

## 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.

#### 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 °C (-65–300 °F).
- Tested leak free under helium at 400 psi for 7 days.\*



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

- 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 ANSI/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.

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

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