

LOCTITE®
BONDERITE®
TECHNOMELT®
TEROSON®

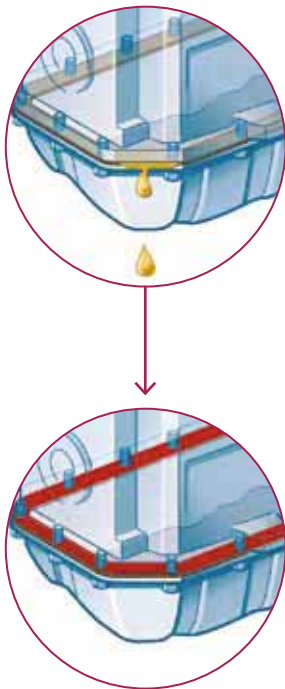
Product Selector

Industrial Adhesive, Sealant and
Functional Coating Solutions



Gasketing Products

Sealing of Flanges



Why use a LOCTITE gasketing product?

Gaskets are used to prevent leakage of fluids or gases by forming impervious barriers. For successful gasketing, the seal must remain intact and leak-free over a long period of time. The gasket must be resistant to fluids and/or gases, and withstand the operating temperatures and pressures to which it is subjected. LOCTITE gasketing products are self-forming gaskets that provide a perfect seal between components, with maximum face-to-face contact, eliminating flange face corrosion. A low-pressure seal is formed immediately on assembly, with full cure in 24 hours giving a joint that will not shrink, crack or relax.

LOCTITE Gasketing products offer a much higher performance and provide numerous benefits over traditional sealing systems such as pre-cut gaskets

The major causes of failure and leakage of compression gaskets are:

- Surface contact: Compression gaskets do not provide total contact between the gasket and the flange surfaces. Therefore minor leakages may always occur (weeping rate)
- Compression set: Compression gaskets relax under dynamic loads and decrease in thickness, with subsequent loss of bolt tension in the flange joint resulting in leakage
- Extrusion: Gaskets can be squeezed out between flanges
- Bolt hole distortion: High stresses are transferred to the gasket material under the bolt head, causing the gasket to crack, tear, rupture or extrude

Advantages of LOCTITE gasketing products as compared to conventional pre-cut compression gaskets

- Single component – easy and clean to apply
- Replace conventional gaskets – reduce inventory
- Fill all voids
- No need for retorquing
- Excellent instant seal
- High resistance to solvents
- Resist high pressure when fully cured

Choose the right LOCTITE gasket for your application

Many factors influence gasket choice. Henkel offers a variety of gasketing materials:

Anaerobic Products for Rigid Flanges

They remain liquid when exposed to air, but cure when confined between mating flanges. LOCTITE anaerobic gasketing products are best suited for rigid metal-to-metal assemblies where the sealing gap is zero or small.



Surface Preparation

Components should be clean and free from contamination such as grease, oil, gasket and sealant residues, etc.

- Degrease, clean and dry surfaces prior to applying the sealant – use LOCTITE SF 7063 (See Cleaning on page 110)
- For maintenance and repair, remove residues of old gaskets with LOCTITE SF 7200 Gasket Remover and clean surfaces with LOCTITE SF 7063 (see Cleaning on page 110)
- If the anaerobic sealant is applied below 5°C, pre-treatment with LOCTITE SF 7240, LOCTITE SF 7471 or LOCTITE SF 7649 is advised (see Surface Preparation on page 133)



Dispensing Equipment

LOCTITE Cartridge Dispensers are ergonomically designed for the hand delivery of LOCTITE sealants. Whether manual or pneumatic, each item is designed for simple, clean, hand-held dispensing of LOCTITE Gasketing Products:

Cartridge Gun Staku 142240

- Hand-held, manually operated dispenser for all standard 300ml cartridges
- Rapid loading system to make cartridge changes clean and easy



142240

Cartridge Gun LOCTITE 97002 Pneumatic Cartridge Dispenser

- Hand held unit for 300ml cartridges and 250ml squeeze tubes
- Integrated pressure regulator
- Quick pressure relief to minimise run-on effect



97002

For information on semi- or fully automated dispensing equipment, available valves, spare parts, accessories and dispensing tips, please refer to pages 152 – 163 or the LOCTITE Equipment Sourcebook.

Silicone Products for Flexible Flanges

LOCTITE silicone gasketing materials include products with specific properties including excellent fluid resistance and formulations for high operating temperatures. They are best suited for large gap applications and assemblies where flange movement occurs.



LOCTITE Gasketing Products

LOCTITE gasketing products can be used on almost every flange type. They are applied as a liquid sealant to one of the flange surfaces before the parts are assembled. After the assembly the gasketing products spreads and cure between the flange, filling gaps, scratches, and surface irregularities to provide a durable seal.



