



Maintenance Expert Guide

Solutions for all bonding, sealing, cleaning
and lubricating tasks



Excellence is our Passion

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 the first time. It covers the most relevant products you need in your everyday maintenance work.

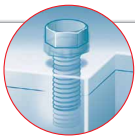
- **Search by product category or by task**
- **Get useful application hints in the “How to apply” sections**

To discover our full product portfolio visit **www.loctite.co.uk** or contact your Henkel Engineer.

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What's Your Task?



Prevent loosening of threaded parts

12

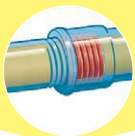


Threadlocking Adhesives



Seal threads / pipes

16

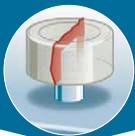


Thread Sealants

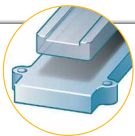


Fast fixturing small parts

28



Instant Adhesives

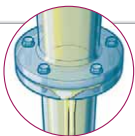


Strong, durable joints large parts

32

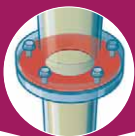


Structural Bonding

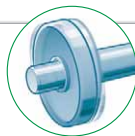


Seal bolted flanges

20



Gasketing Products

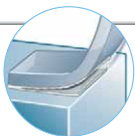


Join cylindrical parts

24



Retaining Compounds



Impact and vibration-
resistant joints

40



Flexible Sealing and Bonding



Repair and rebuild metal parts

44



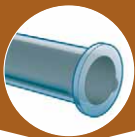
Metal-filled Compounds

What's Your Task?



Protect equipment against
abrasion and corrosion

48



**Protective Coatings and
Compounds**

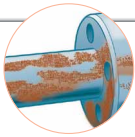


Remove oil, grease and dirt

52



Cleaners

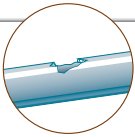


Protect surfaces against
external environment

62



**Surface Treatment and Rust
Prevention Products**

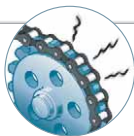


Fix leakages or other damages

66



Emergency Repair Products



Prevent seizing and corrosion
of moving parts

58



Lubricants



Easy and accurate adhesive
dispensing

70



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:

- **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

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

For further details please visit www.loctite.co.uk or contact your Henkel Technical Service Team.



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
- Allows 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® 3463

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



Loctite® 7063

- Parts cleaner
- Degrease and clean surfaces prior to bonding



Loctite® 8201

- Multi-purpose oil
Moisture dispersant



Loctite® 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 MSDS*
- No hazard symbols, risk or safety phrases
- Proven performance



Instant adhesives

- No Health & Safety related risk phrases in the MSDS
- 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

Water and glycol resistance

Oil resistance

High temperature resistance



Heavy-duty maintenance cleaners

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

Fountain cleaning

Floor cleaning

High pressure cleaning

Spray cleaning

Hand cleaning

Bonderite C-MC 1030

Bonderite C-MC NEXO SOL

Bonderite C-MC N DB

Bonderite C-MC 352

Bonderite C-MC 50120

Threadlocking Adhesives

What strength do you require?



Solution

Low

Loctite® 222

Easy Disassembly



Size of thread (up to)

M36

Service temperature range (°C)

-55 to +150°C

Approvals

P1 NSF

Comments

- Use 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® 243	Loctite® 248 Stick	Loctite® 270
The Allrounder	Non Dripping	Permanent Locking
		
M36	M50	M20
-55 to +180°C	-55 to +150°C	-55 to +180°C
P1 NSF	—	P1 NSF
<ul style="list-style-type: none"> • General purpose • Good performance even on plated and stainless steel fasteners • Oil tolerant 	<ul style="list-style-type: none"> • Easy-to-use stick • For overhead applications 	<ul style="list-style-type: none"> • For permanent locking if regular removal for maintenance is not required



Threadlocking Adhesives

How to apply Loctite® 222, 243, 248, 270

1. Preparation

Cleaning

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



Activation

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



2. Application

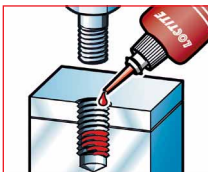
A Loctite® 222, 243, 270

Apply liquid threadlocker to the engagement area.



Through hole:

Assemble bolt first and then apply threadlocker. Apply nut and tighten to correct torque



Blind hole:

Apply into lower third of blind hole.



