



PLOT NO. 60/61, PANDOL INDUSTRIAL AREA, VED ROAD, KATARGAM,
SURAT, GUJARAT -395004

TECHNICAL DATA SHEET RP-303 **MICACEOUS IRON OXIDE METAL PRIMER**

PRODUCT TYPE: Single Pack Air-Drying Micaceous Iron Oxide Primer

1. Product Description

RP-303 is a high-performance, single-pack, air-drying Micaceous Iron Oxide (MIO) primer designed to provide exceptional barrier protection for metal substrates. Formulated for high chemical resistance, this primer is specifically engineered to withstand aggressive, highly saline atmospheres and severe industrial environments.

Recommended Use

- Intermediate Coat:** Suitably cleaned Mild Steel (MS), Galvanized Iron (GI), and Aluminium surfaces in OEM equipment painting workflows.
- Anti-Corrosive Primer:** Designed for process industries such as fertilizer plants, oil refineries, and petrochemical complexes to protect steel pipelines and structural assets from corrosion.

2. Technical & Physical Data

Physical Specifications

Property	Value / Specification
Colour	Red Oxide
Finish	Matt
Solids by Volume	80 ± 3% <i>(May vary depending on shades; alternatives available on request)</i>

Property	Value / Specification
Theoretical Coverage	4.5 sqr mtr / ltr at recommended DFT of 125μ.
Recommended DFT	125 μ per coat (<i>Variations can be obtained by altering application methods/thinning ratios</i>)
Flash Point	Single Pack standard
Shelf Life	9 Months when stored at 25°C

Drying & Overcoating Characteristics

(Data recorded at 30°C and 60% Relative Humidity)

- **Surface Dry:** 20 to 30 Minutes
- **Hard Dry:** 24 Hours
- **Full Cure:** 7 Days
- **Overcoating Interval:**
 - *Minimum:* 8 Hours
 - *Maximum:* 24 Hours
 - *Note:* If the maximum interval is exceeded, the surface must be roughened by emery scuffing prior to coating.

System Compatibility

- Fully compatible with all standard air-drying paints.

3. Performance & Resistance Guide

Chemical & Environmental Resistance Matrix

Exposure Type	Splash & Spillages	Mild Fumes / Outdoor
Solvents	Very Good	Very Good
Salt / Saline	Very Good	Very Good
Water / Moisture	Very Good	Very Good
Acids	Good	Good
Alkalis	Good	Good

Physical Limits

- **Temperature Resistance:** Continuous up to 90°C | Intermittent up to 120°C
- **Flexibility:** Good
- **Weatherability:** Very good when paired with a suitable top coat.

4. Application Engineering Workflow

A. Surface Preparation

1. **Degreasing:** Remove all grease, oil, and surface contaminants, preferably using a dedicated Degreasing Solvent. Thoroughly dust down all surfaces.
2. **Primary Specification (Blast Cleaning):** Blast clean the substrate to a minimum of **Sa 2½ (Swedish Standard SIS 05 5900)** with a controlled surface profile not exceeding 65 microns.
3. **Secondary Specification (Mechanical/Manual):** If abrasive blasting is unfeasible, utilize mechanical devices along with manual chipping and wire brushing to remove loose rust and scale to **St. 2 (Swedish Standard SIS 05 5900)**. Avoid excessive burnishing of the steel.

B. Mixing & Preparation

- Stir the paint thoroughly to attain absolute homogeneity.
- Add **RP-510 Thinner** into the mix if required by the application method, and stir thoroughly for several minutes.
- Allow the mixture to stand still (**maturation time**) for **10 to 15 minutes** to initiate the internal leveling reaction.
- Strain the mixed paint through a **400-mesh Nylon filter cloth** immediately before application.

C. Application Methods & Parameters

Brush	Max 5%	N/A	N/A	Apply uniformly in a cross-cut/criss-cross manner. Ensure no misses. Use high-quality brushes.
Air Spray	10% to 15%	1.2 to 1.4 mm	40 to 70 psi	Apply continuous, uniform wet passes with a 50% overlap.
Airless Spray	Max 5%	0.28 mm	1400 to 1800 psi	Ensure fluid pressure parameters are met to avoid tailing.

D. Environmental Application Notes

- **Temperature Limits:** Do not apply paint when the ambient temperature falls below 10°C or rises above 50°C.
- **Substrate Threshold:** The temperature of the steel substrate must be a minimum of **3°C above the dew point** of the air.
- **Humidity & Weather:** Do not apply when Relative Humidity (RH) exceeds 85%, or during rain, fog, or mist. Ensure excellent ventilation when coating enclosed or confined spaces to facilitate correct solvent release and drying.

5. Equipment Maintenance & Cleanup

- **Immediate Cleanup:** Flush and clean all tools, hoses, guns, and spray units immediately after use with **RP-510 Thinner** to prevent permanent equipment damage.
- **On-Site Maintenance:** Do not allow mixed material to stand idle inside lines or hoses. Establish a good working practice to periodically flush out spray equipment during the course of the day.
- **Storage Post-Mix:** Once units of paint have been mixed, they should not be resealed. Do not exceed pot life limitations.

6. Health, Safety & Logistics

Health and Safety Precautions

- **Compliance:** All application procedures must follow relevant National Health, Safety & Environmental standards.
- **PPE Requirements:** Take comprehensive precautions to avoid skin and eye contact. Wear solvent-resistant gloves, chemical splash goggles, face masks, and barrier creams. Avoid inhalation of spray mist or vapors.
- **Ventilation:** Proper ventilation and air-exchange measures must be maintained during application and drying to keep solvent vapor concentrations within safe limits and prevent oxygen deficiency.
- **Hot Work Hazard:** If welding or flame cutting is performed on metals coated with this product, hazardous dust and fumes will be emitted. Proper personal respirators and localized exhaust ventilation must be deployed.
- **Disposal:** Dispose of all surplus materials, spills, and empty containers in accordance with appropriate regional legislation.

Storage & Logistics

- Individual components must be stored in cool, dry, and covered conditions.
- Keep containers securely sealed and placed away from open flames, direct heat, and active ignition sources.



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