

TECHNICAL DATA SHEET

REAFREE® 17091

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 one-shot matt paints for heat transfer in combination with REAFREE 17014. Use as modifier to increase cross-linking density. Anti-graffiti paints.

SALES SPECIFICATIONS

	CHARACTERISTICS	METHODS
Acid value	10 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	280-320 mg KOH/g	G/07-1

OTHER CHARACTERISTICS¹

	CHARACTERISTICS	METHODS
Appearance	Pale granules	
Glass transition temperature (Tg)	approx 50 °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

12 minutes at 200°C (object temperature)

RECOMMENDED MIXING RATIO

REAFREE 17091/ Uretodione: 40/60

MARKET

Coatings & Inks

- Industrial Coating
 - General Industry
 - Metal Exterior - Powder

PERFORMANCE BENEFITS

- Excellent flow
- Excellent mechanical properties
- Excellent outdoor durability
- As modifier it gives low gloss in a "one-shot" process and high surface hardness.

REAFREE® 17091

FORMULATION GUIDELINES

STARTING FORMULATION	
REAFREE® 17091	150
REAFREE® 17014	510
Vestagon BF 1320 ⁽¹⁾	300
Flow modifier ⁽²⁾	12
Benzoin	3,5
Carbon Black ⁽³⁾	0,04
Red Bayferrox 130M ⁽⁴⁾	0,01
Colortherm Yellow 10 ⁽⁴⁾	3,65
Titanium Dioxide ⁽⁵⁾	20,8

⁽¹⁾ Evonik ⁽²⁾ Byk 360-P (Byk Chemie) ⁽³⁾ Printex V ⁽⁴⁾ Lanxess ⁽⁵⁾ Kronos 2160

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	80 °C
Test substrate (Degreased Aluminium)	0.8 mm

COATING PROPERTIES

	CHARACTERISTICS	METHODS
Film thickness	60-80 microns	
Gloss (60°)	7 %	ASTM D-523-60E
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.

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**
420, rue d'Estienne d'Orves
92705 Colombes Cedex
France
T +33 (0)1 49 00 80 80

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