Post assembly:

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

Equipment

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

B Loctite® 248

Apply threadlocker to the engagement area.

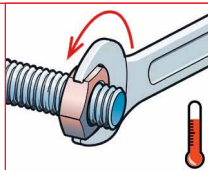
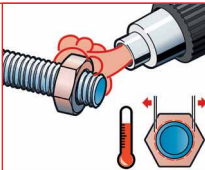
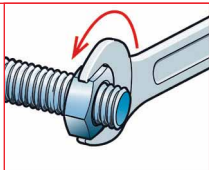


- Twist stick to the amount required
- Apply sufficient product around the thread of the bolt

3. Assembly

- Assemble and tighten
- If several bolts are being assembled, torque them down to the correct value within the fixture time of the product or use a slow curing product

4. Disassembly

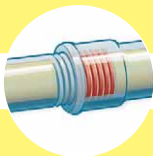


- Disassemble with standard hand tools
- If not possible, apply localised heat to approximately 250°C, disassemble while hot
- For corroded or seized parts use Loctite® 8040 Freeze & Release

Thread Sealants

Are the threads / pipes metal or plastic?

Metal, plastic or a combination of both



Solution

Loctite® 55

Thread Sealing Cord



Max. pipe size (inch)

4"

Service temperature range (°C)

-55 to +149°C

Approvals



DVGW, KTW, WRAS

Comments

- 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

Metal			
Are the threads coarse or fine?			
Coarse		Fine	
Loctite® 577		Loctite® 542	
The Allrounder		Fine Threads	
			
3"		3/4"	
-55 to +150°C		-55 to +150°C	
P1 NSF, DVGW		DVGW	
<ul style="list-style-type: none"> • General purpose • For overhead applications • Slow curing 		<ul style="list-style-type: none"> • For fine threads in hydraulic, pneumatic and general fittings • Fast curing 	



Thread Sealants

How to apply Loctite® 577, 542

1. Preparation

Cleaning

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

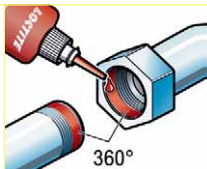


Activation

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

2. 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).

3. Assembly

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

4. 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® 8040 Freeze & Release

How to apply Loctite® 55

1. Preparation

Cleaning

Clean threads if necessary and roughen smooth threads.



2. 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, apply in a criss-cross manner.
- Cut off the cord with the integrated cutting tool at the top of the tube



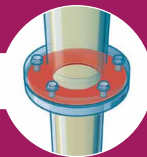
3. Assembly

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



Gasketing Products

Is your flange rigid or flexible?



Solution

Rigid

Loctite® 5188

The Allrounder



Substrate to be sealed

Metal

Max. gap (mm)

0.25mm

Service temperature range (°C)

-55 to +150°C

Approvals

–

Comments

- General purpose
- Excellent chemical resistance
- Oil tolerant

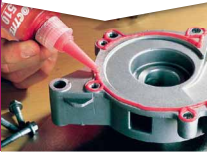
Technology Benefits

- 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

High Temperature



Metal

0.25mm

-55 to +200°C

P1 NSF

- For high temperature applications

Loctite® SI 5980

The Allrounder



Metal, plastic or both

1mm

-55 to +200°C

—

- General purpose
- Oil resistant
- Easy dispensing
- Leading in Health & Safety

Loctite® SI 5990

High Temperature



Metal, plastic or both

1mm

-55 to + 350°C

—

- For high temperature applications
- Easy dispensing
- Leading in Health & Safety



Gasketing Products

How to apply Loctite® 5188, 510, SI 5980, SI 5990

1. Preparation

Cleaning

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



Activation

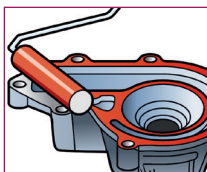
- If cure speed of Loctite® 5188 and Loctite® 510 is too slow due to passive metals or low temperature (below 5°C), use activator Loctite® 7240 or Loctite® 7649 (see cure speed vs. activator graph in the TDS)
- Loctite® SI 5980 and Loctite® SI 5990 do not need an activator

2. 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® 5188 can also be applied by roller onto large flanges



Equipment

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

3. Assembly

Assemble flanges and tighten bolts as soon as possible.

4. Disassembly

- Disassemble bolts with standard hand tools
- Use jacking-screws, cast-on bosses or recesses to lift flanges apart
- For corroded or seized parts, use Loctite® 8040 Freeze & Release

Retaining Compounds

How large is the gap?



