

TECHNICAL DATA SHEET



High Strength Gel Threadlocker-Red C-27006

401 Maplewood Dr • Jupiter, FL 33458 • 561-775-9600

PRODUCT DESCRIPTION

Cyclo® High Strength Gel Threadlocker-Red is a **high strength** anaerobic threadlocking gel. The product, like its liquid counterpart, is a one component, anaerobic gel that cures when confined in the absence of air between close fitting metal surfaces, ideal for all 10mm to 25mm (3/8 inch to 1 inch and greater) diameter threaded assemblies. Excellent chemical resistance and temperature resistance range of -54°C to +149°C (-65°F to +300°F). The assembly may require the use of heat to remove bolts.

PRODUCT BENEFITS

Improved Reliability

- Eliminates vibration loosening
- Seals against leakage
- Prevents rusting of threads
- Designed for use on vertical or hard-to-reach applications
- Cures without cracking or shrinking
- Adjusts or disassembles with hand tools

Easy Application

- Gel-type product does not drip when applied
- Single component
- No curing outside of joint
- Resists dripping from threads during assembly
- No torque compensation required during assembly

TYPICAL APPLICATIONS

Prevents loosening and reliably locks and seals all threaded fastener assemblies 10mm to 25mm (3/8" to 1") and greater where high strength is required.

DIRECTIONS FOR USE

For assembly

1. Clean all threads (bolt and hole) with a cleaning solvent such as a compliant **Cyclo®** Brake and Parts Cleaner and allow to dry.
2. Remove the protective cap.
3. Apply threadlocker to the engagement area of the male fitting (usually the leading 5 to 6 threads).
4. Assemble parts and tighten to recommended torque.
5. Replace protective cap.

For Cleanup

1. Residual liquid films and/or fillets outside the joint are readily soluble in compliant **Cyclo®** Brake and Parts Cleaner.
2. Cured product can be removed with a combination of soaking in **Cyclo®** Gasket Remover and mechanical abrasion such as a wire brush.

For Disassembly

1. Apply localized heat to nut or bolt to approximately 260°C (500°F). Disassemble while hot.

For Reassembly

1. Remove loose product from nut and bolt following cleanup procedure above.
2. Apply activator to all threads, regardless of metal type.
3. Assemble and tighten as usual.

PROPERTIES OF UNCURED MATERIAL

	Typical Value
Appearance	Red Gel
Specific Gravity	1.13
Viscosity @ 25°C, cP	
Brookfield RVF, spindle #3, @ 20 RPM	Gel
Flash Point (TCC), °C (°F)	>93 (>200)

PERFORMANCE OF CURED MATERIAL

(After 24 hr at 72°F on 3/8-16 steel Grade 2 Nuts and Grade 5 bolts)

	Typical Value	Range
Breakaway Torque, Nm, (in.lbs)	22 (195)	17 to 34 (150 to 300)
Prevail Torque, Nm (in.lbs)	28 (248)	23 to 40 (200 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 CURING PERFORMANCE

Cure speed vs. substrate

The rate of cure will depend on the material used. Cyclo® High Strength Threadlocker-Red will react faster and become stronger with **Active Metals**. **Inactive Metals** will require the use of **Cyclo®** C-930 Surface Preparation 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

The graph below shows the breakaway strength developed

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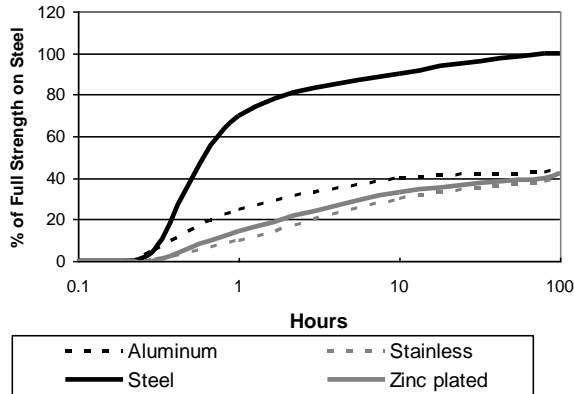
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with time on 3/8" – 16 Grade 5 bolts and Grade 2 nuts for different materials.

Cure Speed vs Substrate



ORDERING INFORMATION

Part Number C-27006
Container Size 6 ml tube

STORAGE

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

Cure speed vs. temperature

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

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.

Chemical / Solvent Resistance

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

3/8-16 steel nuts & bolts

% Initial Strength retained after time

Temp °C(°F)	500hr
Hot air 150C(302F)	100%
Motor oil (5W30SL) 125C(257F)	100%

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.

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