

Product Description

Thermoloc 1500 is a threadlocker intended for use in high temperature systems where traditional organic thread lockers fail due to thermal oxidation. Thermoloc is factory pre-applied to either internal or external threads. It remains inert on the fastener until assembled and heat activated. Activation temperature is 200°C.

Typical Applications

Thermoloc 1500 prevents loosening due to vibration to provide locking of threaded assemblies including but not limited to:

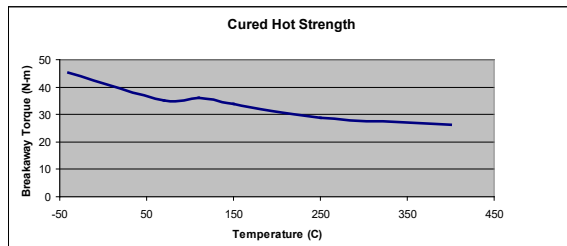
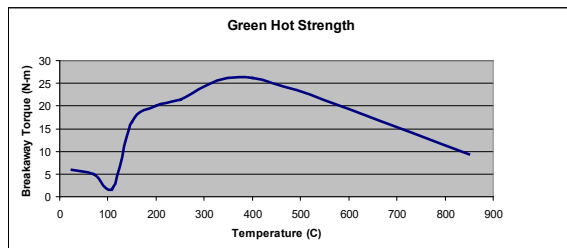
- Furnace Bolts
- Catalytic Converter
- Exhaust Manifold

Properties of Uncured Material

Chemical Type Sodium Silicate
 w/ Methacrylate top coat
 Appearance White
 Toxicity Low

Performance of Cured Material

Installation Torque Typical Values
 Green Breakaway Torque < 12.0 N-m
 Green Prevailing Off Torque 6 N-m
 Cured Breakaway Torque 6 N-m
 Cured Prevailing Off Torque 30 N-m
 Cured Prevailing Off Torque 8 N-m
 Temperature Range -40°F to 1562°F
 (-40°C to 850°C)



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. Green breakaway values are recorded after 24 hours after installation at ambient temperature. Cured breakaway values were determined after exposing the fastener to 400°C for two hours before returning to room temperature. Green hot strength was determined by exposing the assembled fastener to a given temperature for two hours before testing breakaway strength. Cured hot strength was determined by exposing the assembled fastener to 400°C for two hours, followed by two hours at the testing temperature.

Environmental and Fluid Resistance

Environment	Temperature	% of Initial Strength
Brake Fluid	150°C	46%
50/50 Water/Coolant	100°C	243%
5W30 Synthetic Engine Oil	150°C	205%
Gasoline	23°C	20%
Transmission Fluid	150°C	202%
High Temperature Aging (500hrs)	600°C	750%
High Temperature Aging (1000hrs)	600°C	810%
Hot Strength	200°C	179%
	250°C	197%
	400°C	536%

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 and 1000 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 dry phosphate finish bolts and M-10x1.5 zinc nuts.

General Information

Storage

Fasteners coated with product have a shelf life of 12 months when stored in a cool location at temperatures between 10°C to 30°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.