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Technical Data Sheet

High Temperature Thread Sealant

INDUSTRIAL

PRODUCT DESCRIPTION

Permatex® High Temperature Thread Sealant is a medium strength anaerobic sealant with PTFE for tapered pipe threads. This sealing compound is of a white, creamy paste consistency. The high lubricating properties of this compound prevents galling on pipe threads and fittings. It will provide immediate low pressure sealing and allow for the readjustment of fittings shortly after assembly. After 72 hours the joint is sealed to pipe burst pressure. This product has a medium solvent resistance and will withstand temperatures to 400°F (204°C). **This product is not recommended for use on plastic piping.**

PRODUCT BENEFITS

- Resists leakage, vibration loosening, moisture, hydraulic fluids, diesel fuels.
- Lubricates threads for easy assembly and disassembly.
- Will not shred or wear like tapes.
- Parts may be repositioned for up to 24 hours after application.

TYPICAL APPLICATIONS

- Head bolts into through holes
- Oil PSI sending units/sensors
- Oil and coolant lines
- Fuel fittings
- Rear axle fill plug
- Brake and power steering fittings

DIRECTIONS FOR USE

1. For best performance, surfaces should be clean and free of grease.
2. Product should be applied to the thread engagement area in sufficient quantity to fill all engaged threads.
3. Use accepted trade practices to assemble and wrench-tighten fittings until proper alignment is obtained.
4. Very large thread sizes may create large gaps, which will affect cure speed and strength.
5. For maximum pressure and solvent resistance, allow at least 24 hours for the product to fully cure before filling and pressurizing system.
6. Fittings assembled with Permatex® High Temperature Thread Sealant may be disassembled with normal hand tools.
7. For large pipe diameters (over 1"), heat may be required to disassemble fittings.
8. Fittings may be reused by removing loose sealant residue with a wire brush and reapplying sealant.

FOR CLEANUP

1. Wipe off any material outside the joint with a dry cloth.
2. Clean hands with Permatex® Fast Orange® hand cleaner or soap and water.
3. Cured material must be removed with Permatex® Gasket Remover.

PHYSICAL PROPERTIES OF UNCURED MATERIAL

	Typical Value
Chemical Type	Dimethacrylate ester
Appearance	White opaque paste
Odor	Acrid
Specific Gravity	1.21
Viscosity (cP)	350,000
Flash Point (T.C.C.) °F	>200
Chemical resistance	Gasoline, oil, water, glycol, hydraulic fluid, freon, transmission fluid, brake fluid

TYPICAL CURING PERFORMANCE

Cure speed vs. temperature

The rate of cure will depend on the ambient temperature. **Full cure** is attainable in 24 hours at room temperature, 72°F (22°C), or 1 hour at 200°F (93°C).

Cure speed vs. substrate

The rate of cure will depend on the material used. Permatex® High Temperature Thread Sealant will react faster and stronger with **Active Metals**. However, **Inactive Metals** will require the use of an activator (Surface Prep) to obtain maximum strength and cure speed at room temperature.

Active Metals	Inactive Metals
Soft Steel Iron	Stainless Steel
Copper	Anodized Surfaces
Brass	Titanium
Manganese	Zinc
Bronze	Pure Aluminum
Nickel	Bright Platings
Aluminum Alloy	Cadmium

Cure speed vs. activator

Where cure speed is unacceptably long, or large gaps are present, applying an activator (Surface Prep) to the surface will improve cure speed. Assemblies will fully cure in 24 hours with activator.

CURED INFORMATION

(Cured 72 hours @ 75°F)

Pressure Resistance (psi) 10,000
 Temperature Range °F -65 to +400
 Breakaway torque (in.-lb.) 40
 Maximum recommended pipe size* 2" NPT

* May be used on threads larger than 2" but all threads must be activated with Surface Prep Activator and time for full cure extended to 48 hours (Pipe burst pressure after 96 hours). Heat may be required for removal.

Chemical / Solvent Resistance

Aged under conditions and tested at 72°F (22°C)

% Initial Strength retained after time

	Temp	500hr	700hr	1000hr
Heat aged	150°C		80%	
Motor oil(SL)	125°C		90%	
Antifreeze	87°C		40%	
Gasoline	23°C		40%	

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).

ORDERING INFORMATION

Part Number	Container Size
59214	6 mL tube, carded
59235	50 mL tube, carded

STORAGE

Products shall be ideally stored in a cool, dry location in unopened containers at a temperature between 46°F and 82°F (8°C and 28°C) 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.

NOTE

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