

# Anaerobic & RTV Gasketing & Sealing



## Your Application

- Revolutionized flange sealing in the automotive industry, the assembly of heavy equipment, and the manufacture of various types of fluid power equipment
- Remain a liquid when exposed to air, but cure when confined between mating flanges
- Best suited for small gap applications and rigid metal-to-metal assemblies

## Solution

DOES THE EXISTING GASKET NEED TO BE USED AS A SHIM?

No

Are you sealing a rigid or a flexible flange?

Rigid

Flexible

510™  
Flange Sealant

518™  
Flange Sealant

SI 587™ Blue\*  
High Performance  
RTV Silicone  
Gasket Maker

SI 598™ Black\*

Gasket Type	Formed-in-Place	Formed-in-Place	Formed-in-Place	Formed-in-Place
Gap Fill	0.010" (0.25 mm)	0.010" (0.25 mm)	0.250" (6.35 mm)	0.250" (6.35 mm)
Gap Fill with Primer	0.020" (0.50 mm)	0.050" (1.27 mm)	N/A	N/A
Cure Method	Anaerobic	Anaerobic	Moisture (RTV)	Moisture (RTV)
Cure Time	4 to 24 hrs.	4 to 24 hrs.	50 min.	20 min.
Temperature Resistance (Continuous/Intermittent)	400°F (204°C)/ N/A	300°F (149°C)/ N/A	400°F (204°C)/ 500°F (260°C)	400°F (204°C)/ 500°F (260°C)
Oil Resistance	Excellent	Excellent	Excellent	Excellent
Water/Glycol Resistance	Excellent	Excellent	Excellent	Excellent
Recommended Primer	SF 7088™, SF 7649™, SF 7471™	SF 7088™, SF 7649™, SF 7471™	Not Required	Not Required

## Product Description

### LOCTITE® 510™ Flange Sealant

#### High Temperature

Product withstands temperatures to 400°F (204°C) and has excellent solvent and chemical resistance. Fills gaps up to 0.010 in. (0.254 mm) and maintains clamping loads for strong, leakproof assemblies. Makes or dresses gaskets in rigid assemblies. Eliminates gasket compression set.

P/N	Package Size
51031	50 ml tube
51041	250 ml tube
51074	300 ml cartridge

### LOCTITE® 518™ Flange Sealant

Recommended for use on rigid iron, steel and aluminum flanges. Spray LOCTITE® SF 7649™ Primer on only one surface.  
**NSF/ANSI 61 Certified.**  
**CFIA Listed.**

P/N	Package Size
2102974	25 ml syringe
2102986	300 ml tube
2096062	6 ml tube
2096064	50 ml tube
2096061	300 ml cartridge

### LOCTITE® SI 587™ Blue High Performance RTV Silicone Gasket Maker

Recommended for sealing all types of flanges, including stamped sheet metal. Designed for superior bonding properties to oil-contaminated metals.  
**ABS Approved.**  
**NSF/ANSI P1 Certified.**  
**CFIA Listed.**

P/N	Package Size
58730	70 ml tube
58775	300 ml cartridge
58791	50 lb. pail†
40462	190 ml can

### LOCTITE® SI 598™ Black High Performance RTV Silicone Gasket Maker

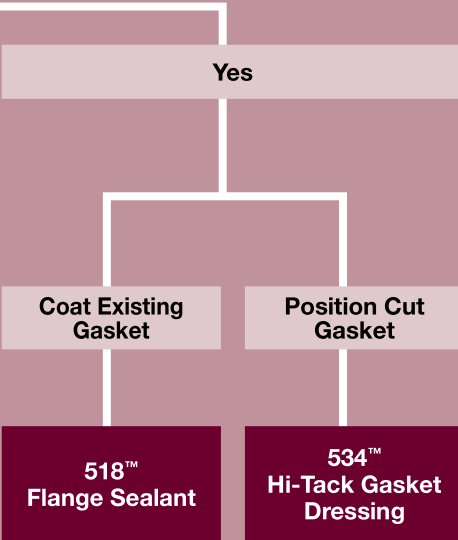
High-performance silicone gasket maker resists aging, weathering and thermal cycling without hardening, shrinking or cracking.  
**CFIA Listed.**

P/N	Package Size
34018	0.5 oz. tube**
59830	70 ml tube
59875	300 ml cartridge
59891	49 lb. pail
40463	190 ml can

\* See page 75 for additional properties.

\*\* Uncarded tubes, sold as full cases of 100 pieces.

† Made-to-order item.



Formed-in-Place	Two-Part Acrylic
0.010" (0.25 mm)	N/A
0.050" (1.27 mm)	N/A
Anaerobic	Anaerobic
N/A	N/A
300°F (150°C)/ N/A	300°F (150°C)/ N/A
Excellent	Excellent
Excellent	N/A
SF 7088™, SF 7649™, SF 7471™	Not Required

**LOCTITE® 518™ Flange Sealant**

Recommended for use on rigid iron, steel and aluminum flanges. Spray LOCTITE® SF 7649™ Primer on only one surface. **NSF/ANSI 61 Certified. CFIA Listed.**

P/N	Package Size
22423	25 ml syringe kit
22424	300 ml syringe kit
51817	6 ml tube
51831	50 ml tube
51845	300 ml cartridge

**LOCTITE® 534™ Hi-Tack Gasket Dressing**

No mess, semisolid formula offers added control and ease of use. Patented package is portable and won't leak or spill. Seals and holds the heaviest gaskets in place during assembly. Solvent-free and low odor. Suitable to 300°F (150°C).

