

## TECHNICAL DATA SHEET

# REAFREE® 5709 MB

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



Bio-Attributed through Mass Balance



Superdurable



Low Temperature Cure

### 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. Excellent corrosion resistance.

### 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 (T <sub>g</sub> )	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 MB / TGIC: 93/7  
 REAFREE® 5709 MB / PRIMID XL-552<sup>(1)</sup>: 95/5  
 REAFREE® 5709 MB / 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
  - Protective Coating

### PERFORMANCE BENEFITS

- Excellent flow.
- High gloss.
- Blooming free.
- Excellent outdoor durability.
- High Corrosion Resistance

# REAFREE® 5709 MB

## FORMULATION GUIDELINES

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

<sup>(1)</sup> Kronos® 2160

<sup>(2)</sup> Araldite PT-810 (Huntsman)/ Tepic (Nissan Chemical)

<sup>(3)</sup> Primid XL-552 (EMS Chemie)

<sup>(4)</sup> 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))	80/015 °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

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# REAFREE® 5709 MB

## 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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