

TECHNICAL DATA SHEET

REAFREE® 5406

Powder Resins / Saturated Carboxylated Polyester / TGIC and β -Hydroxyalkylamide



Low / Ultra Low Temperature Cure



Superdurable

PRODUCT APPLICATION DETAILS

Saturated carboxylated polyester for combination with Triglycidylisocyanurate or β -Hydroxyalkylamide type hardeners. Suitable for the formulation of outdoor SUPERDURABLE and protective thermosetting powders for electrostatic application. For mat paints by dry-blend with REAFREE 5706 or REAFREE 5002 Low TGIC or PRIMID⁽¹⁾ demand. TMA free type.

SALES SPECIFICATIONS

	CHARACTERISTICS	METHODS
Acid value	18-22 mg KOH/g	ASTM D-1639
Viscosity (Cone and plate - 165°C)	18-32 Pa.s	DIN 53229
Color (50%)	2 max Gardner	ASTM D-1544

OTHER CHARACTERISTICS¹

	CHARACTERISTICS	METHODS
Appearance	Pale granules	
Glass transition temperature (Tg)	approx 57 °C	DSC

¹The data provided for these properties are typical values, intended only as guides, and should not be construed as sales specifications

CURING CONDITIONS

TGIC: 15 minutes at 200°C (object temperature)
PRIMID⁽¹⁾: 20 minutes at 180°C (object temperature)

⁽¹⁾ EMS-Chemie AG

RECOMMENDED MIXING RATIO

REAFREE® 5406 / TGIC: 96/4

REAFREE® 5406 / PRIMID XL-552⁽¹⁾: 97/3

⁽¹⁾ EMS-Chemie AG

MARKET & APPLICATIONS

Coatings & Inks

- Industrial Coating
 - Ace
 - General Industry
 - Metal Exterior - Powder

PERFORMANCE BENEFITS

- Flexibility.
- Good flow.
- Good mechanical properties.
- Excellent outdoor durability.

REAFREE® 5406

FORMULATION GUIDELINES

	STARTING FORMULATION	
	A	B
REAFREE® 5406	-	647
REAFREE® 5706	633	-
Titanium Dioxide ⁽¹⁾	320	320
β-Hydroxyalkylamide ⁽²⁾	34	20
Flow modifier ⁽³⁾	10	10
Benzoin	3	3

⁽¹⁾ Kronos® 2160

⁽²⁾ Primid® XL-552 (EMS Chemie)

⁽³⁾ Byk® 360 P (Byk Chemie)

APPLICATION / EXTRUSION CONDITIONS

	CHARACTERISTICS
Extruder	BUSS PCS-30
Spraying gun	GEMA PG 1-B
Torque	40
Extrusion speed	200 rpm
Application voltage	60-80 kV
Test substrate (Degreased steel)	1 mm
Extrusion temperature	105 °C

COATING PROPERTIES

	CHARACTERISTICS	METHODS
Film thickness	60-80 microns	
Gloss (60°)	approx. 40 %	
Cupping test	Over 8 mm	DIN 53156
Direct impact	Over 75 kg.cm	ASTM D-2794
Reverse impact	Over 45 kg.cm	ASTM D-2794
Conical mandrel	100 %	ASTM D-522
Adhesion	Gt0	DIN 53151

PRODUCT SAFETY

Please refer to the corresponding Safety Data Sheet.

DELIVERY FORM

Granules. White opaque polyethylene bags of 25 Kg. One Ton pallet shrink – wrapped.

STORAGE AND HANDLING

The resin in its original unopened bags is stable for more than three years, stored in a dry place at temperature below 30°C. Avoid direct sunlight.

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