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RUDRA PAINT

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

TECHNICAL DATA SHEET_ RP-202

HEAT RESISTANT 400°C

PRODUCT DESCRIPTION

Heat Resistant Aluminium Paint – 400°C is a single-component, metallic aluminium pigmented, silicone resin-based protective coating designed for long-term corrosion protection of metal surfaces exposed to elevated temperatures.

The coating forms a durable metallic barrier that resists oxidation, atmospheric corrosion, moisture, and industrial pollutants while maintaining excellent appearance and performance at temperatures up to 400°C. The specially formulated silicone polymer binder provides superior heat resistance, weatherability, and adhesion under thermal cycling conditions.

The coating is air drying, easy to apply, and suitable for both maintenance and new construction applications in industrial and power generation environments.

PRODUCT FEATURES

- Single-pack, ready-to-use coating.
- Heat resistant up to 400°C continuous service temperature.
- Excellent corrosion and oxidation resistance.
- Metallic aluminium finish with high reflectivity.
- Excellent resistance to industrial atmospheres.
- Good resistance to moisture and weathering.
- Fast air-drying characteristics.
- Excellent adhesion to properly prepared surfaces.
- Suitable for interior and exterior applications.
- Resistant to thermal shock and repeated heating cycles.
- Easy application by brush, roller, conventional spray, or airless spray.

RECOMMENDED USES

Recommended for corrosion protection of surfaces operating at elevated temperatures:

Industrial Equipment

- Chimneys and stacks
- Process pipelines
- Exhaust ducts
- Storage vessels
- Structural steel exposed to heat

Thermal Equipment

- Boiler jackets
- Heat exchangers
- Drying kilns
- Industrial ovens
- Furnaces

Manufacturing Plants

- Hot rolling mill machinery
- Processing equipment
- Industrial reactors

Automotive Components

- Engine housings
- Exhaust systems
- Silencers and mufflers

Power Generation Equipment

- Turbines
- Generators
- Heat recovery systems
- Auxiliary equipment

TECHNICAL DATA

Property	Value
Product Type	Silicone-Based Heat Resistant Coating
Colour	Aluminium (silver), Black, Blue, Red
Finish	Smooth Metallic Gloss
Components	Single Pack
Volume Solids	50 ± 5%
Specific Gravity	1.00 – 1.20
Coverage	10 – 15 m²/Litre per coat
Recommended DFT	20 ± 5 Microns per coat
Recommended WFT	40 – 50 Microns per coat
Flash Point	Above 30°C
Application Methods	Brush, Roller, Air Spray, Airless Spray, Dipping, Flow Coating, Curtain Coating
Shelf Life	12 Months

FILM PROPERTIES

Drying Characteristics (Air Dry)

Property	Time
Touch Dry	60 Minutes
Hard Dry	24 Hours
Recoat Interval	Minimum 12 Hours
Full Cure	7 Days

Finish

Smooth, glossy metallic aluminium finish.

Adhesion

100% adhesion by Cross Hatch Test.

Flexibility

Passes O-T Bend Test.

Scratch Hardness

Minimum 1000 grams.

Impact Resistance

Greater than 60 kg-cm.

Weather Resistance

Excellent; suitable for long-term exterior exposure.

UV Resistance

Excellent.

CHEMICAL RESISTANCE

Chemical	Performance
Water	Excellent
3% Hydrochloric Acid (HCl)	Excellent
3% Sodium Hydroxide (NaOH)	Excellent
Industrial Atmospheres	Excellent
Mild Solvents	Excellent

TEMPERATURE RESISTANCE

Exposure Condition	Temperature
Continuous Service	Up to 400°C
Intermittent Exposure	Up to 450°C
Thermal Cycling Resistance	Excellent

The coating is specifically designed to withstand prolonged exposure to elevated temperatures without significant loss of adhesion, colour stability, or protective performance.

SURFACE PREPARATION

Proper surface preparation is essential for optimum coating performance.

Cleaning

All surfaces must be clean, dry, and free from:

- Oil and grease
- Dust and dirt
- Rust and mill scale
- Moisture
- Old loose coatings
- Other contaminants

Degreasing

Remove oil and grease by:

- Solvent cleaning
- Emulsion degreasing
- Approved industrial degreasers

Steel Surfaces

- Abrasive blast cleaning to Sa 2½ (ISO 8501-1) is recommended.
- Mechanical cleaning using power tools may be used where blasting is impractical.
- Remove all loose rust, scale, and oxidation.

Priming

Apply a suitable heat-resistant silicone primer where additional corrosion protection is required.

APPLICATION PROCEDURE

Mixing

The product is supplied as a single-pack material.

- Stir thoroughly before use until a homogeneous consistency is achieved.
- Continue occasional stirring during application.

Application Methods

The coating may be applied by:

- Brush
- Roller
- Conventional Air Spray
- Airless Spray
- Dipping
- Flow Coating
- Curtain Coating
- Tumbling

Thinning

Use only the recommended Silicone Thinner.

Application Method	Thinner Addition
Brush / Roller	Up to 5%
Air Spray	10–15%
Airless Spray	Up to 5%

Do not over-thin the paint, as excessive thinning may reduce film thickness and coating performance.

FILM THICKNESS

- Minimum Wet Film Thickness (WFT): 50 Microns
- Recommended Dry Film Thickness (DFT): 20 ± 5 Microns per coat

Multiple coats may be applied where higher film build is required.

CURING

Air Drying

- Touch Dry: 60 Minutes
- Hard Dry: 24 Hours

Force Drying

The coating may be stove cured at 120°C for approximately 1 hour after adequate flash-off time to accelerate hardness development.

Full heat resistance is achieved after complete curing and gradual exposure to operating temperature.

STORAGE

Store in accordance with local and national regulations.

Storage Conditions

- Store in a cool, dry, and well-ventilated area.
- Keep away from direct sunlight.
- Protect from heat, sparks, and open flames.
- Keep containers tightly closed when not in use.

Shelf Life

12 months from the date of manufacture when stored in original unopened containers.

PACKING

- 20 Litre Containers
- 200 Litre Drums

Other pack sizes may be available upon request.

HEALTH & SAFETY

- Use only in well-ventilated areas.
- Avoid inhalation of spray mist and solvent vapours.
- Wear suitable PPE including gloves, safety goggles, and respiratory protection.
- Avoid contact with skin and eyes.
- Wash thoroughly after handling.
- Keep away from sources of ignition.
- Do not smoke during application.
- Keep out of reach of children.

First Aid

Skin Contact: Wash immediately with soap and water.

Eye Contact: Flush thoroughly with clean water and seek medical attention.

Inhalation: Move the affected person to fresh air and obtain medical advice if symptoms persist.

QUALITY ASSURANCE

Manufactured under stringent quality control procedures to ensure consistent product quality, durability, and reliable protection of metal surfaces exposed to elevated temperatures and corrosive industrial environments.

Suitable for Continuous Service Temperature up to 400°C

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Mfg by RUDRA ENTERPRISE

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THE FUTURE OF SURFACE PROTECTION

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