

International Epoxies & Sealers
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TECHNICAL DATA SHEET

Anaerobic Thread Locking Compound

Inter-Lock #71 is a fast curing, **RED**, permanent, medium to high strength, anaerobic thread-locking compound for bonding and sealing threads. It is highly resistance to heat, vibrations, water, gases, oils, hydrocarbons and many chemicals, and is good in a chemical environment. Disassembles with heat and hand tools.

Product Number / Size:

774 1.5 Gram Tube
771 10 mL Bottle
772 50 mL Bottle

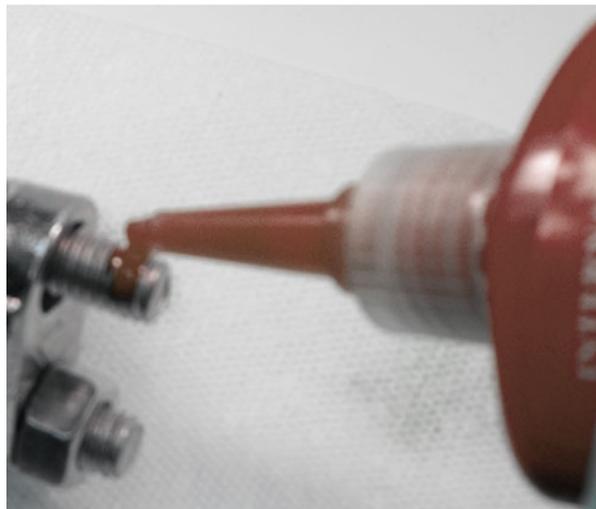
Application

- Ideal for thread locking heavy duty applications such as bolts used in transmission, construction equipment or railroad assemblies, etc.
- Lubricated for easy assembly. Prevents loosening and leakage of threaded fasteners. Locks and seals threaded joint-nuts, screws, and studs.
- Locks and seals threaded joints-nuts, screws, and studs.
- Meets 90% of all nut and bolt thread locking applications.
- Meets Military specifications: MIL-S-46163 Type II Grade O.

DIRECTIONS FOR USE

For assembly:

1. Clean all threads (Bolt and Hole) with a cleaning solvent such as *IES #1700* or *IES #4700 Super Clean* and allow to dry.
2. Determine if the threads to be bonded are **Active** or **Inactive Metals** (Ref: Cure Speed vs. Substrate on the second page). If material is an **Inactive Metal**, it may be necessary to coat all threads with *#700 Primer / Activator* and allow 30 seconds to dry. Priming is not required if the material is an **Active Metal**. If unknown, it is always best to use the primer.
3. Shake Inter-Lock thoroughly before use.
4. To prevent the product from clogging in the nozzle, do not allow the tip to touch metal surfaces during application.
5. **For Thru Holes**, apply several drops of product onto the bolt at the nut engagement area.



For Blind Holes, apply several drops down the female threads into the bottom of the hole. As threads are engaged, compressed air forces the product upwards into the threads.

6. Assemble and tighten as usual. When tightening to established torque values, torque compensation is not required.

For Disassembly

1. Apply localized heat to nut or bolt to approximately 232° C (450° F). Disassemble while hot.

TYPICAL CURING PERFORMANCE

Cure speed vs. substrate

The rate of cure will depend on the material used. *Inter-Lock #71 RED* will react faster and stronger with **Active Metals**. However, **Inactive Metals** may require the use of *IES #700 Primer / Activator* to obtain maximum strength and cure speed at room temperature.

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

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).

Cure speed vs. primer

To shorten fixture time or if an inactive surface is present, applying *#700 Primer / Activator* to the surface will improve fixture speed. A 3/8-16 steel nut and bolt assembly will fixture in 5 minutes using a primer, while fixturing will occur in 20 minutes without a primer. Full cure in 24 hours for both procedures.

CHEMICAL PROPERTIES

Physical Properties

<u>Description</u>	<u>Specification</u>
Composition	Methacrylate Ester
Color	Red
Viscosity @ 25 C, mPa.s (cp) Brookfield	
- Spindle 3 @ 2 rpm	5000 cps
- Spindle 3 @ 20 rpm	1800 cps
Specific Gravity	1.1
Flash Point	>95 C
Solvent Content	None
Shelf Life	1 year

Curing Properties

<u>Description</u>	<u>Specification</u>
Handling Cure Time	5 minutes
Functional Cure Time	1-3 hours

Full Cure Time	24 hours
Shear Strength	8 - 12 N/mm ²
Locking Torque	
- Break	17 - 29 N.m
- Prevailing	17 - 29 N.m
Temperature Range	-65 TO 300 ° F

Chemical Resistance

<u>Chemical</u>	<u>Temp.</u>	<u>% Initial Strength Retained</u>	
		500 hours	1000 Hours
Acetone	22 ° C	100	90
Ethanol	22 ° C	100	100
Motor Oil	125 ° C	100	100
Gasoline	22 ° C	100	100
Brake Fluid	22 ° C	100	100
Water/Glycol	87 ° C	90	80

Application Method

Surfaces should be dry, clean, and free of any contamination. Thread locker should be applied to the bolt in sufficient quantity to fill threads. *Inter-Lock #71* performs the best in thin bond gaps. This thread locker is specifically formulated to give controlled friction and torque/tension ratio during assembly.

Storage

Anaerobic adhesives shall be ideally stored in a cool, dry place in unopened containers at a room temperature between 46 ° F to 82 ° F. Please do not return any unused material to its original container.

PRECAUTIONS: This product and the auxiliary materials normally combined with it are capable of producing adverse health effects ranging from minor skin irritation to serious systemic effects. None of these materials should be used, stored, or transported until the handling precautions and recommendations as stated in the Material Safety Data Sheets (MSDS) for this and all other products being used are understood by all persons who will work with the

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