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

TECHNICAL DATA SHEET RP-205

HEAT RESISTANT 1200°C

PRODUCT DESCRIPTION

Heat Resistant Paint – 1200°C is a single-component, metallic aluminium pigmented, ceramic-modified silicone coating specially formulated to provide long-term protection against oxidation, scaling, corrosion, and thermal degradation at extremely high temperatures.

The coating forms a durable, heat-resistant protective barrier capable of withstanding severe thermal cycling and prolonged exposure to elevated temperatures. The advanced ceramic-silicone technology offers excellent adhesion, oxidation resistance, and thermal stability on metal surfaces subjected to extreme operating conditions.

The coating is designed for industrial equipment, furnaces, chimneys, exhaust systems, kilns, power plants, petrochemical installations, and other applications where conventional coatings cannot withstand the operating temperatures.

PRODUCT FEATURES

- Single-component, ready-to-use coating.
- Heat resistance up to 1200°C.
- Ceramic-modified silicone technology.
- Excellent resistance to oxidation and scaling.
- Outstanding thermal shock resistance.
- Excellent adhesion at elevated temperatures.
- Metallic aluminium finish.
- Resistant to repeated heating and cooling cycles.
- Superior weather and atmospheric resistance.
- Good corrosion protection in industrial environments.
- Easy application by brush, roller, or spray methods.

RECOMMENDED USES

Recommended for protection of metal surfaces exposed to extreme temperatures:

Industrial Equipment

- Chimneys and exhaust stacks
- Flue gas ducts
- Furnace exteriors
- Kilns and dryers
- Incinerators
- Thermal oxidizers
- Process vessels

Power Generation

- Boiler exteriors
- Steam pipelines
- Turbine casings
- Heat recovery systems
- Power plant equipment

Petrochemical & Refinery Equipment

- High-temperature process piping
- Refinery stacks
- Reactors
- Thermal processing units

Steel & Cement Industries

- Hot rolling mill equipment
- Cement kiln exteriors
- Reheating furnaces
- Ducting systems

Automotive & Engineering Applications

- Exhaust manifolds
- Turbocharger housings
- Silencers and mufflers
- High-temperature engine components

TECHNICAL DATA

Property	Value
Product Type	Ceramic Silicone Aluminium Coating
Colour	Aluminium (silver), Black, Blue, Red
Finish	Metallic Matt to Semi-Gloss
Components	Single Pack
Volume Solids	45 ± 5%
Specific Gravity	1.00 – 1.25
Coverage	10–15 m ² /Litre per coat
Recommended DFT	20 ± 5 Microns per coat
Recommended WFT	40–50 Microns per coat
Flash Point	Above 30°C
Shelf Life	12 Months

FILM PROPERTIES

Drying Characteristics

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

Finish

Smooth 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.

UV Resistance

Excellent.

TEMPERATURE RESISTANCE

Exposure Condition	Temperature
Continuous Service Temperature	Up to 1000°C
Intermittent Exposure	Up to 1200°C
Thermal Shock Resistance	Excellent
Oxidation Resistance	Excellent

The coating is designed to withstand severe thermal cycling and extreme service temperatures without significant degradation of the protective film.

CHEMICAL RESISTANCE

Medium	Performance
Water	Excellent
Industrial Atmospheres	Excellent
Sulphur-Bearing Flue Gases	Good
Mild Acids	Good
Mild Alkalis	Good
Petroleum Vapours	Excellent
Industrial Solvents	Good

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
- Existing loose coatings
- Surface contaminants

Degreasing

Remove oil and grease using approved solvent cleaning methods.

Steel Surface Preparation

- Abrasive blast cleaning to Sa 2½ (ISO 8501-1) is recommended.
- Surface profile: 40–75 microns.
- Remove all rust, scale, oxidation, and contaminants.

Priming

For ultra-high temperature service, use only compatible high-temperature inorganic zinc silicate or ceramic silicone primers where specified.

Conventional epoxy, polyurethane, alkyd, chlorinated rubber, or acrylic primers are not recommended.

APPLICATION PROCEDURE

Mixing

The product is supplied as a single-pack coating.

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

Application Methods

Suitable for:

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

Thinning

Use only the recommended High Temperature 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 coating.

FILM THICKNESS

Property	Recommended Value
Wet Film Thickness (WFT)	40–50 Microns
Dry Film Thickness (DFT)	20 ± 5 Microns per coat

Apply multiple thin coats for optimum heat resistance and adhesion.

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.

Service Heat Curing

Final curing occurs gradually during exposure to operating temperatures. Controlled temperature ramp-up is recommended during commissioning.

STORAGE

Store in accordance with local and national regulations.

Storage Conditions

- Store in a cool, dry, and well-ventilated area.
- Protect from direct sunlight.
- Keep away from heat and ignition sources.
- Keep containers tightly closed.

Shelf Life

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

PACKING

- 20 Litre Containers
- 200 Litre Drums

Other pack sizes available upon request.

HEALTH & SAFETY

- Use only in well-ventilated areas.
- Avoid inhalation of spray mist and solvent vapours.
- Wear suitable gloves, goggles, protective clothing, and respiratory protection.
- Avoid contact with skin and eyes.
- Keep away from sources of ignition.
- Wash thoroughly after handling.
- Keep out of reach of children.

First Aid

Skin Contact: Wash with soap and water.

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

Inhalation: Move to fresh air and obtain medical assistance if symptoms persist.

Refer to the Safety Data Sheet (SDS) before use.

QUALITY ASSURANCE

Manufactured under stringent quality control procedures to ensure consistent quality, durability, and reliable protection in extreme high-temperature industrial environments.



Mfg by **RUDRA ENTERPRISE**

Website: www.rudrapaint.com

E Mail:- rudrapaint@yahoo.com

THE FUTURE OF SURFACE PROTECTION

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