SINCE 1974

Rapid Coat
POWDER COATINGS

High Adhesion Polymer Alloy (HAPA) Thermoplastic powder coatings

Thermoplastic Powder Coating

Strength

- 45 Years of experience in the plastic industry
- Capability to produce for very demanding and challenging applications.
- R&D / Analytical resources which help to find solution to improve production and product quality.

Product Benefits

- Excellent adhesion on metal
- Foaming Additives Resistance
- Outdoor Durability
- No cracking or peeling
- Color Stability over the time
- Cryogenic Thermoplastic Coating Powder

Besides traditional corrosion protection systems such as liquid paints or thermoset powders, thermoplastic powder coatings offer many advantages for applicators as well as end users, in temperate and extreme environments.

We manufacture the internal coating powder for mild steel liquid-filled fire extinguisher. We are also offering powder for the external coating of the fire extinguisher. Thermoplastic powder coatings allow to build a relatively thick. Non-porous film with excellent corrosion and chemical resistance all in one step.

HAPA- Fire Extinguisher
High Adhesion Polymer Alloy

Fire Extinguisher

Our specialized HAPA FE powder are designed for internal coating of mild steel liquid-filler fire extinguisher. It fulfils the most demanding properties i.e. foaming additives resistance & long-term protection.

Available Shades

RAL 7011, RAL 9005 and as per customer requirements.

Product Details

Product Type	Roto/Spin	Lining Spray Lining
Particle Size (D-50)	300 Microns	200 Microns
Packaging	20 Kg Box/20 Kg PP Bag	

Please contact rnd@rapidpolymers.com for specific regulatory information.

Features

- Long term adhesion
- Foaming additives resistance
- Excellent corrosion resistance
- Easy to achieve smooth coating
- Electrical insulation
- Maintenance free

How Do You Apply Thermoplastic Coatings?

Our specialized powder can be applied by Roto/Spin Lining and Spray Lining Method.

Pre-treatment & Coating Guidelines

Pre-treatment Guidelines

Degrease – Alkaline/solvent degrease.

Cylinder should be Shot blasted or Iron phosphated.

Coating Parameters

Pre-Heat Time – At 220°C-280°C (425°F - 535°F) for 90-120 seconds (depending on metal thickness)

Dwell Time – 30 Seconds

Post-Heat Time – 30 Seconds

Roto/Spin Lining Coating

- In this method, the fire extinguisher is heated and then the powder is added inside the cylinder.
- The extinguisher is continuously tilted and turned.
- The powder melts and flows out uniformly inside the extinguisher.
- Once the article is coated, care should be taken to ensure it does not rub or come into contact with any surface, to prevent damage to the coating.
- At this stage, a rough powdery, but uniform coating on the article is obtained.
- The excess un-melted powder is shaken off with a slight jerky motion or light tapping.

Spray Lining Coating

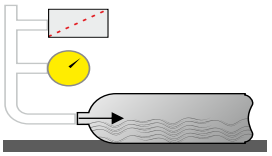
- In this method, the fire extinguisher is heated up to optimum temperature.
- Now, the spray grade powder is sprayed inside the fire extinguisher with or without electrostatic charge.
- The powder melts and flows out uniformly inside the extinguisher.
- Once the article is coated, care should be taken to ensure it does not rub or come into contact with any surface, to prevent damage to the coating.
- At this stage, a thin and uniform coating on the article is obtained.

Points to be considered

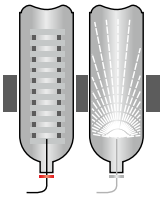
The coating thickness increases with:

- Increase in temperature of the article
- Amount of powder sprayed inside the extinguisher.

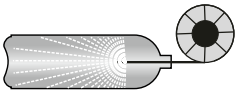
Process



HYDRAULIC TEST

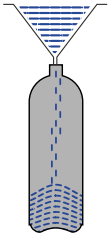


WASHING & DRYING

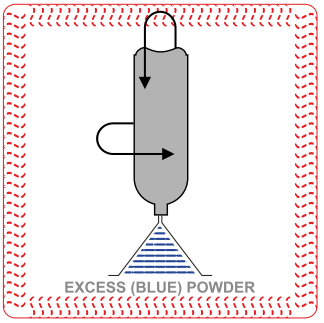


INTERNAL SHOT BLASTING

ROTATIONAL COATING PROCESS

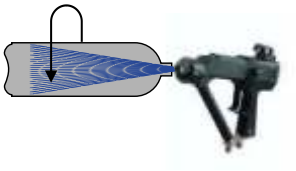


FILLING COLOURS

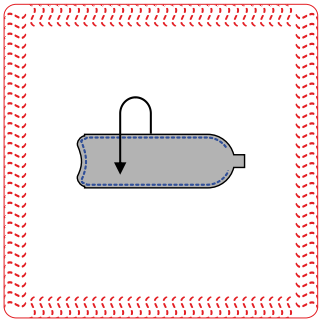


TILT & TURN AND HEATING

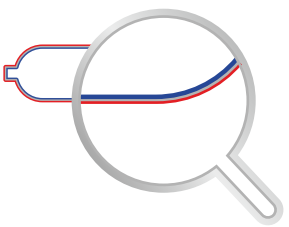
SPRAY LINING PROCESS



ROTATION & SPRAYING



ROTATING & HEATING



CYLINDER INNER PLASTIC LINING

Technical Specifications

Properties of the powder

Properties	Standard	Roto/Spin Lining	Spray Lining
Specific Gravity*	ASTM D792	0.910-0.930	0.920-0.940
Meting Range	ASTM D3418	110-120°C	112-118°C
		(230-250°F)	
Melt Flow Index	ASTM D1238	7-8 g/10min	10-12 g/10mins
Vicat Softening Point	ASTM D1525	102-108°C	
		(215-225°F)	
Particle Size Distribution	-	350 microns	250 microns
Water Absorption	ASTM D570-81	<0.03%	

