

TECHNICAL DATA SHEET

REAFREE® 4705

Powder Resins / Saturated Carboxylated Polyester / TGIC

PRODUCT APPLICATION DETAILS

Saturated carboxylated polyester for combination with Triglycidylisocyanurate. Suitable for the formulation of decorative and protective thermosetting powders for electrostatic application. Higher Tg than REAFREE 4703. Slow curing type. TMA free type.

SALES SPECIFICATIONS

	CHARACTERISTICS	METHODS
Acid value	35-40 mg KOH/g	ASTM D-1639
Viscosity (Cone and plate - 165°C)	25-35 Pa.s	DIN 53229
Color (50%)	2 max Gardner	ASTM D-1544

OTHER CHARACTERISTICS¹

	CHARACTERISTICS	METHODS
Appearance	Pale granules	
Glass transition temperature (Tg)	approx 70 °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

10 minutes at 200°C (object temperature)

RECOMMENDED MIXING RATIO

REAFREE® 4705 / TGIC: 93/7

MARKET & APPLICATIONS

Coatings & Inks

- Industrial Coating
 - General Industry
 - Metal Exterior - Powder

PERFORMANCE BENEFITS

- Very good flow.
- High gloss.
- Good mechanical properties.
- Excellent outdoor durability

REAFREE® 4705

FORMULATION GUIDELINES

STARTING FORMULATION	
REAFREE® 4705	595
Titanium Dioxide ⁽¹⁾	320
Triglycidylisocyanurate ⁽²⁾	45
REAFREE® F3300-A15	37
Benzoin	3

⁽¹⁾ Kronos® 2160

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

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	80 °C

COATING PROPERTIES

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

Arkema Coating Resins
410 Gregson Dr.
Cary, NC 27511 – USA
T +1 919 469 6700

Arkema Química, S.A.U.
Ctra. Olzinelles, s/n
E-08470 Sant Celoni (BCN)
Spain
T +34 938 674 000

Arkema Chemical India Private Ltd.
D-43, Trans Thane Creek
MIDC Industrial Area
400706 Mumbai - India
T +91 22 67377122

Headquarters: Arkema France
51, Esplanade du Général de Gaulle
92800 Puteaux – France
T +33 (0)1 49 00 80 80

Disclaimer - Please consult Arkema's disclaimer regarding the use of Arkema's products on <https://www.arkema.com/global/en/products/product-safety/disclaimer/> which is incorporated herein by reference and made a part hereof.

Arkema France, a French société anonyme registered at the Trade and Companies Register of Nanterre under the number 319 632 790

arkema.com

ARKEMA