

REAFREE® 17009

POWDER COATINGS / POLYURETHANE

TECHNICAL DATA SHEET

Product Application details

Saturated Hydroxylated polyester for combination with blocked isocyanate resin, polyurethodiones and aminoplast hardeners.

Suitable for the formulation of decorative and protective thermosetting powders for electrostatic application.

Low isocyanate demand.

TMA free type.

Performance Benefits

- Excellent flow.
- Excellent mechanical properties.
- Excellent outdoor durability.
- Wrinkle finishes combined with {Tetrakis (methoxymethyl) glycoluril} systems.

Polymer Type

- Saturated Hydroxylated Polyester Resin

Sales Specifications

Colour (50%), (ASTM D-1544)	3 max
Hydroxyl value, mg KOH/g (G/07-1)	25 - 33
Acid value, mg KOH/g (ASTM D-1639)	7 max
Viscosity 165°C, Pa.s (ICI – DIN 53229)	20 – 50

Other Characteristics¹

Appearance	Pale granules
Glass Transition T, °C (DSC - Tg)	approx 55

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

Curing Conditions

15-20 minutes at 200°C (oven temperature)

Recommended Mixing Ratio

REAFREE 17009 / Blocked isocyanate: From 85/15 to 88/12, according to NCO value of the isocyanate.

Starting Formulation

	Black Wrinkle
REAFREE 17009	659,0
Chemark 1374 (1)	42,0
Actiron 32-18 A (2)	10,0
Flow modifier (3)	10,5
Benzoin	6,5
Carbon black (4)	10,0
Blanc fixe ABR (5)	262,0

Formulation Guidelines

- (1) Worlée
(2) Synthron
(3) BYK 360-P (Byk Chemie)
(4) PRINTEX L
(5) ICS

Application / Extrusion Conditions

Extruder:	BUSS PCS-30
Torque:	40%
Speed:	200 rpm
Extrusion temperature:	90°C
Spraying Gun:	GEMA PG 1-B
Application voltage:	60-80 Kv
Test substrate:	Degreased steel 1 mm

Coating Properties

Film thickness	80-100 microns
Gloss 60°, (ASTM D-523-60E)	Ca 5 %
Cupping test, (DIN 53156)	Over 7 mm
Direct Impact, (ASTM D-2794)	Over 75 Kg.cm
Reverse Impact, (ASTM D-2794)	Over 75 Kg.cm
Conical mandrel, (ASTM D-522)	100%
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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