*Properties may vary from colour to colour.

Properties of the coating

The following data applies under standard conditions.

Description	Standard	Roto/Spin Lining	Spray Lining
Recommended Coating Thickness	-	500-1000 microns	350-500 microns
Surface Finish	-	Smooth & Semi-matt	
Abrasion Resistance (Taber)	ASTM D4060 (mg loss)	15-20	
Salt Spray Resistance (After 1000 Hrs.)	ASTM B-117	Less than 1mm in salt water at 35°C	
Chemical Resistance	Dilute Acids	Good	
	Dilute Alkali	Good	
	Salt	Good	
Maximum Working Temperature	-	60±5°C (140±10°F)	

ABOUT US

Rapid Engineering Co. Pvt. Ltd. started operations in **1974** and primarily produces thermoplastic and thermosetting powder coatings. The company has **two plants located in Sahibabad, Uttar Pradesh** and **Noida, Uttar Pradesh, India.**

In addition, the company has warehouses cum sales offices in **New Delhi, Mumbai, Pune & Bangalore.** The company is also exporting its products to 35+ countries worldwide. Rapid Engineering has been awarded the **'Recognized One Star Export House'** certificate by the Government of India in recognition of its exports track record.

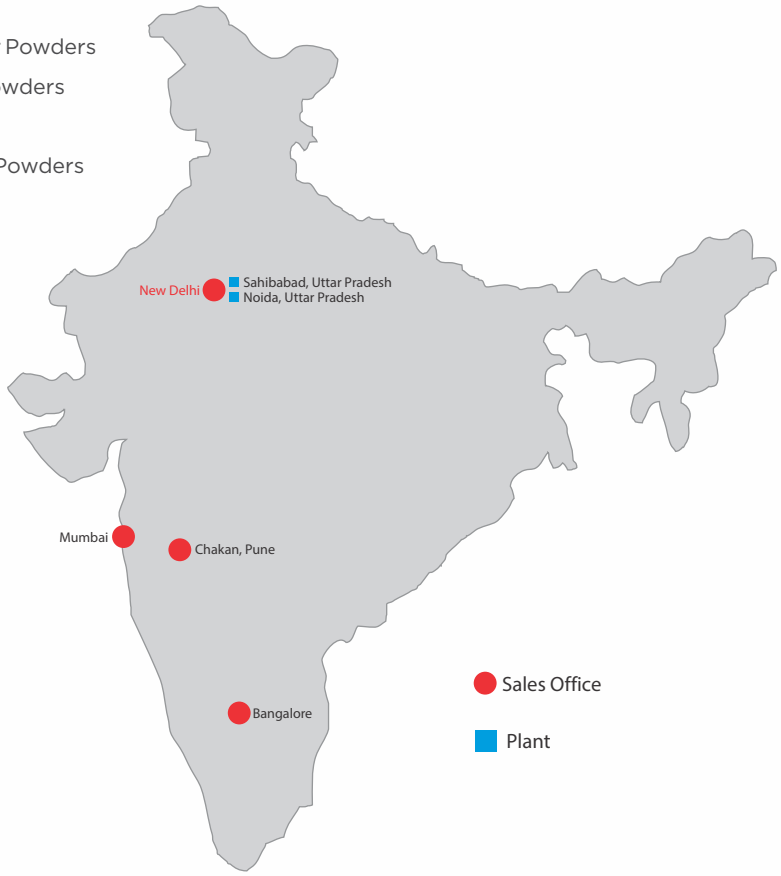
Since 2001 the company is ISO certified and is currently compliant with **ISO 9001:2015 Quality Certificate No. TUV99 100 16731 from TUV SUD Management Services GMBH.**

Rapid's Powders are **Qualicoat, Switzerland: Class 1 and Class 2 approved. Class 1 Approval No. P-1419: Class 2 Approval No. P-1504:**

In 2019, Rapid Polymers (A Division of Rapid Engineering Co. Pvt. Ltd.) was formed to manufacture plastic masterbatches and cryogenically pulverised plastic powders.

Rapid's range of products includes:

1. Thermosetting Epoxy / Polyester Powders
2. Thermoplastic Plastic Coating Powders
3. Plastic Masterbatches
4. Cryogenically Pulverised Plastic Powders



Rapid Coat POWDER COATINGS

QUALICOAT

CRISIL A Standard & Poor's Company

GOVERNMENT OF INDIA RECOGNIZED EXPORT HOUSE

www.rapidcoat.com

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