P/N	Package Size
39156	19 g stick

**WHEN SHOULD A LOCTITE® PRIMER BE USED?**

LOCTITE® anaerobic adhesives cure (1) in the absence of air, and (2) in the presence of metal ions. When assembling inactive metal parts – which are low in metal ions – use of a LOCTITE® Primer is strongly recommended to ensure proper performance.

**HELPFUL HINTS**

INACTIVE METALS (PRIMERS RECOMMENDED)		ACTIVE METALS (PRIMERS OPTIONAL)
PLATED PARTS	SILVER	IRON
ANODIZED ALUMINUM (ALODINE®, IRIDITE™)	GOLD	PLAIN STEEL
TITANIUM	ZINC	COPPER
STAINLESS STEEL	PURE	BRASS
GALVANIZED STEEL	ALUMINUM†	BRONZE
MAGNETITE STEEL	CADMIUM	MANGANESE
INCONEL™	MAGNESIUM	MONEL™
NICKEL	NATURAL OR CHEMICAL BLACK OXIDE	KOVAR™

Primers also help speed up cure rates. Fixture time can be reduced from several hours to minutes, allowing faster assembly and production throughput.

LOCTITE® primers are also recommended when assembling metal parts that are cold, have large gaps or deep threads.

**NOTE:** Using a primer will decrease ultimate bond strength.



**GASKETING & SEALING PREP STEPS**

- Clean parts with LOCTITE® SF 7070™ ODC-Free Cleaner & Degreaser.
- If the parts were in contact with aqueous washing solutions or cutting fluids, which leave a protective layer on the surface, wash with hot water before use.
- If applying below 40°F, pretreat parts with LOCTITE® SF 7649™ Primer.

**HELPFUL HINTS**

† Pure aluminum is an inactive metal. Alloys of aluminum containing copper are considered active metals.

# Anaerobic & RTV Gasketing & Sealing

## LOCTITE® Rigid Assembly Gasketing Product Properties Chart

LOCTITE® PRODUCT	ITEM NUMBER	PACKAGE TYPE/SIZE	COLOR	TYPICAL USE	GAP FILL (INCHES)	CURED STATE	VISCOSITY (cP)	TEMPERATURE RANGE	CURE SPEED	RECOMMENDED PRIMER	SPECIFIC GRAVITY	AGENCY APPROVALS
<b>RIGID ASSEMBLY GASKETING PRODUCTS</b>	<b>510™ HIGH TEMPERATURE</b>	51031 50 ml tube 51041 250 ml tube 51074 300 ml cartridge	Red	High temp. applications, excellent solvent resistance	Unprimed – 0.010 Primed – 0.020	Rigid	188,000/500,000 Thixotropic	-65°F to 400°F (-54°C to 204°C)	Unprimed – 4 to 24 hrs. Primed – 30 min. to 4 hrs.	SF 7088™, SF 7471™ or SF 7649™	1.16	N/A
	<b>515™</b>	51517 6 ml tube 51531 50 ml tube 51580 300 ml cartridge	Purple	For flexible applications	Unprimed – 0.010 Primed – 0.050	Flexible	275,000/950,000 Thixotropic	-65°F to 300°F (-54°C to 149°C)	Unprimed – 1 to 12 hrs. Primed – 15 min. to 2 hrs.	SF 7088™, SF 7471™ or SF 7649™	1.10	UL Classified for U.S.
	<b>518™</b>	2102974 25 ml syringe 2102986 300 ml tube 2096062 6 ml tube 2096064 50 ml tube 2096061 300 ml cartridge	Red	For all metals, including aluminum flanges	Unprimed – 0.010 Primed – 0.050	Flexible	800,000/3,750,000 Thixotropic	-65°F to 300°F (-54°C to 149°C)	Unprimed – 4 to 24 hrs. Primed – 30 min. to 4 hrs.	SF 7088™, SF 7471™ or SF 7649™	1.13	NSF/ANSI 61, CFIA Listed
	<b>549™</b>	1661866 250 ml tube	Orange	Slow curing for extended assembly operations	Unprimed – 0.020 Primed – 0.050	Rigid	22,500	-65°F to 300°F (-54°C to 149°C)	Unprimed – 6 to 24 hrs. Primed – 2 to 24 hrs.	SF 7471™ or SF 7649™	1.25	N/A
	<b>5127™</b>	17430 300 ml cartridge	Blue	For flexible applications, high elongation	0.010	Flexible	100,000/500,000 Thixotropic	-65°F to 300°F (-54°C to 149°C)	Unprimed – 4 to 24 hrs. Primed – 1 to 24 hrs.	SF 7649™	1.10	N/A
<b>HIGHLY FLEXIBLE</b>	<b>509™</b>	21525 300 ml cartridge	Blue	Very flexible	Unprimed – 0.010 Primed – 0.020	Flexible	65,000/200,000 Thixotropic	-65°F to 300°F (-54°C to 149°C)	Unprimed – 6 to 48 hrs. Primed – 1 to 6 hrs.	SF 7088™, SF 7471™ or SF 7649™	1.12	N/A
	<b>5188™</b>	1241991 300 ml cartridge 1253203 50 ml tube	Red	Rigid metal flanges	0.005	Highly Flexible	14,000 - 32,000	-65°F to 300°F (-54°C to 149°C)	24 hrs. @ room temperature	SF 7649™	1.10	N/A

