

International Epoxies & Sealers
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TECHNICAL DATA SHEET

Anaerobic Thread Locking Compound

Inter-Lock #42 is a fast curing, **BLUE**, removable, medium strength, general purpose anaerobic thread-locking compound for bonding and sealing threads. It is highly resistance to heat, vibrations, water, gases, oils, hydrocarbons and many chemicals. Disassembles with hand tools.

Product Number / Size:

744	1.5 Gram Tube
742	10 mL Bottle
743	50 mL Bottle

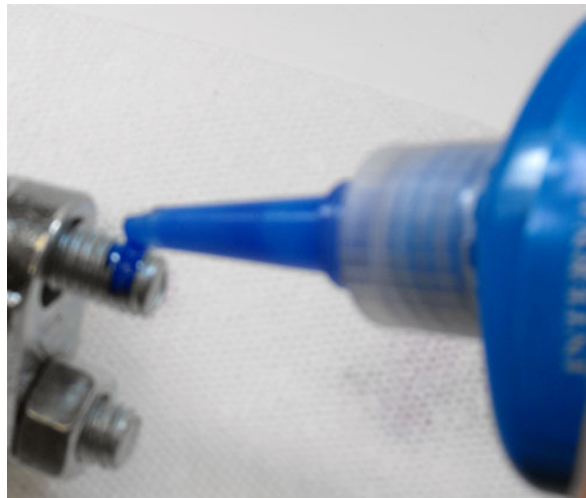
Application

- Ideal for thread locking plated parts, vibration or moving components.
- Ideal for fasteners between ¼" and ¾" (6 to 20 mm) diameters.
- 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 N.

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.

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

For Disassembly

- Remove with standard hand tools.

TYPICAL CURING PERFORMANCE

Cure speed vs. substrate

The rate of cure will depend on the material used. *Inter-Lock #42 BLUE* 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	Blue
Viscosity	1000 cps at 25 ° C
Specific Gravity	1.1
Maximum Diameter of Thread/Gap Filling	M 36/ 1 1/2 "/ 0.20 mm
Flash Point	100 C
Solvent Content	None
Shelf Life	1 year

Curing Properties

<u>Description</u>	<u>Specification</u>
Handling Cure Time	10 minutes
Functional Cure Time	24 hours
Full Cure Time Shear Strength	8 - 12 N/mm ²
Locking Torque - Break	17 - 22 N.m

- Prevailing
- Temperature Range

5 - 8 N.m
 -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

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 product.

WARRANTY: International Epoxies & Sealers warrants only that its product will meet those specifications designated as such herein or in other publications. All other information supplied by International Epoxies & Sealers is consider accurate but are furnished upon the express condition the customer shall make its own assessment to determine the product's suitability for a particular purpose. International Epoxies & Sealers makes no other warranty, either express or implied, including those regarding such other information, the data upon which the same is based, or the results to be obtained from the use thereof; that any product shall be merchantable or fit for any particular purpose; or that the use of such other information or product will nor infringe any patent.

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