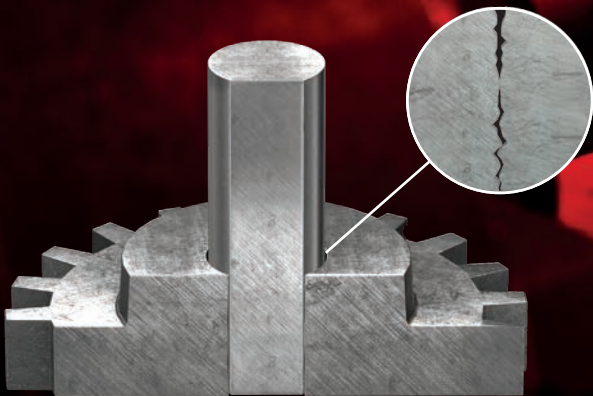


RETAINING COMPOUNDS

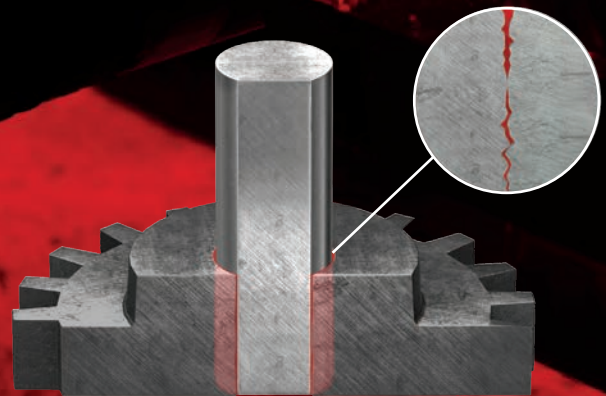
LOCTITE[®] retaining compounds secure components.

For strong reliable assemblies.



PROBLEM

Without retaining compounds:
Mechanical fitting methods leave gaps between fitted parts which cause cylindrical assembly failure.



SOLUTION

With retaining compounds:
Gaps are unitised to provide higher torsional loads and prevent fretting corrosion.

High loads high strength products

Retaining compounds secure bearings, keyways and cylindrical parts into housings or onto shafts, forming strong assemblies. LOCTITE® retaining compounds offer an effective and economical method to eliminate challenges like loosening, corrosion, backlash and wearing by unitising the assembly and providing uniform stress distribution.



How to choose a retaining compound.



GAP SIZE

UP TO 0.15 MM

Typically, lower viscosity retaining compounds are used for gaps up to 0.15 mm. These are typically tight fitting interference fits like those found in press & shrink fits.

0.15 MM TO 0.25 MM

For gaps above 0.15 mm retaining compounds with higher viscosities that allow for better gap fill are used. These include bonded slip fits.

0.25 MM TO 0.5 MM

For assemblies with large gaps that are badly worn, special paste-like retaining compounds should be used.



TEMPERATURE RESISTANCE

Most LOCTITE® retaining compounds are able to withstand temperatures of -55°C to +150°C. However, certain chemistries are available that withstand temperatures up to 180°C to 230°C for assemblies which see higher service temperatures.



STRENGTH

A high-strength retaining compound is recommended for applications that do not need to be disassembled or require extremely high torsional loads. If parts need to be taken apart for maintenance, a lower strength product should be used to aid in disassembly.

Degrease, clean and dry surfaces prior to applying the retaining compound – use LOCTITE® SF 7063. If the retaining compound is applied below 5°C, pre-treatment with LOCTITE® SF 7649 is advised. Use in conjunction with existing designs to increase their strength. For shrink fit assemblies, please contact your local Sales Engineer.

