

RUST PREVENTION

CORROSION MANAGEMENT SOLUTIONS



ARMOR POLY® FILM FOUNDRY Film™

FEATURES AND BENEFITS

ARMOR FOUNDRY Film™ and its vapor corrosion inhibitor (VCI) Nanotechnology® sets industry standards for high performance and innovation. ARMOR's proprietary Bright Idea™ Technology provides visible proof under black light that VCI is present in all **ARMOR POLY** products.

FOUNDRY Film is specifically designed to protect metal castings, stampings, forgings, process metals or other combinations of metals in the harsh conditions present in metal foundries, stamping plants, machine shops and other metal processing facilities.

- **Easy-to-Use:** *simply place clean metal pieces in FOUNDRY Film lined bin and close when finished*
- **Eco-Friendly:** *made partially from recycled ARMOR VCI film combined with virgin ARMOR resin*
- **Cost Effective:** *recycled materials allow for economical pricing*
- **Dual Protection:** *combined benefit of barrier and rust prevention*
- **Foundry-Specific Design:** *constructed for strength/puncture resistance; dark gray color hides metal dust/imperfections*
- **Safe:** *non-hazardous, environmentally friendly*

The proprietary ARMOR VCI Nanotechnology® comes with more than 40 years of industry experience. With service on four continents and in more than 25 countries, ARMOR is positioned to Eradicate Rust wherever and whenever you need them



Approved By/Conforms:

- FDA for use in equipment packaging
- RoHS – REACH Compliant
- NACE Std TM0208-2008

WHY ARMOR?

Armor Protective Packaging® offers rust prevention and rust removal products that are clean, safe, easy, and that protect metals while in-process, in transport, or in storage. ARMOR combines its VCI (vapor corrosion inhibitor) Nanotechnology® with packaging materials such as paper and poly film to create products that displace moisture on metal and guard against rust. ARMOR also offers desiccants, emitters, foam pads and its Metal Rescue® Rust Remover Bath and Dry Coat™ Rust Preventative. For more than 40 years, ARMOR has worked with customers from around the globe to provide rust prevention and rust removal solutions and to Take the Work Out of Your Workday!



TECHNICAL DATA

ARMOR PROTECTIVE PACKAGING CORROSION MANAGEMENT SOLUTIONS

ARMOR FOUNDRY Film™

Product Overview

All Armor Protective Packaging® products utilize our proprietary and time-proven ARMOR vapor corrosion inhibitor (VCI) Nanotechnology®. Oxidation occurs when an electrolyte (water, oxygen, etc.) is present on the surface of a metal. The corrosion process begins when electrons flow through the electrolyte from high energy areas (anode) to low energy areas (cathode) of the metal. ARMOR VCI blocks this reaction by passivating the surface and inhibiting the electrochemical current flow from anode to cathode. ARMOR VCI's protective vapors adhere to a metal surface to form an invisible film only a few molecules thick to protect metal from attack.

ARMOR FOUNDRY Film is recycled remnants of linear low density polyethylene tubing, sheeting, and bags combined with virgin ARMOR resin impregnated with ARMOR VCI formulation for ferrous metals. FOUNDRY Film is designed for short-term to medium-term storage and shipping. FOUNDRY Film is nitrite-free.

Compatibility of ARMOR FOUNDRY Film with Metals

Metal to be Protected	ARMOR FOUNDRY Film™
Aluminum	○
Aluminum Bronze	○
Aluminum Magnesium alloy	○
Brass	○
Bronze	○
Cadmium	○
Cast Iron	★★★
Chromium	○
Constantan	○
Copper	○
Galvanized	○
Lead	○
Molybdenum	○
Nickel	○
Nickel Silver (CU, Ni, Zn)	○
Silver	○
Solder (Pb, Sn)	○
Steel	★★★
Tin (Pure)	★★★
Tinned Steel	★★★
Zinc	○

Compatibility Key

★★★ Complete Protection

○ Not tested for this metal – Customer testing is recommended

TECHNICAL DATA

ARMOR PROTECTIVE PACKAGING CORROSION MANAGEMENT SOLUTIONS

Shelf Life & Storage of ARMOR VCI Products

ARMOR VCI Poly individual sheets, bags or bin liners have a shelf life of two years from the date of manufacture when stored in original packaging. Rolled goods have a longer shelf life of three years from the date of manufacture when stored in original packaging.

For best results, do not leave FOUNDRY Film out in an open environment, either indoors or outdoors. Keeping it in its original packaging or enclosed inside a container ensures that the vapors remain in the packaging. As temperature and humidity levels increase, the rate of the volatilization of the chemicals contained in the packaging also increases, reducing the effectiveness and longevity of the product. Product should be stored in a dry environment with temperatures between 40° – 110° F (5° – 43°C).

Length of Protection

ARMOR VCI products are used to cover or wrap metal parts and surfaces. The continuous vaporization of this chemically treated packaging creates a safe, protective environment that effectively blocks out rust, corrosion and oxidation. The key element in protecting parts is that the part must be completely clean, prior to wrapping in ARMOR products. We recommend that parts be completely wrapped or enclosed in airtight packaging for best results and longest protection time.

ARMOR cannot control variable conditions such as temperature and humidity extremes, airflow, production and process methods, surface conditions of metal to be protected, customer employee training and other factors beyond our control, therefore it is impossible to guarantee a specific length of protection. Additionally, if warehouse conditions are expected to be severe (i.e. over 90° F and 75% RH) for any length of time, other methods of rust preventatives such as ARMOR WRAP®, ARMOR POLY®, Dry Coat™ RP or desiccants, may be needed, in conjunction with VCI packaging. It is important to test parts and packaging as extensively as possible, prior to conducting any long-term storage projects.

Note: While Shelf Life and Length of Protection are two separate characteristics of VCI packaging materials, they are somewhat interrelated. Shelf Life refers to how long the unused VCI packaging material can be stored prior to being put in use. Length of Protection refers to how long the VCI packaging materials provide protection once in use. In both cases the duration depends on the product's storage conditions.

Properties

Products are nitrite-free; contain no secondary amines.

Products are made from partially recycled ARMOR VCI Film (pre-consumer recycled content).

ARMOR POLY® products comply with directive 2002/95/EC (RoHS and RoHS2 2011/65/EU) of the European Parliament and do not contain Sulfur or halide compounds (fluorides, chlorides, bromides, or iodides).

Wash hands thoroughly after handling this product and before eating.

All products manufactured Armor Protective Packaging® are warranted to be first class products and free from defects in material and workmanship. Liability under this warranty is limited to the net purchase price of any of such products proven defective or at our option to the repair or replacement of said products upon their return to us transportation prepaid. All claims on defective products must be made in writing 30 days after the receipt of such products in your plant and prior to further processing or combining with other materials and products. We make no warranty, express or implied, as to the suitability of any of our product for any particular use, and we shall not be subject to liability from any damages resulting from their use in operations not under our direct control. This warranty is exclusive of all other warranties, express or implied, and no representative of ours or any other person is authorized to assume for us any other liability in connection with the sale of our products.

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