Gasketing Products

Product Table

Which gap must the sealant fill?

Solution

Up to 0.25 mm

Metals

Paste

Gel

Paste

**LOCTITE
574**

**LOCTITE
518**

**LOCTITE
5188**



	LOCTITE 574	LOCTITE 518	LOCTITE 5188
Flange type	Rigid	Rigid	Rigid
Cure method	Anaerobic	Anaerobic	Anaerobic
Oil resistance	Excellent	Excellent	Excellent
Water/Glycol resistance	Excellent	Excellent	Excellent
Service temperature range	-55°C to +150°C	-55°C to +150°C	-55°C to +150°C
Pack size	50ml, 160ml cartridge, 250ml, 2 ltr	50ml, 65ml, 300ml, 850ml, 2 ltr	50ml, 300ml cartridge, 850ml, 2 ltr
Equipment¹	97002, 91124	142240, 97002	142240, 97002

Handy Hints

- Remove residues of old gaskets with LOCTITE SF 7200 gasket remover
- Degrease, clean and dry surfaces prior to applying the adhesive – use LOCTITE SF 7063 (See Cleaning on page 110)
- If the anaerobic sealant is applied below 5°C, pre-treatment with LOCTITE SF 7240 or LOCTITE SF 7649 is advised (See Surface Preparation on page 133)

LOCTITE 574


- Ideal for use on rigid metal parts, e.g. cast iron components and pump housings

LOCTITE 518

- Ideal for use on rigid iron, steel and aluminium flanges
- P1 NSF Reg. No.: 123758**

LOCTITE 5188

- Ideal for sealing all kinds of rigid metal flanges, especially aluminium flanges
- Excellent in demanding applications
- Excellent chemical resistance, highly flexible
- Superior adhesion, can tolerate slight oil contamination on the flange surface

		Greater than 0.25 mm		
		Plastic, metals or combination of both		
Gel	Paste	Paste	Paste	Paste
LOCTITE 5800	LOCTITE 510	LOCTITE SI 5926	LOCTITE SI 5699	LOCTITE SI 5970
				
Rigid	Rigid	Flexible	Flexible	Flexible
Anaerobic	Anaerobic	Moisture	Moisture	Moisture
Excellent	Excellent	Good	Good	Excellent
Excellent	Excellent	Good	Excellent	Good
-55°C to +180°C	-55°C to +200°C	-55°C to +200°C	-55°C to +200°C	-50°C to +200°C
50ml, 300ml cartridge	50ml, 160ml, 250ml	40ml tube, 310ml	300ml cartridge, 20 ltr	300ml cartridge, 20 ltr
142240, 97002	142240, 97002	–	142240, 97002	142240, 97002
<p>LOCTITE 5800</p> <ul style="list-style-type: none"> • Leading in health and safety: No hazard symbols, risk or safety phrases • “White” Material Safety Data Sheet – no entries in sections 2, 3, 15 and 16 of MSDS • Excellent chemical and thermal resistance of cured product 	<p>LOCTITE 510</p> <ul style="list-style-type: none"> • Ideal for use on rigid flanges where high temperature and chemical resistance are necessary <p>P1 NSF Reg. No.: 123007</p>	<p>LOCTITE SI 5926</p> <ul style="list-style-type: none"> • Multi-purpose flexible silicone sealant. Can be used on metal, plastic and painted parts • Resists vibration, thermal expansion and contraction 	<p>LOCTITE SI 5699</p> <ul style="list-style-type: none"> • Ideal for sealing all types of flanges including stamped sheet metal where water glycol resistance is required • Tack-free after 10 min. <p>P1 NSF Reg. No.: 122998</p>	<p>LOCTITE SI 5970</p> <ul style="list-style-type: none"> • Replacement for cork and paper cut gaskets on flanges and stamped sheet metal covers • Ideal for use where high vibration or flexing occurs • Can be used with plastic and painted parts • Tack-free after 25 min.

