

**PALM LABS ADHESIVES, INC.**  
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## TECHNICAL DATA SHEET

### Anaerobic Thread Locking Compound

TURBO-LOCK 12 SERIES is a fast curing, medium to high strength, **RED**, permanent, 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.

#### Application

- Ideal for thread locking heavy duty applications such as bolts used in transmission, construction equipment or railroad assemblies, etc.
- Ideal for fasteners between ¼" and ¾" (6 to 20 mm) diameters.
- Lubricated for easy assembly. Prevents loosening and leakage of threaded fasteners. Locks and seals threaded joints-nuts, screws, and studs.
- Meets 90% of all nut and bolt thread locking applications.
- Meets military specification: MIL-S-46163

#### ADHESIVE PROPERTIES

Color	Red
Composition	Methacrylate Ester
Viscosity (Brookfield RVT Spindle 3 @ 20 rpm)	2400 cps at 25 °C
Specific Gravity	1.05
Maximum Bolt Size	3/4" / 20 mm
Flash Point	> 95 °C
Solvent Content	None
Shelf Life	2 years

#### CURING PROPERTIES

Handling Cure Time	20 minutes
Functional Cure Time	1-3 hours
Full Cure Time	24 hours
Breakaway Torque ISO 10964 M10 steel nuts and bolts N.m	22 N.m 190 lb.in.
Prevail Torque ISO 10964 M10 steel nuts and bolts N.m	32 N.m 275 lb.in.
Breakloose Torque ISO 10964, pre-torqued to 5 N.m M10 steel nuts and bolts	38 N.m 340 lb.in.
Max Prevail Torque ISO 10964, pre-torqued to 5 N.m M10 steel nuts and bolts N.m	40 N.m 350 lb.in.
Compressive Shear Strength, ISO 10123 Steel pins and collars	> 10 N/mm <sup>2</sup> 1400 psi
Temperature Range	-55 to 150 °C

## PHYSICAL PROPERTIES

Coefficient of Thermal Expansion ASTM D 696, K-1	80x10 <sup>-6</sup>
Coefficient of Thermal Conductivity ASTM C 177, W/(m.K)	0.10
Specific Heat kJ/(kg.K)	0.30

## CHEMICAL RESISTANCE

<u>Chemical</u>	<u>Temperature</u>	<u>% Initial Strength Retained</u>	
		<u>500 Hours</u>	<u>1000 Hours</u>
Acetone	22 °C	95	95
Ethanol	22 °C	95	95
Motor Oil	125 °C	95	95
Gasoline	22 °C	100	100
Brake Fluid	22 °C	100	100
Water/Glycol	87 °C	85	85

### 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. TURBO-LOCK 12 SERIES 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 are ideally stored in a cool, dry place in unopened containers at a room temperature between 46 °F to 82 °F. Please do not return 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 Warranty: All products purchased from or supplied by Palm Labs Adhesives are subject to terms and conditions set out in the contract. Palm Labs Adhesives warrants only that its product will meet those specifications designated as such herein or in other publications. All other information supplied by Palm Labs Adhesives is considered 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. Palm Labs Adhesives 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 not infringe any patent.

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