



Product Description

ND Microspheres Acrylic AA1095/AA1096 is a pre-applied film form adhesive for locking and sealing. Microspheres AA 1095 is factory applied to either internal or external threads. It remains inert on the fastener until assembly of the threads. The resin fills the voids of the threads and cures to lock and seal the assembly. Microspheres AA1095/AA1096 exhibits excellent strengths on plated finishes.

Typical Applications

Microspheres AA 1095/1096 prevents loosening through vibration to provide locking and sealing of threaded assemblies including:

- Chassis bolts
- Intake manifold bolts
- Transmission bolts
- Axle bolts

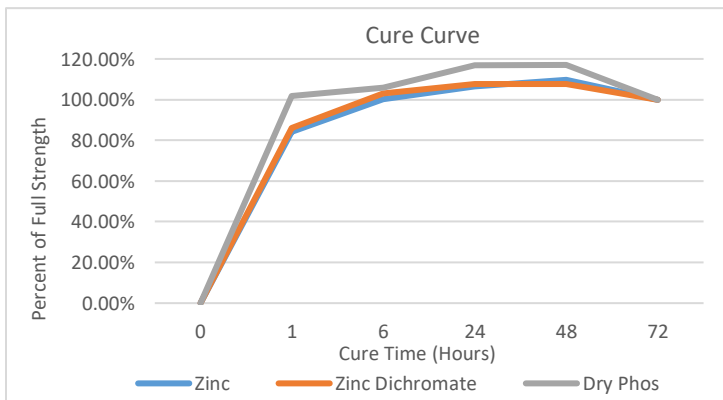
Properties of Uncured Material

| | |
|---------------|----------|
| Chemical Type | Acrylate |
| Appearance | Pink |
| Toxicity | Low |

Typical Curing Performance

| | |
|----------------------------------|-----------|
| Full Cure Time | 72 hours |
| Fixture Time (M10 Dry Phosphate) | 2 minutes |

Note: Fastener size and finish may affect fixture speed of AA1095/AA1096 material



Performance of Cured Material

| | |
|-------------------------------|------------------------------------|
| Prevailing On Torque | 0.24 N-m |
| Breakaway Torque | 24 N-m |
| Operational Temperature Range | -65°F to 300°F (-54°C to 150°C) |

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

Environmental and Fluid Resistance

| | Typical Values |
|-------------------------------------|----------------|
| Engine Oil @ 150°C | 24 N-m |
| Brake Fluid @ 150°C | 13 N-m |
| Transmission Fluid @ 150°C | 22 N-m |
| 50/50 Water/Ethylene Glycol @ 120°C | 27 N-m |
| Water @ 100°C | 33 N-m |
| Gasoline @ 25°C | 30 N-m |
| Diesel fuel @ 25°C | 30 N-m |
| 15/85 Methanol/Gasoline @ 25°C | 28 N-m |
| Ethyl Alcohol @ 25°C | 33 N-m |
| Cyclic Test | 34 N-m |
| Heat Age | 35 N-m |
| Hot Strength | 16 N-m |

Immersion testing was conducted using M-10 x 1.5 phos-oil bolts and nuts. Assembled fasteners were submerged in each fluid for 500 hours at the temperature. Assemblies were allowed to cool to room temperature before breakaway test.

Cyclic Test was conducted on M-10 x 1.5 phos-oil bolts and nuts. Assembled fasteners were aged at 150°C for 1 hours, -30°C for 2 hours and allowed to cool to room temperature for 1 hour before breakaway test.

Heat age testing was conducted on M-10 x 1.5 phos-oil bolts and nuts. Assembled fasteners were aged at 135°C for 500 hours and allowed to cool to room temperature before breakaway test.

Hot Strength testing was conducted on M-10 x 1.5 phos-oil bolts and nuts. Assembled fasteners were heated to 135°C for 2 hours and tested for breakaway strength at the elevated temperature.

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.

Special 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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