



ND Microspheres® TA 800 Technical Data Sheet

Product Description

Microspheres TA 800® is a high strength, high temperature preapplied adhesive for locking and sealing fasteners. Microspheres TA 800 is factory preapplied to internal or external threads. It remains inert on the fastener until assembly. The resin fills the voids of the threads, and cures to lock and seal the assembly.

Typical Applications

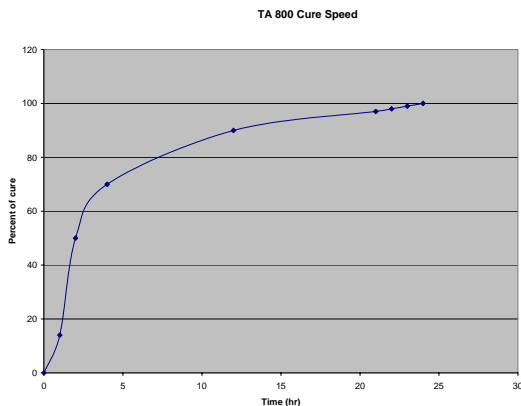
Microspheres TA 800 prevents loosening through vibration to provide locking and sealing of threaded assemblies including:

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

Curing Performance (fastener assembly)

Cure speed vs. substrate

The graph shows the rate of cure of an M-10 nut and bolt plated with various finishes. The breakaway strength was determined using industrial procedures.



Performance of Cured Material

	Typical Values
Prevailing on-torque	< 1.0 N-m
Breakaway torque	32 N-m
Prevailing off-torque	22 N-m
Temperature Range	-65°F to 400°F (-54°C to 200°C)
Cure time at Room Temp	24 hours

Prevailing on-torque and Breakaway torque data are from test results conducted on an M-10 x 1.5 class 10.9 zinc organic finish bolts and M-10 x 1.5 class 10 zinc nuts.

Environmental and Fluid Resistance (Breakaway values)

Environment	Temperature	% of initial strength 168 h
5w30 oil	150°C	104%
Brake Fluid	150°C	147%
50/50 Long Life Coolant	100°C	80%
Transmission Fluid	150°C	80%
Gasoline	23°C	100%
Gasoline/Ethanol	23°C	98%
15w40 OIL	150°C	140%
Hot Strength *	200°C	160%
Cyclic Age	-40°C to 200°C	122%
High Temp Age	200°C	102%

Heat age testing was conducted on M-10 x 1.5 zinc organic finish bolts and a zinc plate nuts. Assembled fasteners were aged at 200°C for 168 hours and allowed to cool to room temperature before breakaway test.

Immersion testing was conducted using M-10 x 1.5 Zinc organic finish bolts and zinc plate nuts. Assembled fasteners were submerged in each fluid for 168 hours at the temperature. Assemblies were allowed to cool to room temperature before breakaway test.

Technical data contained within this document is intended for reference only
For assistance and recommendations on specifications for this product, contact ND Industries

www.ndinfo@ndindustries.com



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General Information

Storage

Fasteners coated with product are to be stored in a cool and dry location at temperatures between -10 °C to 35 °C. Optimal storage is 25±4°C.

Note

The data are furnished for information only and are believed to be reliable. We cannot assume responsibility for the results obtained by others over whose methods we have no control. It is recommended that the product be tested in the application for which it is to be used.

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