RETAINING COMPOUNDS

Find the right product for your application



GAP SIZE

Gap Size Up To 0.15 mm

LOCTITE® 609™
LOCTITE® 641™
LOCTITE® 648™

Gap Size 0.15 to 0.25 mm

LOCTITE® 232™
LOCTITE® 620™
LOCTITE® 638™
LOCTITE® 635™
LOCTITE® 680™

Gap Size 0.25 to 0.5 mm

LOCTITE® 660™

Gap Size up to 0.15 mm

RETAINING COMPOUNDS



609™
General Purpose



Temperature Resistance:
150°C



Strength: 15.8 N/mm²

Cure Speed: 24 hours
Fixture Time: 15 minutes*



641™
Medium Strength



Temperature Resistance:
150°C



Strength: 6.5 N/mm²

Cure Speed: 24 hours
Fixture Time: 25 minutes *



648™
High Strength



Temperature Resistance:
180°C



Strength: 31 N/mm²

Cure Speed: 24 hours
Fixture Time: 3 minutes*



RETAINING COMPOUNDS

Product	Item Number	Pack Size	Colour	Features	Viscosity [cP]	Compressive Shear Strength, Steel to Steel, psi (N/mm ²)	Fixture Time [min]	Temperature Range
GAP SIZE - UP TO 0.15 mm								
609™	471311	10 ml	Green	Medium strength - excellent load transmission capabilities, augment press fits	120	15.8	15	-55°C to 150°C
	234551	50 ml						
	234549	250 ml						
640™	135521	250 ml	Green	High Strength, slow fixture, Mil-R-46082B / ASTM D5363 tested	600	22	30	-55°C to 180°C
641™	469090	10 ml	Green	Controlled strength - ideal for cylindrical parts that require disassembly	600	6.5	20	-55°C to 150°C
	1496887	10 ml (automotive)						
	1496859	50 ml						
	1496874	250 ml						
648™	1800518	50 ml	Green	High strength, primerless, fast fixturing	500	25*	3	-55°C to 180°C
GAP SIZE - UP TO 0.25 mm								
635™	135516	50 ml	Green	High strength, Mil-R-46082B / ASTM D5363 tested	2000	20	30	-55°C to 150°C
	135517	250 ml						
638™	1878045	50 ml	Green	High strength for slip-fitted parts, primerless	2500	25**	4	-55°C to 180°C

* Increase to 31 N/mm² after 7 days cure

** Increase to 29 N/mm² after 7 days cure

Gap Size - 0.15 mm to 0.25 mm

RETAINING COMPOUNDS



232™
High Lubricity



Temperature Resistance:
150°C



Strength: 7 N/mm²

Cure Speed: 24 hours
Fixture Time: 5 hours*



620™
High Temperature



Temperature Resistance:
230°C**



Strength: 17.2 N/mm²

Cure Speed: 24 hours
Fixture Time: 60 minutes*



680™
General Purpose



Temperature Resistance:
180°C



Strength: 26 N/mm²

Cure Speed: 24 hours
Fixture Time: 4 minutes*



638™
High Strength



Temperature Resistance:
180°C



Strength: 29 N/mm²

Cure Speed: 24 hours
Fixture Time: 4 minutes*



635™
Mil-Spec



Temperature Resistance:
150°C



Strength: 20 N/mm²

Cure Speed: 24 hours
Fixture Time: 30 minutes*



660™
Badly Worn Assemblies
Use with LOCTITE SF 7649

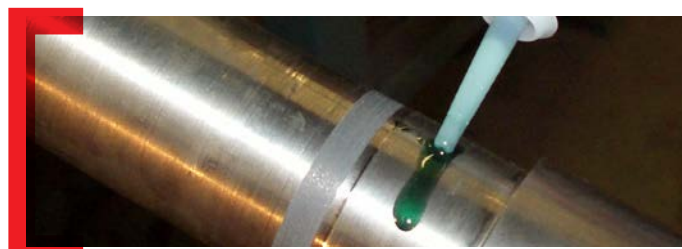


Temperature Resistance:
150°C



Strength: 17.2 N/mm²

Cure Speed: 24 hours
Fixture Time: 15 minutes *



* Fixture time measured at room temperature on steel joints
** After 30 min. heat cure at 180°C

RETAINING COMPOUNDS

Product	Item Number	Pack Size	Colour	Features	Viscosity [cP]	Compressive Shear Strength, Steel to Steel, psi (N/mm²)	Fixture Time [min]	Temperature Range
GAP SIZE - UP TO 0.25 mm								
680™	1878433	50 ml	Green	High strength, fast fixturing, primerless, best resistance to dynamic, axial, and radial loads. Potable water approval AS/ NZS 4020:2018 PST20158	1300	19***	4	-55°C to 180°C
	1878498	250 ml						
620™	234772	10 ml	Green	High strength, slow fixture, high temperature and heat aging resistance	8,000	17	60	-55°C to 230°C
	234776	50 ml						
	135515	250 ml						
232™	1381765	250 ml	Brown	High lubricity to facilitate smooth assembly of heavy interference / press fits, Prevents galling and metal pick-up during assembly	6,200	7	5 hrs	-55°C to 150°C
GAP SIZE - 0.5 mm								
660™	473167	6 ml	Silver	High Strength, large gap fill for repairing worn coaxial parts without remachining	250,000	17	15	-55°C to 150°C
	473166	50 ml						

*** Increase to 26 N/mm² after 7 days cure