



ChemTools 8277 **Anaerobic Thread Locking Compound**

ChemTools 8277 is a high strength anaerobic thread locking compound for bonding and sealing threads, and retaining of cylindrical parts. The product cures when confined in the absence of air between close fitting metal surfaces and prevents loosening and leakage from shock and vibration.

ChemTools 8277 is highly resistant to heat, vibrations, water, gases, oils, hydrocarbons and many chemicals.

Applications:

- Ideal for locking and sealing of larger bolts and studs. (M25 and larger)
- Transmission and engine block studs, valve sets, etc.
- High strength, permanent and eliminates need for double nutting and welding. Prevents corrosion and leakage.
- Meets Military Specification: MIL-S-43163A Type I Grade L

Adhesive Properties:

Liquid Adhesive

Composition:	Methacrylate Ester
Colour:	Red
Viscosity @ 25°C, (Brookfield Viscometer, Spindle 3 @ 20 rpm)	7,000 cps
Specific Gravity:	1.11
Maximum Diameter of thread/Gap Filling	M25(1")/0.25mm
Flash Point:	>100°C
Solvent Content:	None
Shelf Life:	2 years

Curing Properties

Handling Cure Time:	30 minutes
Functional Cure Time:	2 - 4 hours
Full Cure Time:	24 hours
Breakaway Torque, ISO 10964: M10 steel nuts and bolts Nm	32 Nm, 280 lbin.
Prevail Torque, ISO 10964: M10 steel nuts and bolts	32 Nm, 280 lbin.
Breakloose Torque, ISO 10964 Pre-torqued to 5 Nm: M10 steel nuts and bolts	38 Nm. 340 lbin

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Max. Prevail Torque, ISO 10964
Pre-torqued to 5 Nm: M10 steel nuts and bolts 40 Nm 350 lbin
Compressive Shear Strength, ISO 10123:
Steel pins and collars >9 N/mm² >1,300 psi
Temperature Range: -55 to 150°C

Physical Properties:

Coefficient of Thermal Expansion, 80×10⁻⁶
ASTM D 696, K⁻¹
Coefficient of Thermal Conductivity, 0.10
ASTM C 177, W/(mK)
Specific Heat, kJ/(kgK) 0.30

Chemical Resistance:

Chemical	Temperature	% Initial Strength Retained	
		500 hours	1000 hours
Acetone	22°C	95	95
Ethanol	22°C	95	95
Motor Oil	125°C	100	100
Petrol	22°C	100	100
Brake Fluid	22°C	90	90
Water/Glycol	87°C	90	90

Application:

Surfaces should be dry, clean, and free of any contamination. Thread locker should be applied to the bolt in sufficient quantity to fill threads. ChemTools 8262 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 7°C to 28°C. 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 material.

Warranty: All products purchased from or supplied by ChemTools are subject to terms and conditions set out in the contract. ChemTools warrants only that its product will meet those specifications designated as such herein or in other publications. All other information supplied by ChemTools is considered accurate but is furnished upon the express condition the customer shall make its own assessment to determine the product's suitability for a particular purpose. ChemTools 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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