



# Technical Resource

## Dry Coat™ RUST PREVENTATIVE SPRAY



Dry Coat™ Rust Preventative is a water-based, liquid rust preventative (RP) designed to prevent corrosion on ferrous and many non-ferrous metals. The chemistry of [Dry Coat™](#) is unique. As supplied, it is 95% water and contains film-forming inhibitors. Other features of the unique, water-based formulation include components that envelop the metal ions and inhibit their ability to catalyze corrosion reactions. Additionally, there are unique ingredients that offer multi-metal protection and ARMOR VCI components that provide vapor corrosion inhibitors.

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These components work together to form a thin film of protection to guard against rust and corrosion. Dry Coat™ is able to do this by wetting the substrate and adhering to the metal's surface with the appropriate film thickness. Upon drying, Dry Coat™ forms a hydrophobic layer that provides a barrier to water and other corrosion causing substances. In addition, Dry Coat™ emits VCI (a vapor-corrosion inhibitor) within enclosed spaces to protect non-coated surfaces as well.

Dry Coat™ application options include dip, spray or flow coat. Each method requires that the entire surface be coated with Dry Coat™ and that excess be allowed to flow off of the part, leaving the correct amount on the metal surface. While parts do not have to be completely clean, it is always better to coat a clean metal surface to assure the best corrosion protection.

One key advantage of Dry Coat™ is its quick dry time. In ambient conditions, Dry Coat™ will dry-to-touch within 30 minutes. This dry time is impacted by temperature, humidity, and airflow. The use of warm air via dryers, fans or low-temperature ovens will accelerate the drying process. Once properly applied, Dry Coat™ is not sticky or tacky and will not attract dirt or dust on metal parts.

While Dry Coat's effectiveness is dependent on humidity, temperature, air flow and temperature cycles (meaning condensation/evaporation cycles), on average it offers 12 months of protection for items stored indoors and two years for enclosed applications. Factors that impact the protection duration are highlighted below:

There is no need to remove Dry Coat™ before the coated metal part is placed into service. Dry Coat™ will not interfere with parts exposed to additional processing including stamping, grinding, cutting, welding or burnishing. It is recommended that Dry Coat™ be removed before the application of paint or conversion coatings through the use of standard industrial pretreatments and cleaners. For all other cases, the metal part can be rinsed with water and mild detergent.

Dry Coat™ Rust Preventative is a clean, safe and easy alternative to traditional rust prevention methods such as solvents and oil-based products. It is non-toxic, non-hazardous, easy to apply and easy to remove. Ideal for small parts

in large quantities or odd shaped parts that cannot be placed into ARMOR VCI bags or wrap, Dry Coat™ is also ideal for export equipment or machinery.

**DRY COAT™ liquid**

**WHAT IT DOES**

- Prevents corrosion on ferrous & many non-ferrous metals
- Wets the substrate and adheres to the metal surface with the appropriate film thickness
- Upon drying, forms a hydrophobic layer that provides a barrier to water and other corrosion causing substances
- Emits VCI within enclosed spaces to protect non-coated surfaces

The diagram illustrates the mechanism of Dry Coat™. On the left, an electrolyte layer is shown on a metal surface, with arrows indicating high energy and low energy zones. On the right, Dry Coat™ is applied, forming a hydrophobic layer and emitting VCI (Vapor Corrosion Inhibitor) into the enclosed space. The ARMOR logo is visible in the bottom right corner of the diagram.