LOCTITE

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Product Description Sheet

Product 513

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PRODUCT DESCRIPTION

LOCTITE® Dri-Seal™ Product 513 High Temperature Pre-applied Thread Sealant is a ready to use, sealing compound applied to bolts, screws, studs, pipe plugs, etc. Dri-Seal™ 513 is a resilient, tight clinging, non-curing sealant for tapered or straight threads. This product can be used on metal or plastic fittings. This product withstands temperatures up to 350ºF (177ºC).

TYPICAL APPLICATIONS

Dri-Seal™ 513 provides positive sealing and resistance to vibrational loosening. The thread filling ability and prevailing torque characteristics are effective for use on locking applications, particularly where readjustments are required.

- Rear axle filler plugs
- Adjustment screws
- Bearing adjuster nuts
- Shower head fittings
- Water sprinkler fittings
- Brake fittings
- Compressor pipe
- Pressure gauges & sensors
- Cable connectors
- Pipe fittings
- Screws for plastic assembly
- Adjustment screws

PRODUCT FEATURES

Improved Reliability

- Seals pipe threads for immediate use.
- Locks straight threads by resisting thread movement.
- Can be easily seen and inspected.
- Does not contaminate from shredding and washout.
- Provides lubrication for assembly.
- Seals against leakage of automotive lubricants, fuels and coolants up to 300ºF/150ºC with intermittent use to 350ºF/177ºC.

Cost Savings

- Is inexpensively applied by high speed equipment
  - Can be shipped on parts for field service.
  - Save application labor and mess on the line.

DIRECTIONS FOR USE

LOCTITE® Dri-Seal™ 513 is applied to threaded parts by Loctite authorized converters throughout the United States who have automatic fastener cleaning, feeding, coating, rust proofing and drying equipment. Quantities of parts to be coated can be handled promptly with minimum turnaround time. Samples of threaded parts should be sent to the nearest Loctite authorized converter where the parts will be coated with Dri-Seal™ 513 and returned for required evaluation. Contact the nearest Loctite Technical Service Center for additional information on the Loctite authorized converters available for this service.

PROPERTIES OF UNCURED MATERIAL

	Typical Value
Chemical Type	Tough resin coating
Appearance	White liquid
Specific Gravity, gm/cc	1.22
Viscosity @ 77°F/25°C, Pa.s (cP)	
Brookfield RVF, Spindle #4, 20 rpm	400 - 1200

CURING INFORMATION OF THE LIQUID SEALANT

Drying Requirements:
Thin film coating requires 10 - 30 minutes @ 155ºF with an airflow of not less than 60 cubic feet per minute.

TYPICAL PROPERTIES OF CURED MATERIAL

Normal operating temperature range -65º to 300ºF (-54º to 150ºC)

COATING SOFTNESS
Dri-Seal™ 513 is compounded to be soft and provide good cold flow sealing properties. This prevents galling and allows a resilient coating for ease of installation onto aluminum and other soft metals, plastics, etc.

LUBRICITY
Dri-Seal™ 513 is designed to give consistent control of lubricity. Dri-Seal™ 513 may affect the K - value and when precise results are necessary, the user should first test the actual coated parts.

TYPICAL PERFORMANCE OF CURED MATERIAL

HEAT RESISTANCE
Dri-Seal™ 513 sealant, coated on 3/8" malleable iron National Pipe Thread (NPT) fittings are exposed to the following high temperature conditions of 302ºF/150ºC for 30 days and to 351ºF/177ºC for 10 days. After the heat aging period, the assemblies are pressure tested for fluid leaks. Test assemblies passed 1035 kPa for one minute.

	Typical Value
On part life, years	4

Chemical / Solvent Resistance
Dri-Seal™ 513 coated on 3/8" malleable iron National Pipe Threads (NPT) fittings are immersed in the following automotive test fluids at the specified temperature for 30 days. After the aging period, the assemblies are tested for fluid leaks. Assemblies passed 1035 kPa for one minute.

Solvent	Solvent Temperature
Standard automotive engine oil	302ºF/150ºC
Standard automotive transmission fluid	302ºF/150ºC
50/50 Ethylene glycol and water	248ºF/120ºC
Tap water	212ºF/100ºC
Brake Fluid	302ºF/150ºC
Gasoline, unleaded	77ºF/25ºC
Diesel fuel #2	77ºF/25ºC

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).

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. Optimal storage is at the lower half of this temperature range. 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.

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.