



Toll Free: 87 PERMATEX  
(877-376-2839)

6875 Parkland Boulevard, Solon  
Ohio 44139

## Technical Data Sheet

# The Right Stuff Rapid Cure Threadlocker ORANGE

Revised 08/25

### PRODUCT DESCRIPTION

PERMATEX® The Right Stuff® Rapid Cure Threadlocker Orange is a High-strength, removable single-component anaerobic adhesive designed to lock and seal threaded fasteners. It cures quickly between engaged threads to form a durable, vibration-resistant bond that helps prevent leakage, shock, and loosening.

This formulation cures in the absence of air when confined between close-fitting metal surfaces and is effective even on surfaces that are slightly oily or dirty. It is ideal for

### PRODUCT BENEFITS

#### Improved Reliability

- Eliminates fastener loosening due to vibration
- Seals threads to prevent fluid leakage
- Cures without cracking or shrinking for long-term performance
- Allows for easy adjustment or disassembly with standard hand tools

#### Easy Application

- One-part system, no mixing required
- Cures only in the absence of air and presence of metal, no surface cure outside the joint
- Thixotropic consistency prevents dripping or migration during assembly
- No need for torque compensation during installation

### TYPICAL APPLICATIONS

Prevents loosening and leakage in threaded fasteners. Ideal for automotive, heavy-duty, and general mechanical applications such as:

- Belt tensioner bolts
- Construction equipment
- Manufacturing machinery
- Motorcycles / dirt bikes
- Axle nuts
- Starter bolts
- Power tools
- Lawn and garden equipment
- Flywheel bolts
- Triple tree fasteners
- Case half bolts
- Stator bolts
- Transmission mounting bolts

### DIRECTIONS FOR USE

#### For assembly

1. **Metal Type Identification & Surface Preparation**
  - Determine whether the threaded components are **Active** or **Inactive Metals**.
  - If using **Inactive Metals** (e.g., stainless steel, zinc, plated surfaces), apply *Permatex® Surface Prep* to all threads and allow to dry for **30 seconds** before application.
  - **No primer is needed** for Active Metals (e.g., brass, copper, iron).
  - If metal type is unknown, it is recommended to use the activator as a precaution.
2. **Shake Bottle**
  - Shake the threadlocker bottle thoroughly before each use to ensure uniformity.
3. **Prepare Nozzle**
  - Remove the cap and snip the tip of the nozzle to the desired application size.
4. **Apply and Assemble**
  - Apply the threadlocker to the threaded areas and immediately assemble the parts.

#### For Cleanup

1. Residual liquid films and fillets outside the joint can be easily removed using Permatex® Brake and Parts Cleaner.
2. Cured material can be removed by soaking in Permatex® Gasket Remover, followed by mechanical abrasion.

#### For Disassembly

1. Disassemble using standard hand tools.
2. If hand tools are ineffective due to excessive thread engagement:
  - Apply localized heat to the nut or bolt.
  - Heat to approximately **232°C (450°F)**.
  - Disassemble carefully while components are still hot.

#### For Reassembly

1. Remove any loose cured product from both nut and bolt threads.
2. Apply primer to all threads, regardless of metal type.
3. Reassemble and tighten components as normal.

NOT FOR PRODUCT SPECIFICATIONS.

THE TECHNICAL DATA CONTAINED HEREIN ARE INTENDED AS REFERENCE ONLY.  
PLEASE CONTACT PERMATEX, INC., TECHNICAL SERVICE DEPARTMENT FOR ASSISTANCE AND RECOMMENDATIONS FOR YOUR SPECIFIC APPLICATION.  
PERMATEX, INC., 6875 PARKLAND BOULEVARD, SOLON, OH 44139 PHONE - (1-877PERMATEX) 05/08

**Technical Data Sheet** Medium Strength Threadlocker ORANGE the plastic could result). It is recommended to confirm compatibility of the product with such substrates.

**PROPERTIES OF UNCURED MATERIAL**

	Typical Value
Chemical Type	Anaerobic Dimethacrylate Ester
Appearance	Opaque Yellow-Red Liquid
Specific Gravity	1.09
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)	22 (200)	20 to 28 (180 to 250)
Prevail Torque, Nm (in.lbs)	25 (220)	20 to 28 (180 to 250)

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

**ORDERING INFORMATION**

Part Number	Container Size
25251	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**

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. **ITW Permatex, Inc. specifically disclaims all warranties expressed or implied, including warranties of merchantability or fitness for a particular purpose, arising from sale or use of Permatex, Inc. products and disclaims any liability for consequential or incidental damages of any kind, including lost profits.** This product may be covered by one or more United States or foreign patents or patent applications.