< 0.1 mm

Loctite® 603

Ideal for Bearings



Handling strength after (min.)¹

8 min.

Service temperature range (°C)

-55 to +150°C

Approvals

P1 NSF, WRAS


Comments

- For use on close fitting cylindrical parts
- High oil tolerance

¹ At room temperature (20°C) on steel joints.

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

0.1 to 0.25 mm	0.25 to 0.5 mm
Loctite® 638	Loctite® 660
The Allrounder	Gap Filling
	
4 min.	15 min.
-55 to +150°C	-55 to +150°C
P1 NSF, WRAS	P1 NSF
<ul style="list-style-type: none"> • High Strength • Fast curing 	<ul style="list-style-type: none"> • For repair of worn out seats, keys, splines, bearings or tapers without remachining • To be used with activator Loctite® 7240



Retaining Compounds

How to apply Loctite® 603, 638, 660

1. Preparation

Cleaning

- Use Loctite® 7200 for easier removal of residues in case of old retaining adhesive
- It is recommended to use Loctite® 7063 to degrease and clean surfaces prior to applying the adhesive
- For gaps larger than 0.5mm or worn out shafts, bearing seats or keyways, use Loctite® metal-filled compounds (see chapter **Metal-filled Compounds**)



Activation

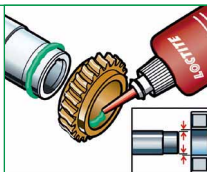
If cure speed is too slow due to passive metals or low temperature (below 5°C), use activator Loctite® 7240 or Loctite® 7649 (see cure speed vs. activator graph in the TDS).



2. Application

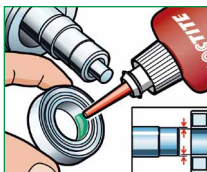
A For slip fitted assemblies: Loctite® 603, 638, 660

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



B For press fitted assemblies: Loctite® 603

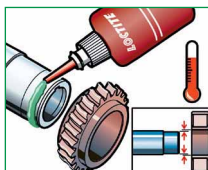
Apply adhesive thoroughly to both bond surfaces and assemble at high press on rates.



C For shrink fitted assemblies:

Apply the adhesive onto the shaft, heat the collar to create sufficient clearance for free assembly.

For product selection contact your Henkel Technical Service Team.

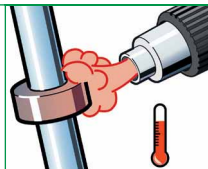


Equipment

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

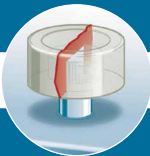
3. Disassembly

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



Instant Adhesives

Do you need a non-drip / non-run product?



Solution

No

Gaps < 0.15 mm

Loctite® 401

The Allrounder



Fixture time (sec.)

3 – 10 sec.

Service temperature range (°C)

-40 to +120°C

Approvals


P1 NSF

Comments

- General purpose
- Low viscosity

Technology Benefits

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

Yes			
Gaps < 0.15 mm		Gaps ≤ 5 mm	
Loctite® 454		Loctite® 3090	
Gel		Gap Filling	
			
5 – 10 sec.		90 – 150 sec.	
-40 to +120°C		-40 to +80°C	
P1 NSF		—	
<ul style="list-style-type: none"> • High viscosity gel • For overhead applications 		<ul style="list-style-type: none"> • Multi-purpose • Highly gap filling (5mm) • Professional repairs 	



Instant Adhesives

How to apply Loctite® 401, 454, 3090

1. Preparation

Cleaning

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



Priming

To improve adhesion on difficult to bond plastic surfaces, apply Loctite® 7239 or Loctite® 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® 7458 or Loctite® 7455 (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 a small amount of product to equalise pistons. Mount static mixer and push some mixed product out. The static mixer will then dispense correctly mixed product.



2. Application

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



Equipment

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

3. Assembly

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

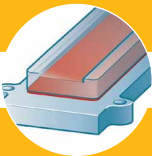
Hint:

If necessary excess product can be cured by activator Loctite® 7458 or Loctite® 7455. Spray or drop activator onto excess product.



Structural Bonding – Acrylics and

What is your focus?



Solution

General bonding

Teroson PU 6700

The Allrounder



Technology

2K-PU

Fixture time (min.)

30 min.

