



Advanced Fastening and Sealing Technologies

PRE-APPLIED

EXPAND-A-SEAL®

Expand-A-Seal is a unique microencapsulated expanding thread sealant which is pre-applied by ND to your fasteners and arrives dry to the touch and ready for assembly. Upon installation Expand-A-Seal increases in volume 20 to 50%, penetrating gaps in fastener threads typically left unfilled by conventional thread sealants. When fully cured it forms a high pressure seal from gas and fluid.



PRE-APPLIED PRODUCT FEATURES

How It Works

Expand-A-Seal contain a microencapsulated epoxy resin and expanding compounds suspended in a hardener. The forces of engagement crush the microscopic capsules of epoxy resin and expansion agent, mixing the separate reactant components, and initiating a chemical reaction. As the reaction is taking place, the material expands, filling the fastener thread gaps while hardening.



Problem Solver

Many threadsealants fail when used in less than optimal conditions, such as misfit parts or threadformed screws. Because of its expansion properties, Expand-A-Seal can overcome these limitations.



Surface Insensitive

Expand-A-Seal is compatible with most fastener sizes, configurations, materials and finishes. Its epoxy formulation insures that a strong reliable lock and seal are formed.



High Pressure Seal

Expand-A-Seal has been shown to have some of the highest sealing pressures of all our pre-applied threadsealants with burst pressure in excess of 10,000 psi under challenging conditions.



Additional Locking

Once cured, a low strength lock is formed which helps prevent loosening under vibration or reversal of stress and greatly reduces the need to retighten fasteners.



Chemical Resistant

A cross-linked molecular structure makes it one of the most resistant types of adhesives. Oil, gasoline, salt spray, acids, solvents, and water have virtually no effect on parts when introduced after final cure.



Long Shelf Life

Expand-A-Seal has an on-part life of 1 1/2 years and will remain inert until a cure is activated by engagement with a mating thread.

CONTACT US

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PRODUCT APPLICATIONS

Expand-A-Seal can be used to seal critical applications where shock, vibration and fluid pressure cause the fastener to loosen or the joint to leak. Typical applications include: Marine Ride Plates, Head Bolts, Engine Plugs and bolts, Pipe Fittings, Air fitting connectors.

BREAKAWAY TORQUES

M-10 Phosphate oil bolt

Zinc Test Nut @24 hr: 13 Nm

M-10 Zinc plate bolt

Zinc Test Nut @24hr: 12 Nm

CURE TIMES

Fixture time

60 minutes @ 72°F

Full cure time

24 hours @ 72°F

EXPAND-A-SEAL PRE-APPLIED SERVICE

Step 1 - Product Selection: Our Sales and R&D staff will help you find or custom formulate a product to meet your performance specifications.

Step 2 - Shipping: Once a material selection has been made, have your fasteners shipped to one of our worldwide processing centers.

Step 3 - Processing: Utilizing custom, high-speed equipment, we apply the selected material to your exact specification.

Step 4 - Delivery: Once processing is complete, parts are shipped back ready for distribution or assembly.

PRE-APPLIED BENEFITS

Saves Time: ND's Expand-A-Seal Pre-Applied service utilizes custom build in-house equipment to coat your fasteners at extremely high rates. In addition, our rapid turn around time and fast customer service lead to significant time savings.

Saves Money: The bulk pre-application of Expand-A-Seal to fasteners is less expensive than hand applying bottled thread sealing compounds at the point of assembly. It also eliminates the need for costly lock washers, cotter pins or castellated nuts.

Quality Control: The Expand-A-Seal Pre-Applied process is strictly controlled by ND to meet and reduce variation between parts. Fasteners are coated to specification, insuring consistent performance from fastener to fastener and lot to lot.

STORAGE CONDITIONS

Expand-A-Seal 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 18 months from date of manufacture when stored at 22±4°C.