

TECHNICAL DATA SHEET

REAFREE® 17013

Powder Resins / Saturated Hydroxylated Polyester / Polyisocyanate

PRODUCT APPLICATION DETAILS

Saturated Hydroxylated polyester for combination with blocked isocyanate resin and polyurethodione. Suitable for the formulation of Clear Coat or Pigmented outdoor durable and protective thermosetting powder paints.

SALES SPECIFICATIONS

	CHARACTERISTICS	METHODS
Acid value	7 max mg KOH/g	ASTM D-1639
Viscosity (Cone and plate - 165°C)	10-30 Pa.s	DIN 53229
Color (50%)	2 max Gardner	ASTM D-1544
Hydroxyl value	37-47 mg KOH/g	G/07-1

OTHER CHARACTERISTICS¹

	CHARACTERISTICS	METHODS
Appearance	Pale granules	
Glass transition temperature (Tg)	approx 62 °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

15 minutes at 200°C (object temperature)

RECOMMENDED MIXING RATIO

REAFREE 17013/ Blocked isocyanate: From 80/20

MARKET & APPLICATIONS

Coatings & Inks

- Industrial Coating
 - General Industry
 - Metal Exterior - Powder

PERFORMANCE BENEFITS

- Excellent flow
- Excellent mechanical properties
- Excellent outdoor durability
- Excellent transparency in Clear Coat.

REAFREE® 17013

FORMULATION GUIDELINES

STARTING FORMULATION	
REAFREE® 17013	535
Titanium Dioxide ⁽¹⁾	330
IPDI ε-Caprolactam blocked ⁽²⁾	120
Flow control agent ⁽³⁾	10
Benzoin	5

⁽¹⁾ Kronos® 2160

⁽²⁾ Vestagon® B 1530 (Evonik)

⁽³⁾ BYK® 360P (Byk Chemie)

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
Extrusion temperature	100 °C
Test substrate (Degreased Aluminium)	0.8 mm

COATING PROPERTIES

	CHARACTERISTICS	METHODS
Film thickness	60-80 microns	
Gloss (60°)	Over 90 %	
Cupping test	Over 5 mm	DIN 53156
Direct impact	Over 50 kg.cm	ASTM D-2794
Reverse impact	Over 50 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.

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