Shear strength (GBMS N/mm²)

>12N/mm²

Service temperature range (°C)

-40 to +80°C

Comments

- General purpose
- Suitable for painted surfaces
- Gap filling
- Slightly flexible

Technology Benefits

- Rigid to slightly flexible structural bonding
- High strength
- Good chemical resistance
- Excellent adhesion on multiple substrates

Polyurethanes

Difficult to bond plastics

Cosmetic appearance

Loctite® 3038

Loctite® V5004

Polyolefin Bonder

Clear Bondline



2K-Acrylic

2K-Acrylic

> 40 min.

3 min.

13 (PBT)

21N/mm²

-50 to +100°C

-50 to +80°C

- Very good adhesion to difficult to bond plastics like PE, PP

- Fast curing
- High strength
- Clear bondline



Structural Bonding – Acrylics and

How to apply Teroson PU 6700, Loctite® 3038, V5004

1. Preparation

Cleaning

It is recommended to use Loctite® 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 a small amount of product to equalise pistons. Mount static mixer and push some mixed product out until a uniform colour is reached, the static mixer will then dispense correctly mixed product.

Polyurethanes

2. 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**)

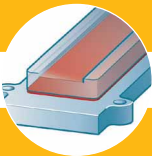
	Dispensing equipment	Mixers / nozzles
Teroson PU 6700	• IDH 267452	• IDH 1487440
Loctite® 3038	• IDH 1034026	• IDH 1034575
Loctite® V5004	• IDH 267452	• IDH 1467955

3. Assembly

- Parts should be assembled immediately
- Prevent the assembled parts from moving during cure
- The joint should be allowed to develop full strength before subjecting to service loads

Structural Bonding – Epoxies

What is your focus?



Solution

High technical performance

Loctite® 9492

High Temperature



Colour

White

Fixture time (min.)

75 min.

Shear strength (GBMS N/mm²)

20N/mm²

Service temperature range (°C)

-55 to +180°C

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® 3430

The Allrounder



Ultra clear

15 min.

22N/mm²

-55 to +100°C

- Five-minute epoxy
- Water resistance
- Clear Bondline

Loctite® Double Bubble

Easy to Use



Clear

5 min.

9N/mm²

-55 to +100°C

- For small and quick repairs
- Fast curing
- Handy Sachet



Structural Bonding – Epoxies

How to apply Loctite® 9492, 3430, Double Bubble

1. Preparation

Cleaning

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



Mixing

- **Hand mixing (Loctite® 3430, Double Bubble):**

Mix A and B components according to the specified mixing ratio. Thoroughly mix the two components before use



- **With static mixer (Loctite® 9492):**

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

2. 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 for Loctite® 9492 (see chapter **Equipment**): IDH 267452
- Spare static mixers: IDH 1487440

3. Assembly

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

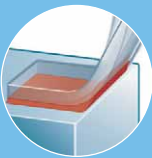
Hint:

Excess uncured product can be wiped away with Loctite® 7063.

Flexible Sealing and Bonding

What is your focus?

Solution

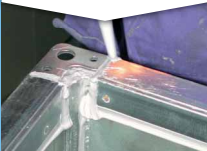


Elastic sealing

Teroson MS 930

known as Terostat MS 930

The Allrounder



Loctite® 5366

Transparent



Technology

1K-SMP

1K-Silicone

Skin formation time (min.)

18 min.

5 min.

Service temperature range (°C)

-40 to +80°C

-50 to +250°C

Approvals

BSS 7239

—

Comments

- General purpose
- Transparent
- Very high temperature resistance

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

known as Terostat MS 9399

The Allrounder



2K-SMP

35 min.

-40 to +100°C

ASTM E 662/E 162
VDI 6022

- General purpose
- Fast curing

Loctite® SI 5616

Fast Curing



2K-Silicone

—

-50 to +180°C

—

- Very fast curing
- High temperature resistance

Teroson MS 9320 SF

known as Terostat 9320 SF

Sprayable Sealant



1K-SMP

12 min.

-40 to +100°C

—

- Fast curing
- No cracks, no rust penetration

Flexible Sealing and Bonding

How to apply Teroson MS 930, Loctite® 5366, Teroson MS 9399, Loctite® SI 5616, Teroson MS 9320 SF

1. 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 a 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 will then dispense correctly mixed product.

Hint:

If you see crumbles on the bead surface the product is already partly cured and the final properties will not be reached.

