LOCTITE

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Product Description Sheet

Product 554

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PRODUCT DESCRIPTION

Loctite® Refrigerant Sealant 554 provides maximum solvent resistance on threaded fittings and pipe up to 2" in diameter. It is recommended for refrigeration systems and service with strong chemicals. The sealant is used in place of specialty non-hardening compounds, litharge, glycerine, and sealing tape. **Refrigerant Sealant is not for slip fitted tube joints.** 554 has excellent solvent resistance and withstands temperatures to 300ºF (149ºC).

TYPICAL APPLICATIONS

- Metal and fiber plants
- Chemical processing
- Paper processing plants
- Waste treatment facilities
- Textile industry

PROPERTIES OF UNCURED MATERIAL

	Typical Value
Chemical Type	Methacrylate Ester
Appearance	Red liquid
Specific Gravity @ 25°C	1.02
Viscosity, @ 25°C, MPa.s (cP)	
Brookfield RVF, Method B	
Spindle 3 @ 20 rpm	2,500
Flash Point (TCC), °C	>200ºF (93ºC)
Toxicity	Low

USE AND APPLICATION

Directions for Application

1. Optimum results will be obtained on fittings that are clean and free of grease and oil.
2. Apply 554 to the leading threads of the male fitting, leaving the first thread free of sealant. Force material into the threads to thoroughly fill the voids.
3. Using accepted trade practices, assemble and wrench tighten fittings until proper alignment is obtained.
4. Properly tightened fittings will seal instantly to moderate pressures. For maximum pressure resistance and solvent resistance allow 554 to fully cure (at least 24 hours).

Disassembly

Fittings assembled with 554 may be disassembled with normal hand tools. For large pipe diameters (over 1") heat may be required to disassemble fittings. Fittings may be reused by removing loose sealant residue with a wire brush and reapplying 554 Refrigerant Sealant.

TYPICAL PROPERTIES OF CURED MATERIAL

Time to achieve full strength on steel @ 72ºF		24 hrs min
Coefficient of thermal expansion, ASTM D696		0.1
Coefficient of thermal conductivity, ASTMC177		
	W / m.ºK	0.1
Specific heat,	k J / kg.ºK	0.3

PERFORMANCE OF CURED MATERIAL

(After 72 hrs @ 22 °C on steel)

	Typical Value
Breakaway torque, on steel 3/8 x 24 degreased grade 5 bolts and grade 2 nuts	240 in. lb
Prevail Torque, on steel 3/8 x 24 degreased grade 5 bolts and grade 2 nuts	210 in. lb

MATERIAL COMPATABILITY

Loctite anaerobic adhesive/sealants can be used in conjunction with all metals, glass, ceramics and many thermoset plastics such as phenolic, polyster, etc. Liquid adhesives will, however, soften and sometimes craze thermoplastics including ABS, polycarbonate, vinyl, methacrylates, etc. They will also soften varnish and lacquer finishes. Most baked enamel finishes are not harmful by initial contact but should be wiped clean within an hour of application. The cured 554 Refrigerant Sealant will not affect any of these materials.

GENERAL INFORMATION

This product is not recommended for use in pure oxygen and/or oxygen rich systems and should not be selected as a sealant for chlorine or other strong oxidizing materials.

For safe handling information on this product, consult the Material Safety Data Sheet (MSDS).

Where aqueous washing systems are used to clean the surfaces before bonding, it is important to check for compatibility of the washing solution with the adhesive. In some cases these aqueous washes can affect the cure and performance of the adhesive.

This product is not normally recommended for use on plastics (particularly thermoplastic materials where stress cracking of the plastic could result). It is recommended to confirm compatibility of the product with such substrates.

Directions for use

1. Optimum results will be obtained on fittings that are clean and free of grease and oil.

2. Apply 554 to the leading threads of the male fitting, leaving the first thread free of sealant. Force material into the threads to thoroughly fill the voids.

3. Using accepted trade practices, assemble and wrench tighten fittings until proper alignment is obtained.

4. Properly tightened fittings will seal instantly to moderate pressures. For maximum pressure resistance and solvent resistance allow 554 to fully cure (at least 24 hours).

Storage
Products shall be ideally stored in a cool, dry location in unopened containers at a temperature between 8° to 28°C (46 ° to 82°F) unless otherwise labeled. To prevent contamination of unused product, do not return any material to its original container. For specific shelf-life information, contact your local Technical Service Center.

Data Ranges
The data contained herein may be reported as a typical value and/or range. Values are based on actual test data and are verified on a periodic basis.

Note
The data contained herein are furnished for information only and are believed to be reliable. We cannot assume responsibility for the results obtained by others over whose methods we have no control. It is the user's responsibility to determine suitability for the user's purpose of any production methods mentioned herein and to adopt such precautions as may be advisable for the protection of property and of persons against any hazards that may be involved in the handling and use thereof. In light of the foregoing, **Loctite Corporation specifically disclaims all warranties expressed or implied, including warranties of merchantability or fitness for a particular purpose, arising from sale or use of Loctite Corporation's products. Loctite Corporation specifically disclaims any liability for consequential or incidental damages of any kind, including lost profits.** The discussion herein of various processes or compositions is not to be interpreted as representation that they are free from domination of patents owned by others or as a license under any Loctite Corporation patents that may cover such processes or compositions. We recommend that each prospective user test his proposed application before repetitive use, using this data as a guide. This product may be covered by one or more United States or foreign patents or patent applications.