

### Product Description

Fasteners coated with ND Microspheres TA800, a pre-applied adhesive film with high strength and excellent temperature resistance up to 200°C, provide excellent locking and sealing properties for various applications. ND Microspheres TA800 is factory applied to either internal or external threads, remaining inert on the fastener until assembly of the threads bursts resin and activator containing microcapsules and allowing for mixing of reactive components present in the pre-applied film. Assembly of fasteners coated with ND Microspheres TA800 with a mating component to create a joint fills the voids of the threads and cures to lock and seal the assembly.

### Typical Applications

Fasteners coated with ND Microspheres TA800 prevent loosening through vibration to provide locking and sealing of threaded assemblies including but not limited to the following types of applications:

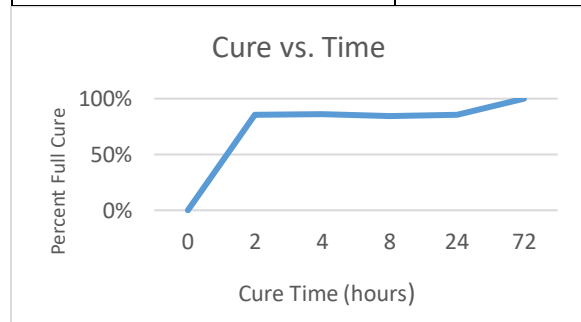
- Ring gear bolts
- Head bolts
- Intake manifold bolts
- Transmission bolts

### Typical Properties of Unassembled Fasteners Coated with ND Microspheres TA800

Chemical Type	Microencapsulated Acrylic
Color	Pink

### Typical Curing Performance of Fasteners Coated with ND Microspheres TA800

Fixture Speed (M10 Phosphate)	2 minutes
Full Cure Time at 23°C	72 Hours



The graph shows the rate of cure of an M-10 x 1.5 Zinc plated bolt and nut. Please note that performance may vary depending on fastener size and finish.

### Typical Properties of Assembled Fasteners Coated with ND Microspheres TA800

	Phosphate	Zinc Plate	Zinc Organic
Installation Torque	1.0 Nm	1.0 Nm	3.0 Nm
Breakaway Torque	53 Nm	29 Nm	21 Nm
Prevailing-Off Torque	46 Nm	33 Nm	11 Nm
k-Value	0.26	0.28	0.18
Temperature Range	-54°C to 200°C (-65°F to 392°F)		

The data above is for M10 x 1.5 bolts of finishes listed and M10 x 1.5 zinc plate nut. Please note that performance may vary depending on fastener size and finish.

### Environmental and Fluid Resistance

	Temp	% Initial Strength
SW30 Synthetic Oil	150°C	117
Brake Fluid	150°C	118
50/50 Coolant	100°C	128
Transmission Fluid	150°C	123
Gasoline	23°C	121
Cyclic Aging	-40°C to 200°C	103
Heat Age (500 hr.)	200°C	47
Hot Strength (2 hr.)	200°C	65

Note: Heat age and immersion testing were conducted on M10 x 1.5 zinc plate bolts and nuts. Assembled fasteners were allowed to cure for 72 hours at ambient conditions and then aged at the temperature listed above for 168 hours and allowed to cool to room temperature before breakaway test, unless otherwise specified above.

### Shelf Life & Storage

Unassembled fasteners coated with ND Microspheres TA800 are recommended to be stored inside a cool and dry location at temperatures between -10°C to 35°C. Optimal storage is 25±4°C with 50% or below relative humidity. Please consult the SDS for ND Microspheres TA800 Applied for further information regarding proper handling.

### Special Note

The data contained on this data sheet is representative of the performance of fasteners coated with ND Microspheres TA800. Given that actual conditions may vary, it is recommended that testing should be conducted by the end user to determine suitability for their application.