2. Application

- Apply product with suitable dispensing equipment
- Where 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



Hints:

- 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	Mixer / nozzle
Teroson MS 930	• IDH 142240	• IDH 581582
Loctite® 5366	• IDH 142240	• IDH 1118785
Teroson MS 9399	• IDH 150035	• IDH 1487440
Loctite® SI 5616	• IDH 142240	• IDH 874905
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?



Solution

Emergency repair

Loctite® 3463

Metal Magic Steel™ Stick



Fixture time at 20 °C (min.)

10°C

Compressive strength (N/mm²)

83N/mm²

Service temperature range (°C)

-30 to +120°C

Comments

- Steel-filled kneadable stick
- For emergency repair of tanks, pipes and castings

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® 3478

High Compressive Strength



360°C

125N/mm²

-30 to +120°C

- Rebuild worn steel shafts and bearings
- High compressive strength

Loctite® 3471

Steel Rebuilding



180°C

70N/mm²

-20 to +120°C

- Repair worn steel parts
- Non-sagging putty

Loctite® 3475

Aluminium Rebuilding



180°C

70N/mm²

-20 to +120°C

- Repair worn aluminium parts
- Non-sagging putty



Metal-filled Compounds

How to apply Loctite® 3463

1. Preparation

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



2. Application

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

How to apply Loctite® 3478

1. Preparation

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

Cleaning

It is recommended to use Loctite® 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. Thoroughly mix for up to two minutes until an even mix is achieved.

2. Application

- Turn shaft and apply a thin layer of Loctite® 3478. Then build up product layer, until there is an excess compared to the nominal shaft diameter
- After full cure, machine repair area and reduce to nominal diameter

How to apply Loctite® 3471, 3475

1. Preparation

Cleaning

It is recommended to use Loctite® 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. Thoroughly mix for up to two minutes until an even mix is achieved.



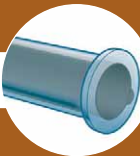
2. Application

- Apply the product to the working area with the spatula provided
- Prevent 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?



Solution

Coarse particles

Loctite® 7218

Trowelable Ceramic



Mix ratio by volume / weight (A:B)

2:1 / 100:50

Recommended layer thickness (mm)

6mm

Service temperature range (°C)

-30 to +120°C

Approvals

—

Comments

- High wear resistance
- High build

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® 7255

Sprayable Ceramic



2:1 / 100:50

0.5mm

-30 to +95°C

WRAS

- General purpose
- Ultra-smooth

Loctite® 7117

Brushable Ceramic



3.34:1 / 100:16

0.5mm

-30 to +95°C

—

- General purpose
- High gloss, low friction



Protective Coatings and Compounds

How to apply Loctite® 7218, 7255, 7117

1. Preparation

Cleaning

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



Mixing

- 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)
- Thoroughly mix for up to two minutes until an even mix is achieved



2. 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® 7255 and Loctite® 7117 apply minimum 2 layers to achieve a total layer thickness

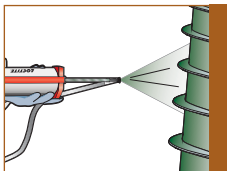


Hints:

- Pre-coating the surface by rubbing the mixed polymer 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 to achieve a 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® 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 in corners and edges, it is recommended to smooth angles to a radius of 3mm
- When using Loctite® 7255 it is recommended to heat the product prior to application to ensure easy spraying and a smoother surface



Equipment

- Recommended dispensing equipment for Loctite® 7255: IDH 1175530 (see chapter Equipment)

Cleaners – Heavy-duty Maintenance

Which type of heavy-duty maintenance cleaner is required?



Solution

Floor cleaner

Bonderite C-MC 80

known as Loctite® 7861

Heavy-duty Floor Cleaner



Application concentration (g/l)

50 to 200g/l

Application temperature range (°C)

+15 to +100°C

Comments


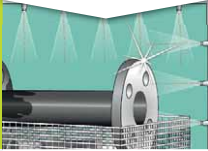
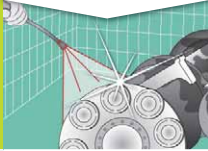
- For concrete floors
- Solvent-free

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 all types of industry
- For metals, plastics, concrete, stone, ceramics, glass, painted surfaces etc.