Gasketing Products

Product List

Product	Chemical basis	Colour	Fluorescence	Service temperature range	Strength	Viscosity	Tensile shear strength
LOCTITE 510	Methacrylate	Pink	No	-55°C to +200°C	Medium	40,000 – 140,000 mPa·s	5 N/mm ²
LOCTITE 515		Dark purple	Yes	-55°C to +150°C	Medium	150,000 – 375,000 mPa·s	6 N/mm ²
LOCTITE 518		Red	Yes	-55°C to +150°C	Medium	500,000 - 1,000,000 mPa·s	7.5 N/mm ²
LOCTITE 573		Green	Yes	-55°C to +150°C	Low	13,500 – 33,000 mPa·s	1.3 N/mm ²
LOCTITE 574		Orange	Yes	-55°C to +150°C	Medium	23,000 – 35,000 mPa·s	8.5 N/mm ²
LOCTITE 5188		Red	Yes	-55°C to +150°C	Medium	11,000 – 32,000 mPa·s	7 N/mm ²
LOCTITE 5203		Red	Yes	-55°C to +150°C	Very low	50,000 - 100,000 mPa·s	1 N/mm ²
LOCTITE 5205		Red	Yes	-55°C to +150°C	Medium	30,000 – 75,000 mPa·s	3 N/mm ²
LOCTITE 5208		Red	Yes	-55°C to +150°C	Medium	12,000 – 27,000 mPa·s	6 N/mm ²
LOCTITE 5800		Red	Yes	-55°C to +180°C	Medium	11,000 – 32,000 mPa·s	5 N/mm ²
LOCTITE 128068		Dark purple	Yes	-55°C to +150°C	Medium	300,000 - 1,000,000 mPa·s	6 N/mm ²
						Extrusion rate	
LOCTITE SI 5699	Silicone	Grey	No	-55°C to +200°C	Low	200 g/min	1.7 N/mm ²
LOCTITE SI 5900		Black	No	-55°C to +200°C	Low	20 – 50 g/min	1.2 N/mm ²
LOCTITE SI 5910		Black	No	-55°C to +200°C	Low	300 g/min	1.2 N/mm ²
LOCTITE SI 5920		Copper	No	-55°C to +350°C	Low	275 g/min	1.4 N/mm ²
LOCTITE SI 5926		Blue	No	-55°C to +200°C	Low	550 g/min	–
LOCTITE SI 5970		Black	No	-50°C to +200°C	Low	40 – 80 g/min	1.5 N/mm ²
LOCTITE SI 5980		Black	No	-55°C to +200°C	Low	120 – 325 g/min	1.5 N/mm ²

Max. gap	Fixture time steel	Fixture time aluminium	Pack sizes	Comments
0.25 mm	25 min.	45 min.	50ml, 160ml, 250ml	For machined, rigid metal flanges – high temperature resistance
0.25 mm	30 min.	30 min.	50ml, 300ml	For machined, rigid metal flanges – medium cure speed
0.3 mm	25 min.	20 min.	50ml, 65ml, 300ml cartridge, 850ml, 2 ltr	For machined, rigid metal flanges – semi-flexible
0.1 mm	9 hr	12 hr	250ml	For machined, rigid metal flanges – slow curing
0.25 mm	15 min.	45 min.	50ml, 160ml cartridge, 250ml, 2 ltr	For machined, rigid metal flanges – general purpose
0.25 mm	25 min.	10 min.	50ml, 300ml, 850ml, 2 ltr	For machined, rigid metal flanges – highly flexible
0.125 mm	10 min.	20 min.	300ml	For machined, rigid metal flanges – easy disassembly
0.25 mm	25 min.	25 min.	50ml, 300ml, 850ml	For machined, rigid metal flanges – semi-flexible
0.125 mm	12 min.	30 min.	250ml	For machined, rigid metal flanges – semi-flexible
0.25 mm	25 min.	20 min.	50ml, 300ml cartridge	For machined, rigid metal flanges – no labelling, white MSDS
0.1 mm	1 hr	3 hr	300ml, 850ml, 2kg	For machined, rigid metal flanges – semi-flexible, very slow curing
	Skin-over time	Cure through volume in 24 hr		
1 mm	30 min.	2.5 mm	300ml, 20 ltr	For flexible flanges, machined or cast surfaces, metal or plastic, excellent in water/glycol
1 mm	15 min.	2.5 mm	50ml, 300ml, 20 ltr	Thixotropic paste, black, excellent in engine oils
1 mm	40 min.	2.75 mm	300ml cartridge, 20 ltr, 200 ltr	For flexible flanges, machined or cast surfaces, metal or plastic
1 mm	40 min.	2.5 mm	80ml tube, 300ml cartridge	For flexible flanges, machined or cast surfaces, high temperature resistant
1 mm	60 min.	2.5 mm	40ml tube, 310ml	For flexible flanges, machined or cast surfaces, metal or plastic
1 mm	25 min.	2.5 mm	300ml cartridge, 20 ltr	For flexible flanges, machined or cast surfaces, metal or plastic
1 mm	30 min.	1 mm	40ml, 100ml, 300ml 200ml rocep can	Flange sealant, black, big gaps, label-free