Information about SI 587™ and SI 598™ is in the chart on page 75.

## LOCTITE® Sealing / Dressing for Existing Gasket Properties Chart

LOCTITE® PRODUCT	ITEM NUMBER	PACKAGE TYPE/SIZE	COLOR	TYPICAL USE	CONSISTENCY	VISCOSITY (cP)	TEMPERATURE RANGE	CURE SPEED	OIL RESISTANCE	AGENCY APPROVALS	
<b>SEALING / DRESSINGS FOR EXISTING GASKETS</b>	<b>NONCORROSIVE</b>	<b>534™ HI-TACK GASKET DRESSING</b>	39156 19 g stick	Purple	Vertical, repositionable	Semisolid	N/A	-65°F to 300°F (-54°C to 149°C)	5 minutes to set	Oil resistant	N/A
		<b>MR GS1™ GASKET SEALANT</b>	30510 1.5 oz. tube 30512 7 fl. oz. tube	Reddish-Brown	Fast dry, rigid cure	Paste	75,000/110,000	-65°F to 400°F (-54°C to 204°C)	Full strength – 24 hours	Oil resistant	CFIA Listed
		<b>MR GS2™ GASKET SEALANT</b>	30513 1.5 oz. tube 30514 3 oz. tube 30515 7 fl. oz. tube 80964 5 gallon can	Black	Slow drying, flexible cure	Paste	75,000/110,000	-65°F to 400°F (-54°C to 204°C)	Remains tacky	Oil resistant	N/A
		<b>NS 5109™ GASKET MAKER</b>	30558 7 fl. oz. tube	Black	High temperature	Paste	75,000/110,000	-50°F to 600°F (-45°C to 315°C)	3 to 5 hours to set	Oil resistant	CFIA Listed
		<b>MR 5009™ HI-TACK GASKET SEALANT</b>	1540591 1 pint brush-top can 30526 9 oz. net wt. aerosol	Red	Improved heat transfer, repositionable	Liquid	420/650	-65°F to 500°F (-54°C to 260°C) [aerosol to 600°F/316°C]	5 minutes to set	Increased oil resistance	N/A
		<b>MR 5923™ GASKET DRESSING</b>	1522029 1 pint brush can	Dark Reddish-Brown	Close tolerance, slow cure	Liquid	85/140	-65°F to 400°F (-54°C to 204°C)	Full strength – 12 hours	Oil resistant	CFIA Listed
		<b>MR 7657™ COPPER GASKET ADHESIVE</b>	30535 9 oz. net wt. aerosol	Copper	Improved heat transfer, fills surface imperfections	Aerosol	N/A	-50°F to 500°F (-45°C to 260°C)	Remains tacky	Oil resistant	N/A

## LOCTITE® Primer Properties Chart

LOCTITE® PRODUCT	ITEM	PACKAGE TYPE & SIZE	COLOR	VISCOSITY (cP)	BASE	ON-PART LIFE	DRY TIME	APPLICATION	AGENCY APPROVALS
<b>SF 7088™ PRIMER</b>	1069258	17 g stick	Teal	Semisolid	No solvent	30 days	None	Anaerobics	N/A
<b>SF 7090™ ACTIVATOR</b>	19368 1 fl. oz. bottle 12695 1 liter bottle		Dark Blue	17.5	No solvent	1 hour	None	Anaerobics	N/A
<b>SF 7471™ PRIMER</b>	19267 1.75 fl. oz. glass bottle 22477 4.5 oz. net wt. aerosol can 19268 1 gallon can		Amber	2	Acetone/Isopropanol	7 days	30 to 70 seconds	Anaerobics	MIL-S-22473E for existing designs, ASTM D-5363 for new designs
<b>SF 7649™ PRIMER</b>	19269 1.75 fl. oz. glass bottle 21347 25 g net wt. aerosol can 21348 4.5 oz. net wt. aerosol can 19266 1 gallon can		Clear/Green	2	Acetone	30 days	30 to 70 seconds	Anaerobics	MIL-S-22473E for existing designs, ASTM D-5363 for new designs, NSF/ANSI 61, NSF P1, CFIA Listed

ITEMS IN RED = Source's PICK or NEW  = Indicates Worldwide Availability

U.S.: 1-800-LOCTITE (562-8483)

Canada: 1-800-263-5043

na.henkel-adhesives.com/loctite

www.equipment.loctite.com