Cleaners

Parts cleaner		
Bonderite C-MC 1030 known as Loctite® 7013	Bonderite C-MC 352 known as Loctite® 7014	Bonderite C-MC 3000 known as P3 Grato 3000
Fountain Cleaner	Spray Cleaner	High Pressure Cleaner
		
Ready-to-use	20 to 60g/l	20 to 200g/l
Room temperature	+50 to +75°C	+10 to +50°C
<ul style="list-style-type: none">• For all kinds of cleaning• Solvent-free• Biodegradable	<ul style="list-style-type: none">• For dirt, oil and grease• For spray cleaning equipment• Solvent-free	<ul style="list-style-type: none">• For dirt, oil and grease• Provide temporary rust protection• Solvent-free• Biodegradable

Cleaners – Parts and Hands Cleaners

What do you want to clean?



Solution

Hands

Loctite® 7850

Hand Cleaner



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

Parts

Loctite® 7063

Prior to Bonding



Solvent

- For use prior to bonding and sealing applications
- Leaves no residue

Loctite® 7200

Gasket Remover



Solvent

- Removes old gaskets
- Minimal scraping

Loctite® 7840

General Cleaner



Water

- Biodegradable
- Can be diluted with water

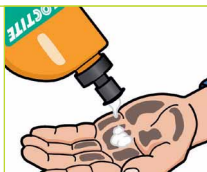


Cleaners – Parts and Hands Cleaners

How to apply Loctite® 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® 7063

Application

- Treat surfaces to be cleaned by generously spraying with Loctite® 7063
- Wipe surface when 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® 7063 can cause stress cracks on sensitive substrates.

How to apply Loctite® 7200

Application

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



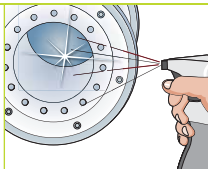
How to apply Loctite® 7840

Application

- Dilute Loctite® 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® 8150

Aluminium Anti-seize



Base

Aluminium, graphite

Viscosity

—

Service temperature range (°C)

-30 to +900°C

Comments

- Protect threaded connections
- Prevent seizing and corrosion

Technology Benefits

- Protect against corrosion, friction and wear withstanding extreme pressure
- General lubrication

Medium speed /
medium loads

Fast movements / small loads

Loctite® 8105

Multi-purpose Grease



Mineral oil

—

-20 to +150°C

- Odourless
- Neutral appearance

Loctite® 8191

Dry Film Lubricant



MoS₂

11 s (cup 4)

-40 to +340°C

- Fast-drying
- Enhance the performance of oils and greases

Loctite® 8201

Multi-purpose Oil



Mineral oil

17.5 cSt (+50°C)

-20 to +120°C

- Free assemblies
- Lubricate metal
- Clean parts
- Displace moisture
- Prevent corrosion



Lubricants

How to apply Loctite® 8150, 8105, 8191, 8201

1. Preparation

Cleaning

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



2. Application

Shake well before use.

A Loctite® 8150

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



B Loctite® 8105

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

Hint:

Product may be suitable for use in automatic application systems.



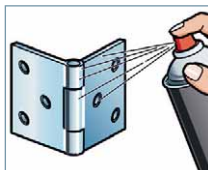
C Loctite® 8191

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



D Loctite® 8021

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



Surface Treatment and Rust

What kind of treatment do you require?

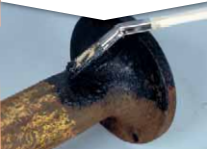


Solution

Rust treatment

Loctite® 7500

Rust Converter



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

Prevention Products

Corrosion protection	Protection of welding equipment	Tamper proofing
Loctite® 7800 Zinc Spray 	Loctite® SF 7900 Ceramic Shield 	Loctite® 7414 Movement Detector 
Grey	White	Blue
-50 to +550°C	—	-35 to +145°C
<ul style="list-style-type: none"> • Excellent cathodic corrosion protection on ferrous metal • Restore protection to galvanised parts 	<ul style="list-style-type: none"> • Prevent adhesion of welding spatter • Long-term protection of welding equipment • Silicone-free 	<ul style="list-style-type: none"> • Visually detect movement of parts • For outdoor applications



Surface Treatment and Rust

How to apply Loctite® 7500

1. Preparation

Use a wire brush to remove flaky rust and loose scale. It is recommended to use Loctite® 7063 to remove oil, grease and dirt. Shake well before use.

