

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 165°C, Pa.s (ICI – DIN 53229)	20 - 50

Other Characteristics¹

Appearance	Pale granules
Glass Transition T, °C (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 200°C (object temperature)
PRIMID⁽¹⁾: 15 minutes at 160°C (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: 80°C / 105°C (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 60°, (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

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 30°C. Avoid direct sunlight.

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Headquarter

ARKEMA FRANCE

420 rue d'Estienne d'Orves

92705 Colombes Cedex – France

Tel : +33 (0)1 49 00 80 80

Arkema.com - arkemacoatingresins.com

ARKEMA QUÍMICA, S.A.U.

CTRA. OLZINELLES, S/N

E08470 SANT CELONI (BCN) – ESPAÑA

Tel: + 34 93 867 40 00

