Technical Data Sheet

Reactive Threadlocker Eco-Loc®

March 2019

Product Description

Eco-Loc is a water based version of the ND Microspheres 593; a powerful pre-applied adhesive film for locking and sealing. Eco-Loc 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

Eco-Loc 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
- Transmission bolts

Properties of Uncured Material

Chemical Type	Microencapsulated Epoxy
Appearance	Blue
Toxicity	Low

Performance of Cured Material

Values	Typical
Installation Torque	< 1.0 N-m
Breakaway Torque	30 N-m
Prevailing off-torque	16 N-m
k-Value	0.20
Temperature Range	-65°F to 300°F (-54°C to 150°C)
Cure time at 23°C	72 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
5W30 Synthetic Engine Oil	150°C	104%
Brake Fluid	150°C	90%
50/50 Water/Coolant	100°C	90%
Transmission Fluid	150°C	111%
Gasoline	23°C	117%
High Temperature Aging	135°C	80%
Hot Strength	135°C	42%

Please note that all environmental and fluid testing was conducted as specified in GMW14657 (2006). 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. The percent of initial strength reported is based upon data collected for M-10 x 1.5 zinc organic finish bolts and M-10 x 1.5 zinc nuts.

General Information

Storage

Fasteners coated with product have a shelf life of 2 years 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 particular application. ND is a registered trademark of ND Industries, Inc.