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Technical Data Sheet

The Right Stuff Rapid Cure Threadlocker RED

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PRODUCT DESCRIPTION

PERMATEX® The Right Stuff® Rapid Cure Threadlocker is a single-component anaerobic adhesive designed to lock and seal threaded fasteners. The formulation cures rapidly in the absence of air when confined between close-fitting metal surfaces, forming a durable, vibration-resistant bond. Its advanced chemistry penetrates through light surface contamination such as grease and oil, achieving full holding power up to 80% faster than conventional threadlockers. This formulation cures in the absence of air when confined between close-fitting metal surfaces. It remains effective even on surfaces that are slightly oily or contaminated. The product is recommended for use on threaded fasteners ranging from **3/8 in. to 1 in.** in diameter.

PRODUCT BENEFITS

Improved Reliability

- High Strength
- Eliminates fastener loosening due to vibration
- Seals threads to prevent fluid leakage
- Resists cracking and shrinkage for long-term performance

Easy Application

- No mixing required
- Cures only in the absence of air and in the presence of metal (no full cure outside the joint)
- Thixotropic: resists dripping from threads during assembly
- No torque compensation required during installation

Consistent Curing

- Cures on oily and dirty fasteners
- Secures common automotive metals up to 80% faster than original threadlocker

TYPICAL APPLICATIONS

Prevents loosening and leakage in threaded fasteners exposed to vibration, shock, and thermal cycling. Recommended for permanent locking of critical fasteners where disassembly is infrequent and may require heat. Ideal for automotive, heavy-duty, industrial, and general mechanical applications such as:

- Belt tensioner bolts
- Engine accessory bracket bolts
- Starter mounting bolts
- Transmission and bellhousing bolts
- Motor mount fasteners
- Suspension and chassis fasteners
- Brake caliper bolts and bracket bolts
- Flywheel and pulley bolts
- Differential housing bolts

- Pump, compressor, and hydraulic equipment fasteners
- Lawn, garden and power equipment fasteners
- Transmission mounting bolts

DIRECTIONS FOR USE

For Assembly

1. Surface Preparation / Metal Identification
 - Clean and dry all threaded surfaces prior to application.
 - Determine whether components are Active or Inactive metals.
 - For Inactive metals (stainless steel, aluminum, zinc, plated surfaces), apply Permatex® Surface Prep/Activator to all threads and allow to dry (~30 seconds) before applying product.
 - Active metals (steel, iron, brass, copper) typically do not require primer.
 - If metal type is unknown, use activator as a precaution.
2. Shake Bottle
 - Shake thoroughly before each use.
3. Prepare Nozzle
 - Remove cap and cut nozzle tip to desired bead size.
4. Apply and Assemble
 - Apply product to the threaded area.
 - Assemble immediately and tighten as required.

For Cleanup

1. Excess liquid outside the joint can be removed with Permatex® Brake and Parts Cleaner.
2. Cured material may be removed by soaking with Permatex® Gasket Remover, followed by mechanical abrasion.

For Disassembly

1. Remove fasteners using standard hand tools.
2. If disassembly is difficult due to high thread engagement or permanent locking:
 - Apply localized heat to the fastener.
 - Heat to approximately **260°C (500°F)**.
 - Disassemble while still hot, using caution.

For Reassembly

1. Remove loose cured material from both male and female threads.
2. Clean threads thoroughly.
3. Reapply product and reassemble

PROPERTIES OF UNCURED MATERIAL

	Typical Value
Chemical Type	Anaerobic Dimethacrylate Ester
Appearance	Opaque Red Liquid
Specific Gravity	1.08
Viscosity @ 25°C, cP	1,000 to 2,000
Brookfield RVF, spindle #3, @ 20 RPM	
Flash Point (TCC), °C (°F)	>93 (>200)

TYPICAL CURING PERFORMANCE

Cure speed vs. substrate

The rate of cure will depend on the material used. PERMATEx® Medium Strength Threadlocker BLUE 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	Bright Platings
Copper	Anodized Surfaces
Brass	Titanium
Manganese	Zinc
Bronze	Pure Aluminum
Nickel	Stainless Steel
Aluminum Alloy	Cadmium

Cure speed vs. temperature

The rate of cure will depend on the ambient temperature. **Full cure** is attainable in 4.5 hours at room temperature, 22°C (72°F), or 1 hour at 93°C (200°F).

PERFORMANCE OF CURED MATERIAL

(After 24 hr at 72°F on 3/8-16 steel Grade 8 Nuts and Grade 5 bolts)

	Typical	
	Value	Range
Breakaway Torque, Nm, (in.lbs)	31 (275)	27 to 35 (240 to 310)
Prevail Torque, Nm (in.lbs)	34 (300)	28 to 39 (250 to 350)

Where Breakaway Torque is the force required to initiate the fastener movement and Prevail Torque is the force required to disassemble the fastener once Breakaway Torque has occurred.

TYPICAL ENVIRONMENTAL RESISTANCE

Temperature Resistance

Product temperature range from -54°C to +149°C (-65°F to +300°F). The breakaway and prevailing torque values decrease as temperature increases, however the assembly remains effective against vibration and leakage.

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).

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.

ORDERING INFORMATION

Part Number	Container Size
27251	10 ml bottle, carded

STORAGE

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

NOTE

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