Krytox™ TS4
Performance Lubricants

Thread Sealant

Product Information

Krytox™ TS4 thread sealant, the solution for demanding applications, is designed for use on a variety of metal and plastic surfaces.

Specially formulated for added sealing power, Krytox™ TS4 seals water, air, steam, natural gas, and reactive gases and liquid.

Key Benefits

- Unlike PTFE tape, which should be removed before re-application, Krytox™ TS4 can be re-applied over existing Krytox™ thread sealant.
- Clings to threads and will not shred or tear on assembly/disassembly.
- Cannot plug or restrict critical piping, valves, or instruments like tape solids.
- Krytox™ TS4 is non-reactive, non-toxic, nonflammable, non-corrosive and compatible with most seal, O-ring, and valve polymers.
- No VOC content or hydrocarbon in the product; safe for oxygen use with no auto-ignition temperatures.
- Cost-effective—only a small amount of sealant needed per application.
- Fast and easy to apply, even while wearing protective gloves.
- Operating temperature range of -54–149 ºC (-65–300 ºF).
- Tested leak free under helium at 400 psi for 7 days.*
- Safe for use: The Chlorine Institute (Pamphlet 164) rates Krytox™ lubricants a "1".
- Lubricates threads, preventing costly thread damage from galling and seizing during assembly. Allows low breakaway torque for easy-to-break connections.

Suggested Krytox™ TS4 Thread Sealant Application Procedures

- Clean all pipe and fitting threads with a non-chlorinated solvent to remove cutting/protective oil and chase threads with stiff wire brush to remove burrs, debris, and old sealant (PTFE tape, pipe dope, anaerobic resin, etc.).
- Check pipe and fittings against ASNI/ASME guideline B.20.1-1983 to meet specifications for proper fit and engagement.
- Construct piping systems following all applicable ANSI/ASME codes.
- Apply Krytox™ TS4 to fill the male threads evenly, up to the recommended engagement length from the ANSI/ASME guideline. DO NOT OVERTIGHTEN.

* Users should complete testing in their process and conditions to determine suitability.

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Project	Pipe Thread Sealant Leak Test	
Sealant	Krytox™ TS4	
Leak Check Gas	Helium	
Result	PASS	
Time	Pressure, psig	Temperature, °F
Day 1	400	81.5
	400	81.9
	400	84.2
Day 2	400	82
	400	83.5
	399	78.2
Day 3	399	78.7
	400	83.6
	402	86.4
Day 4	400	78.8
	400	80.8
	403	87.8
Day 5	404	89
	398	79.3
	402	87.5
Day 6	402	88
	398	82.3
	400	86.2
Day 7	401	87.7
	392	78
	401	87.7

Note: Pressure fluctuations due to temperature change

Due to its small atomic size, helium passes easily through leaks, and it is an industry standard for a tracer gas used to find leaks.

Krytox™ TS4 is conveniently available in 0.5, 2, and 8 oz tubes, 0.5 kg jars, and other size containers available upon request.

Krytox™ lubricants have been used in contact with the following chemicals, in addition to many others not listed:

Acetone
Acrylonitrile
Alcohol
Acetylene Hydrocarbon Oils
Ammonia
Ammonium Nitrate
Aniline
Aqueous Caustic
Benzene
Boiling Sulfuric Acid
Brake Fluids
Bromine
Butadiene
Butane
Butylene
Carbon Dioxide
Carbon Monoxide
Carbon Tetrachloride
Chlorine, Liquid or Gas
Chlorine Trifluoride
Chloroform
Compressed Air
Dichlorosilane
Dimethylether
Diesel Fuel
Diethylenetriamine
Ester Oils
Ethane
Ethanol
Ethyl Alcohol
Ethyl Chloride
Ethylene
Ethylene Glycol
Ethylene Oxide
Fluorine
Formaldehyde
Gasoline
Helium
Heptane
Hexafluoropropylene
Hexane
Hydrobromic Acid
Hydrocarbon Compounds
Hydrocyanic Acid
Hydrochloric Acid
Hydrofluoric Acid
Hydrogen
Hydrogen Bromide
Hydrogen Chloride
Hydrogen Peroxide
Hydrogen Sulfide
Iodine
Isopropyl Alcohol
JP 4 and 8 Turbine Fuel
Lithium Glycol
Methane
Methanol
Methylamine
Methylchloride
Methylbromide
Methylmercaptan
Methylsilane
Methylene Oxide
Mineral Acids
Monosilane
Molten Caustic
Natural Gas
Nitric Acid
Nitrogen
Nitrogen Oxide
Nitrogen Oxides
Nitrogen Trifluoride
Nitrotrifluorine
Nitrous Oxide (Anesthesia)
Organic Acids
Organic Compounds
Oxygen, Liquid or Gas
Ozone
Pentane
Polyalphaolefin
Potassium Chloride
Potassium Hydroxide
Perchloroethylene
Phosphoric Acids
Phosgene
Polyalkylene Glycols
Polyalpholefins
Polyol Ester Oils
Polyphenyleneoxide (PPO)
Potassium Hydroxide
Potassium Permanganate
Propane
Propylene
Red Fuming Nitric Acid
Silicone Products
Sodium Hydroxide
Sulfur Hexafluoride
Sulfuric Acid
Sulfur Oxides
Unsymmetrical Dimethyl Hydrazine
Uranium Hexafluoride
Trifluoroacetylchloride
Trimethylamine
Vinyl Chloride
Vinyl Bromide
Vinyl Fluoride
Water, Steam

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