



Product Description

Thermoloc 450 is a solvent based threadlocker intended for use in higher temperature systems. Thermoloc is factory pre-applied to either internal or external threads. It remains inert on the fastener until assembly of the threads mixes the resin. The resin fills the voids of the threads and cures to lock and seal the assembly.

Typical Applications

Thermoloc 450 prevents loosening through vibration to provide locking and sealing of threaded assemblies including but not limited to:

- Ring gear bolts
- Head bolts
- Intake manifold bolts
- Exhaust manifold
- Transmission bolts

Properties of Uncured Material

Chemical Type Microencapsulated Methacrylate
Appearance Blue
Toxicity Low

Performance of Cured Material

	Typical Values
Installation Torque	< 1.0 N-m
Breakaway Torque	35 N-m
Prevailing off-torque	11 N-m
k-Value	0.25
Temperature Range	-65°F to 450°F (-54°C to 232°C)
Cure time at 23°C	24 Hours

Please note that installation, breakaway, and prevailing off-torque data are from test results conducted on an M-10 x 1.5 dry phosphate finish bolts and M010 x 1.5 zinc nuts. Performance may vary depending on fastener finish.

Environmental and Fluid Resistance

Environment	Temperature	% of Initial Strength
Brake Fluid	150°C	60%
50/50 Water/Coolant	100°C	57%
High Temperature Aging	232°C	30%
Hot Strength	32°C	69%

Please note that all environmental and fluid testing was conducted as specified in GMW14657. Chemical resistance testing was conducted at temperature for 168 hours; parts were cooled to room temperature prior to testing. High temperature aging was conducted for 500 hours at temperature; parts were cooled to room temperature prior to testing. Percent of initial strength reported is based upon data collected for M-10x1.5 zinc organic finish bolts and M-10x1.5 zinc nuts with the exception of the hot strength, which is based on M-10x1.5

General Information

Storage

Fasteners coated with product have a shelf life of 6 months when stored in a cool and dry location at temperatures between -10°C to 35°C. Optimal storage is 25±4°C.

Note

The data contained on this data sheet is believed to be reliable. However, since actual conditions may vary, testing should be conducted by the user to determine suitability for their application. ND is a registered trademark of ND Industries, Inc.