

White

Blue -35 to +145

-50 to +550

- Excellent cathodic corrosion protection on ferrous metal
- Restore protection to galvanised parts
- Prevent adhesion of welding spatter
- Long-term protection of welding equipment
- Silicone-free

- Visually detect
- For outdoor applications

movement of parts

SURFACE TREATMENT AND RUST **PREVENTION PRODUCTS**

HOW TO APPLY LOCTITE® SF 7505

PREPARATION

Wire brush to remove flaky rust and loose scale. It is recommended to use LOCTITE® SF 7063 to remove oil, grease and dirt. Shake well before use.

APPLICATION

Brush or sponge on liberally. Apply two coats (recoat time: 60 to 120 minutes). Uneven colour indicates need for additional coats. Allow minimum 24 hours to dry before painting.



HINT:

Do not apply in direct sunlight or on wet surfaces.

HOW TO APPLY LOCTITE® SF 7800

PREPARATION

Remove rust, old coats of paint etc. from surface. Sandblast surface if possible. It is recommended to use LOCTITE® SF 7063 to finally remove oil, grease and dust. Shake well before use.

APPLICATION

- Spray on clean parts from 20 to 30 cm to give a uniform film
- The coating becomes dry to touch after 30 to 60 minutes. Allow 24 hours to dry completely



HOW TO APPLY LOCTITE® SF 7900 CERAMIC SHIELD

PREPARATION

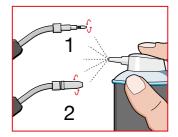
Clean contact tip and shroud from adhering spatter.

For best results, use a new contact tip and shroud.

Shake well before use.

APPLICATION

- Place the contact tip on the welding torch and apply from a distance of 10 - 15 cm. Fit the shroud to the welding torch and coat the exterior and interior. Let the coating dry for several seconds
- · After the application reverse the can and spray for several seconds to prevent clogging of the nozzle



HOW TO APPLY LOCTITE® SF 7414

PREPARATION

It is recommended to use LOCTITE® SF 7063 to degrease, clean and dry surfaces.

APPLICATION

Squeeze the tub to extrude the paste and form a narrow bead across the parts. Let product dry for 60 seconds.



EMERGENCY REPAIR PRODUCTS

O-RING

REPLACEMENT

LOCTITE®

O-RING KIT O-Ring Kit

WHAT IS YOUR APPLICATION?

SOLUTION



Service range (°C)

temperature

Comments

- Set with rubber cords, LOCTITE® 406 and tools to create customized O-rings
- Eliminates the need for an inventory of different sized O-Rings

FREE CORRODED PARTS LOCTITE® LB 8040 Freeze & Release



- Release rusted. corroded and seized components

(-40 °C)

Shock freezing

Wicks directly into the rust by capillary action

- DETECT PIPE **LEAKS**
- LOCTITE® SF 7100
- Leak Detector



Produce bubbles at leakages

+10 to +50

- For all gases and gas mixtures except for oxygen
- Non-toxic / non-flammable
- Use for iron. copper and plastic piping



SEAL PIPE LEAKS

LOCTITE® EA 3463







TAPING

LOCTITE® PC 5075



TEROSON TAPE FIX&REPAIR

High Strength



-30 to +120

Steel-filled

kneadable

emergency

sealing of

tanks and

pipes

stick

For

- - Easy-to-use repair kit for temporary repair of weak areas on pipes
- -54 to +260
- Insulating and Sealing Wrap
- Withstand extreme conditions
- Stretches 3-times its size
- Fabric reinforced tape

up to +70

- Easy to tear by hand
- Repair, reinforce. fix, seal and protect

EMERGENCY REPAIR PRODUCTS

HOW TO APPLY LOCTITE® LB 8040

PREPARATION

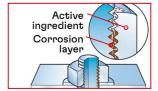
Remove loose dirt, and rust. Shake well before use.

APPLICATION

- Spray onto parts from a distance of 10 15 cm for 5 to 10 seconds
- After 1 to 2 minutes disassemble parts. If necessary repeat procedure







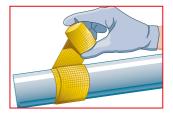
HOW TO APPLY LOCTITE® PC 5070

PREPARATION

- Turn off pressure in pipe system
- Thoroughly clean and abrade surfaces. Finally clean with LOCTITE® SF 7063

APPLICATION

- Mix required amount of LOCTITE® 3463 (details see chapter Metalfilled Compounds). Firmly press product into the crack, hole or void
- Activate tape by soaking into water at room temperature for 20 seconds. Wrap tape tightly around repair, building up at least 4 layers



HOW TO APPLY LOCTITE® O-RING KIT

PREPARATION

- Clean cutting blade using LOCTITE® SF 7063
- Cut the required approximate length of cord. Use the O-Ring cutting fixture to cut at both ends to achieve clean bonding surfaces at required length



APPLICATION

- Apply a small drop of LOCTITE® 406 to one end of the O-Ring
- Immediately join the two ends using the V-groove on the end of the cutting fixture. Hold in place for 30 seconds, then O-Ring is ready for service



HOW TO APPLY LOCTITE® SF 7100

PREPARATION

Shake well before use.