2. 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® 7800

1. Preparation

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

2. Application

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



Prevention Products

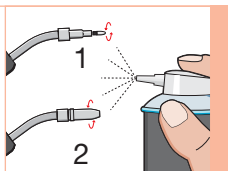
How to apply Loctite® SF 7900 Ceramic Shield

1. Preparation

Clean contact tip and shroud from adhering spatter. For best results, use a new contact tip and shroud. Shake well before use.

2. Application

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



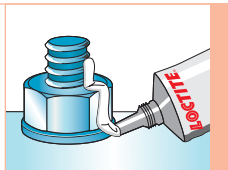
How to apply Loctite® 7414

1. Preparation

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

2. Application

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



Emergency Repair Products

What is your application?

Solution



O-Ring replacement

Free corroded parts

Detect pipe leaks

Loctite® O-RING KIT

Loctite® 8040

Loctite® 7100

O-Ring Kit

Freeze & Release

Leak Detector



Service temperature range (°C)

—

—





+10 to +50°C

Comments

- Contains rubber cords, Loctite® 406 and tools to create customised O-rings
- Allows 'o' rings to be made in situ reducing the degree of dismantling required

- Shock freezing (-40°C)
- Releases rusted, corroded and seized components
- Wicks directly into the rust by capillary action

- Produce bubbles at leakages
- For all gases and gas mixtures except for oxygen
- Non-toxic / non-flammable

Seal pipe leaks		Taping	
Loctite® 3463 Metal Magic Steel™ Stick 	Loctite® 5070 Pipe Repair Kit 	Loctite® 5075 Insulating and Sealing Wrap 	Teroson Tape FIX & REPAIR High Strength Tape 
-30 to +120°C	—	-54 to +260°C	up to +70°C
<ul style="list-style-type: none"> • Steel-filled kneadable stick • For emergency repair of tanks, pipes and castings 	<ul style="list-style-type: none"> • Easy-to-use repair kit for temporary repair of weak areas on pipes 	<ul style="list-style-type: none"> • Insulating and Sealing Wrap • Withstand extreme conditions • Water tight seal 	<ul style="list-style-type: none"> • Fabric reinforced tape • Easy to tear by hand • Repair, reinforce, fix, seal and protect

Emergency Repair Products

How to apply Loctite® 8040

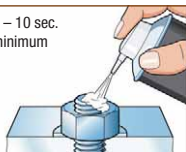
1. Preparation

Remove loose dirt and rust. Shake well before use.

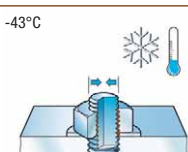
2. Application

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

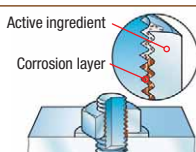
5 – 10 sec.
minimum



-43°C



Active ingredient
Corrosion layer



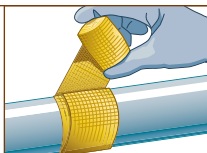
How to apply Loctite® 5070

1. Preparation

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

2. Application

- Mix required amount of Loctite® 3463 (details see chapter **Metal-filled 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 use Loctite® O-Ring KIT

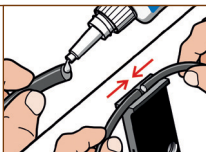
1. Preparation

- Clean cutting blade using Loctite® 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



2. 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



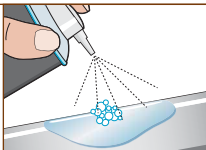
How to apply Loctite® 7100

1. Preparation

Shake well before use.

2. Application

- Spray product from 15 to 20cm onto suspect area
- 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
 IDH 142240	<ul style="list-style-type: none"> • Loctite® 5188, 510, 5366, SI 5980, SI 5990, SI 5616 • Teroson MS 930, MS 9320 SF, PU 6700 	<ul style="list-style-type: none"> • 300 ml • 310 ml • 250 ml (1:1) • 265 ml (2:1)
 IDH 150035	<ul style="list-style-type: none"> • Teroson MS 9399 	<ul style="list-style-type: none"> • 50 ml (1:1)
 IDH 218312	<ul style="list-style-type: none"> • Loctite® 9492 	<ul style="list-style-type: none"> • 400 ml (2:1)
 IDH 267452	<ul style="list-style-type: none"> • Loctite® 9492, V5004 • Teroson PU 6700 	<ul style="list-style-type: none"> • 50 ml (1:1, 2:1)
 IDH 363544	<ul style="list-style-type: none"> • Loctite® 5188, 510, SI 5980, SI 5990 	<ul style="list-style-type: none"> • 50 ml
 IDH 1034026	<ul style="list-style-type: none"> • Loctite® 3038 	<ul style="list-style-type: none"> • 50 ml (10:1)

