REAFREE® 5709

POWDER COATINGS / TGIC & PRIMID — **TECHNICAL DATA SHEET**

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.
TMA free type.

Performance Benefits

- Excellent flow.
- High gloss.
- Blooming free.
- Excellent outdoor durability. SUPERDURABLE FINISHES.

Polymer Type

- Saturated Carboxylated Polyester Resin

Sales Specifications

Colour (50%), (ASTM D-1544)	2 max
Acid value, mg KOH/g (ASTM D-1639)	32 - 38
Viscosity 165ºC, Pa.s (ICI – DIN 53229)	20 - 50

Other Characteristics[1]

Appearance	Pale granules
Glass Transition T, ºC (DSC - Tg)	approx 67

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

Curing Conditions

TGIC: 12 minutes at 200ºC (object temperature)
PRIMID(1): 15 minutes at 160ºC (object temperature)
(1)PRIMID is a trade mark of EMS-Chemie AG

Recommended Mixing Ratio

REAFREE 5709 / TGIC :	93/7
REAFREE 5709 / PRIMID XL-552(1):	95/5
REAFREE 5709 / PRIMID QM-1260(1):	94,5/5,5

Formulation Guidelines

Starting Formulation

	TGIC	PRIMID
REAFREE 5709	620	633
Titanium Dioxide(1)	320	320
Triglycidylisocyanurate(2)	47	
β-Hydroxyalkylamide(3)		34
Benzoin	3	3
Flow modifier(4)	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

Extruder:	BUSS PCS-30
Torque:	40%
Speed:	200 rpm
Extrusion temperature:	80ºC / 105ºC (TGIC / PRIMID)
Spraying Gun:	GEMA PG 1-B
Application voltage:	60-80 Kv
Test substrate:	Degreased steel 1 mm

Coating Properties

Film thickness	60-80 microns
Gloss 60º, (ASTM D-523-60E)	Over 90%
Cupping test, (DIN 53156)	Over 8 mm
Direct Impact, (ASTM D-2794)	Over 50 Kg.cm
Reverse Impact, (ASTM D-2794)	Over 20 Kg.cm
Adhesion, (DIN 53151)	Gt0

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

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