APPLICATION

- Spray product from 15 to 20 cm onto suspect
- · A leak will be clearly visible, as the product will start foaming at the leaking area



EQUIPMENT – DISPENSERS

MANUAL APPLICATORS

 IDH NUMBER	FOR PRODUCT	FOR PACK SIZE
142240	 LOCTITE® 510, 577, SI 5366, SI 5980, SI 5990 TEROSON® MS 930, MS 9320 	50ml (510, 577)300 ml310 ml
2693823	• LOCTITE® SI 5616	• 1:1, 2:1, 4:1 and 10:1
267452	 LOCTITE® SI 5616, V5004 LOCTITE® HY 4090 TEROSON® PU 6700 	• 50 ml (1:1, 2:1, 10:1)
363544	- LOCTITE® 510, SI 5980, SI 5990	- 50 ml
1034026	• LOCTITE® AA 3038	- 50 ml (10:1)

PERISTALTIC DISPENSERS

IDH NUMBER	FOR PRODUCT	FOR PACK SIZE
2564842	• LOCTITE® 222, 243, 270, 542, 603, 638	• 50 ml • 250 ml

PNEUMATIC APPLICATORS

 IDH NUMBER	FOR PRODUCT	FOR PACK SIZE
142241	• TEROSON® MS 9320 SF (for spraying)	• 310 ml
2251591	- LOCTITE® PC 7255	- 900 ml

LOCTITE. **BEYOND** THE BOND

EQUIPMENT – ACCESSORIES

MIXERS

	IDH NUMBER	FOR PRODUCT	FOR PACK SIZE
	2447734	• LOCTITE® PC 7255	• 1125 ml (2:1)
	780805	• TEROSO® PU 6700	• 250 ml (1:1)
MONONONONONON	1034575	• LOCTITE® AA 3038	• 50 ml (10:1)
	1453183	 LOCTITE® 3090 LOCTITE® HY 4070 	• 10 ml (10:1)
N. 4-14-14-14-14-14-14	1467955	• LOCTITE® V5004	• 50 ml (1:1)
	1487439	• LOCTITE® EA 9492	- 400 ml (2:1)
	1487440	 LOCTITE® EA 9492 TEROSO® PU 6700, MS 9399 	• 50 ml (1:1; 2:1)
	1826921	• LOCTITE® HY 4090	• 50 g (1:1)
	1573135	• LOCTITE® HY 4090	• 400 g (1:1)
	720174	- LOCTITE® SI 5616	- 400 ml

NOZZLES

 IDH NUMBER	FOR PRODUCT	FOR PACK SIZE
547882	TEROSON® MS 9320 SF (for spraying)	- 310 ml
581582	• TEROSON® MS 930, MS 9320 SF	• 310 ml

NEEDLES

 IDH NUMBER	FOR PRODUCT	FOR PACK SIZE
88661	- LOCTITE® 401	• 18 (= Green) ID 0.84 mm
88662	• LOCTITE® 401	• 20 (= Pink) ID 0.61 mm

MAINTENANCE EXPERT TRAINING



High-quality products can be only as good as the people who use them. That is why we offer hands-on training on the use of our products in maintenance and repair environments.

Our trainers are thoroughly familiar with the day-to-day problems you may encounter and will give you the tools and practical know-how for successful application of our products.

The training content is based on the product categories of this Maintenance Expert Guide and can be tailored to your needs.

FEATURES

- Pre-plant survey
- Hands-on training
- Conducted on site
- Training materials supplied
- Review of common failure causes and prevention
- In-plant follow up





YOUR BENEFITS

The training will provide you with knowledge and tools to do the following:









INCREASE RELIABILITY

and avoid downtime of your industrial equipment and machinery by regular maintenance

IMPROVE SAFETY

at work by increasing reliability of your machinery and by using nonhazardous products

SAVE TIME

by using innovative technologies that reduce downtimes and increase service intervals

REDUCE COSTS

by using innovative technologies that reduce downtimes and increase service intervals

Contact your Henkel Engineer for more details and to arrange training for your maintenance and repair team.

SPECIFIC MAINTENANCE SOLUTIONS

INDUSTRY EXPERTISE AND EQUIPMENT KNOW-HOW

Years of experience in manufacturing and maintenance have enabled us to build up profound knowledge of the typical maintenance and repair tasks in all major industries and common industrial equipment.

INDUSTRY PROGRAMS

Our industry programs cover the typical maintenance and repair challenges in your industry. They include numerous application examples, references and case studies. Learn how your specific repair task was solved in a comparable situation.



POWER PLANTS



MINING



PETROCHEMICAL



MARINE



RAILWAY



WATER UTILITIES

DEVICE PROGRAMS

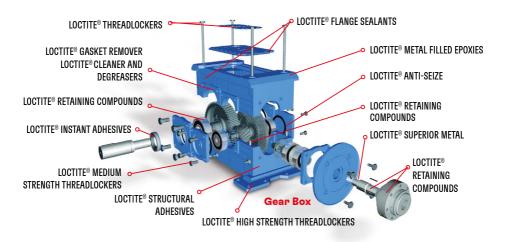
Our device programs go even deeper into the specific maintenance and repair tasks of the industrial component. They include specific application solutions for any repair tasks and suitable product suggestions. We will bring the solution so you could concentrate on your expertise.







PLIMAP SHAFT CENTRIFUGE



Find more information on the programs on https://next.henkel-adhesives.com/uk/en/industries/industrial-maintenance-repair.html and contact your Henkel Engineer for a workshop tailored to your needs.

The data contained herein are intended as reference only. Please contact Henkel Technical Support Group for assistance and recommendation on specifications for these products.

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