



Product Description

ND Expand-A-Seal® ES0105 is a unique expanding thread sealing and locking compound. ND Expand-A-Seal ES0105 is design for the hard to seal threaded assemblies. The Expand-A-Seal works by expanding upon assembly to increase the material volume by 20 to 50%. This increase in volume fills all voids in the assembly. The product performs in both straight and tapered pipe threads on aluminum, steel, plated, stainless steel, and special alloy parts. ND Expand-A-Seal exhibits excellent temperature and solvent resistant.

Typical Applications

ND Expand-A-Seal will lock and seal fasteners. ND Expand-A-Seal is used to seal critical applications where shock and vibration may cause the fastener to loosen. Typical Applications include engine pipe plugs, air fitting connectors, compressor fittings, and cooling connectors.

Properties of Uncured Material

Chemical Type	Epoxy
Appearance	Green
Toxicity	Low
Viscosity @ 25°C, cP	
Brookfield RVT,	
Spindle 3 @ 20 rpm	900-1500
Specific Gravity	1.10

Performance of Cured Material

Fixture Time	10-15 min @ 72°F
Full Cure Time	24 hrs @ 72°F
Temperature Range	-60°F to 300°F (-51°C to 150°C)

Breakaway Strength	Typical Values
M-10 Phosphate oil bolt aluminum test plate @24 hr	37 N-m
M-10 Zinc plate bolt aluminum test plate@24hr	34 N-m
M-10 Zinc Dichromate bolt aluminum nut @24 hr	25 N-m

Environmental and Fluid Resistance

Tests were conducted on M-10 x 1.5 phosphate-oil, zinc plate and zinc dichromate bolt into an aluminum test block drill tapped to a 8.676 mm minor diameter. The block was 19 mm thick. Coated parts were assembled into the Aluminum block and submersed in the fluid for 30 days; the parts were tested for sealing while at temperature and tested for breakaway strength at Room Temperature.

(Shear strength values)

	Seals	Typical Values
Engine oil@ 150°C	P	100%
Brake fluid @ 150°C	P	98%
ATF @ 150°C	P	100%
50/50 water/ ethylene glycol @ 120°C	P	100%
Gasoline @ 25°C	P	88%

General Information

Storage

Product should be stored in a cool and dry location at temperatures between -10 °C to 30 °C. Optimal storage is 22±4°C. Shelf life is 12 months from date of manufacture when stored at 22±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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