

## TECHNICAL DATA SHEET

### REAFREE® 5709

Powder Resins / Saturated Carboxylated Polyester / TGIC and  $\beta$ -Hydroxyalkylamide



Low Temperature Cure



Superdurable

#### PRODUCT APPLICATION DETAILS

Saturated carboxylated polyester for combination with Triglycidylisocyanurate or  $\beta$ -Hydroxyalkylamide type hardeners. Suitable for the formulation of outdoor SUPERDURABLE and protective thermosetting powders for electrostatic application. TMA free type. Low E cure with HAA.

#### SALES SPECIFICATIONS

	CHARACTERISTICS	METHODS
Acid value	32-38 mg KOH/g	ASTM D-1639
Viscosity (Cone and plate - 165°C)	20-50 Pa.s	DIN 53229
Color (50%)	2 max Gardner	ASTM D-1544

#### OTHER CHARACTERISTICS<sup>1</sup>

	CHARACTERISTICS	METHODS
Appearance	Pale granules	
Glass transition temperature (Tg)	approx 67 °C	DSC

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

#### CURING CONDITIONS

TGIC: 10 minutes at 200°C (object temperature)  
PRIMID<sup>(1)</sup>: 10 minutes at 160°C (object temperature)  
<sup>(1)</sup> EMS-Chemie AG

#### RECOMMENDED MIXING RATIO

REAFREE® 5709 / TGIC: 93/7  
REAFREE® 5709 / PRIMID XL-552<sup>(1)</sup>: 95/5  
REAFREE® 5709 / PRIMID QM-1260<sup>(1)</sup>: 94,5/5,5  
<sup>(1)</sup> EMS-Chemie AG

#### MARKET

##### Coatings & Inks

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

#### PERFORMANCE BENEFITS

- Excellent corrosion resistance.
- High gloss.
- Blooming free.
- Excellent outdoor durability. SUPERDURABLE FINISHES.
- Low E cure (HAA).
- Excellent texturing performance.

# REAFREE® 5709

## FORMULATION GUIDELINES

	STARTING FORMULATION	
	TGIC	PRIMID
<b>REAFREE® 5709</b>	620	633
Titanium Dioxide <sup>(1)</sup>	320	320
Triglycidylisocyanurate <sup>(2)</sup>	47	-
B-Hydroxyalkylamide <sup>(3)</sup>	-	34
Benzoin	3	3
Flow modifier <sup>(4)</sup>	10	10

(1) Kronos® 2160

(2) Araldite® PT-810 (Huntsman) / Tepic (Nissan Chemical)

(3) Primid® XL-552 (EMS Chemie)

(4) Byk® 360 P (Byk Chemie)

## APPLICATION / EXTRUSION CONDITIONS

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

## COATING PROPERTIES

	CHARACTERISTICS	METHODS
Film thickness	60-80 microns	
Gloss (60°)	Over 90 %	
Cupping test	Over 8 mm	DIN 53156
Direct impact	Over 50 kg.cm	ASTM D-2794
Reverse impact	Over 20 kg.cm	ASTM D-2794
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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