Peristaltic dispensers








IDH number	For product	For pack size
 <p>IDH 608966</p>	<ul style="list-style-type: none"> Loctite® 222, 243, 270, 542, 603, 638 	<ul style="list-style-type: none"> 50 ml
 <p>IDH 88631</p>	<ul style="list-style-type: none"> Loctite® 222, 243, 270, 542, 603, 638 	<ul style="list-style-type: none"> 250 ml

Pneumatic applicators




IDH number	For product	For pack size
 <p>IDH 142241</p>	<ul style="list-style-type: none"> Teroson MS 9320 SF (for spraying) 	<ul style="list-style-type: none"> 310 ml
 <p>IDH 1175530</p>	<ul style="list-style-type: none"> Loctite® 7255 	<ul style="list-style-type: none"> 900 ml

Equipment – Accessories



Mixers

IDH number	For product	For pack size
 IDH 780805	<ul style="list-style-type: none"> Teroson PU 6700 	<ul style="list-style-type: none"> 250 ml (1:1)
 IDH 1034575	<ul style="list-style-type: none"> Loctite® 3038 	<ul style="list-style-type: none"> 50 ml (10:1)
 IDH 1453183	<ul style="list-style-type: none"> Loctite® 3090 	<ul style="list-style-type: none"> 10 ml (10:1)
 IDH 1467955	<ul style="list-style-type: none"> Loctite® V5004 	<ul style="list-style-type: none"> 50 ml (1:1)
 IDH 1487439	<ul style="list-style-type: none"> Loctite® 9492 	<ul style="list-style-type: none"> 400 ml (2:1)
 IDH 1487440	<ul style="list-style-type: none"> Loctite® 9492 Teroson PU 6700, MS 9399 	<ul style="list-style-type: none"> 50 ml (1:1; 2:1)
 IDH 874905	<ul style="list-style-type: none"> Loctite® SI 5616 	<ul style="list-style-type: none"> 265 ml (2:1)

Nozzles

IDH number	For product	For pack size
 IDH 1395025	<ul style="list-style-type: none">• Teroson MS 9320 SF (for spraying)	<ul style="list-style-type: none">• 310 ml
 IDH 581582	<ul style="list-style-type: none">• Teroson MS 930, MS 9320 SF	<ul style="list-style-type: none">• 310 ml
 IDH 546017	<ul style="list-style-type: none">• Loctite® 5366, SI 5980, SI 5990	<ul style="list-style-type: none">• 310 ml

Needles

IDH number	For product	For pack size
 IDH 88661	<ul style="list-style-type: none">• Loctite® 401	<ul style="list-style-type: none">• 18 Gauge (= Green) ID 0.84 mm
 IDH 88662	<ul style="list-style-type: none">• Loctite® 401	<ul style="list-style-type: none">• 20 Gauge (= 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 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 with regular maintenance



Improve Safety

at work by increasing reliability of your machinery and by using non-hazardous products



Save Time

by using innovative technologies that reduce downtimes and increase service intervals



Reduce Costs

by repairing worn or damaged parts instead of replacing them

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 has enabled us to build up knowledge of the typical maintenance and repair tasks in all major industries and industrial equipment.

Industry programs

Our industry programs cover the typical maintenance and repair challenges in your industry. 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 other matters.



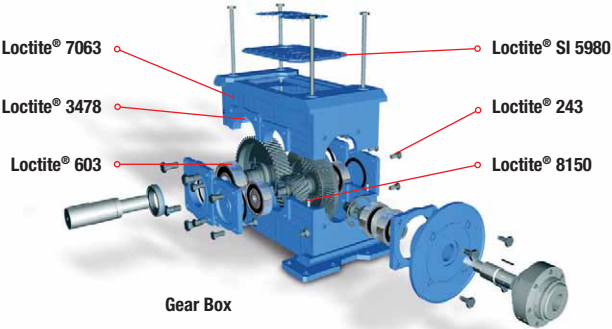
Pump



Shaft



Centrifuge



Find more information on the programs on www.loctite.co.uk/maintenance and contact your Henkel Engineer for a workshop tailored to your needs.



Find the right product and discover additional features. **Check out our mobile Maintenance Expert Guide:**



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