

## Product Bulletin

# ASR TURBO-SHIELD 3510

(Corrosion Protector)

### PRODUCT DESCRIPTION

ASR TURBO-SHIELD 3510 is a high-purity nitrogen-based polymeric compound designed to provide strong corrosion protection in aqueous and acidic environments. It forms a durable molecular film on metallic surfaces, preventing oxidation and pitting caused by corrosive media. The product is highly soluble in water and alcohols, thermally stable, and non-hygroscopic, making it suitable for long-term storage and use in various industrial applications.

### CHEMICAL IDENTITY

Chemical Nature	Nitrogen-based Polymeric Compound
Molecular Structure Type	Organic Polyamine Network
Molecular Weight Range	Approx. 140 g/mol (Representative Unit)

### PHYSICAL & CHEMICAL PROPERTIES

Property	Typical Value
Appearance	White crystalline powder or fine granules
Active Content	≥ 99.0 %
Moisture Content	≤ 0.5 %
Free Amine Content	≤ 0.01 %
Ash Content	≤ 0.05 %
Thermal Stability	Up to 280 °C without degradation
Density	1.33 g/cm <sup>3</sup> (solid)
Solubility	Fully soluble in water, alcohol, and polar solvents
pH (10% solution)	8.0 – 9.5
Odor	Faint amine-like
Stability	Stable under normal conditions, non-hygroscopic

Flash Point	Not applicable (non-flammable solid)
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## APPLICATIONS

- Corrosion protection additive for acid cleaning and pickling formulations
- Preventive treatment for boiler systems and closed-loop cooling circuits
- Surface passivation and protective film formation on ferrous metals
- Additive in polymeric coatings, lubricants, and industrial fluids
- Component for multipurpose metal protection formulations

## HANDLING AND STORAGE

Store in a cool, dry, and well-ventilated area. Keep the container tightly sealed to prevent moisture ingress. Avoid contact with strong oxidizing or acidic materials. Shelf life: 24 months under recommended storage conditions.

## SAFETY & PRECAUTIONS

Avoid inhalation of dust and contact with skin or eyes. Use appropriate PPE such as gloves, goggles, and a dust mask. In case of contact, rinse thoroughly with water. For spills, sweep and collect dry material and avoid release into drains. Refer to the Safety Data Sheet (SDS) for detailed health and safety guidelines.

## PACKAGING

ASR TURBO-SHIELD 3510 is supplied in 25 kg woven PP bags or fiber drums with polyethylene liner. Bulk packaging and customized container sizes are available upon request.

## PRODUCT GRADE AVAILABILITY

Grade	Description
Technical Grade	For industrial and water treatment applications
Premium Grade	Enhanced purity and inhibitor performance for sensitive systems

## TYPICAL USE IN FORMULATION

When formulated as a corrosion inhibitor concentrate:

- Recommended solution concentration: 30–40 % w/w in demineralized water (fully soluble)
- Typical pH: 8–9 at 25 °C
- Produces a clear, stable liquid suitable for metal protection applications.