SIRALES® PE 7321

PRODUCT
DATA SHEET
RS/149/031401/1

Description

Carboxylated polyester resin for outdoor powder coatings.

Experimental resin. The specifications could be refined without any notice. In case of any question, please contact our sales department.

Applications

Sirales PE 7321, in combination with TGIC (ratio 93/7), makes achievable a powder coating durable for outdoor purposes featuring good weather resistance, very good flow and mechanical properties together with high gloss. The powder coatings prepared with it show an excellent storage stability.

Curing cycles (real time) 10 … 15 min. at 200°C
15 … 20 min. at 180°C

Sales specification

Property	Value	Unit	Method
Acid number	30 … 38	mg KOH/gr	SIR 103281
Viscosity at 200°C (ICI cone plate)	3000 - 5000	mPa.s	SIR 10391
Colour(1)	2 max.	Sc. Gardner	ASTM D 1544

(1) Determined on 50% m/m solution on dimethylformamide.

Typical Properties

Property	Value	Unit	Method
Glass transition temperature(2)	65	°C	ASTM D 3418

(2) Determined on DSC (Perkin Elmer mod Diamond) : 20°C/minute.

Supply Form

Product is available as irregular flakes packed in 25 kg polyethylene bags.

Storage stability

The product should be stored in the original bags kept tightly closed, away from sunshine and heat sources. Under these conditions and at a normal temperature (20°C) the resin should have a stability of one year.

Safety

The product is not flammable and no toxic effect has been determined.
Further informations are provided in the relevant safety data sheet.

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APPLICATION DATA
RS/149/031401/2

Starting formulation

Component	[parts by weight]
Sirales PE 7321	558
TGIC(#)	42
Benzoin	4
Flow control agent(§)	10
Titanium dioxide(§§)	390

(#) Araldit PT 810 from Huntsman, Teppic from Nissan
(§) Byk 360/P from BykChemie GmbH; Resiflow PV 88 from Worlee-Chemie GmbH
(§§) Kronos 2310 from Kronos Titan GmbH

Manufacturing method:
Extruder: Buss-Ko-Kneader PLK 46; Casing setting temp.: 120°C; Kneading screw temp.: cold; rpm: 150.

Application procedure :
Corona spray gun, voltage 60 kV; 0.6 mm aluminium chromate pretread Al 36 panel (Q-Panels), film thickness approx 60 microns.

Stoving cycles :
15 minutes at 180°C, 10 minutes at 200°C (object temperature)

Properties of cured film on Al 36 panel	Value	Unit	Test method
Impact front / rev [N.m] 1/2" ball	> 4 / > 4	N.m	ASTM D 2794
Accelerated weathering resistance (*) Retention of 50% of initial 60° gloss	350	hours	ASTM G 53

(*) Q-Panel QUV; UVB 313 lamps; 4 hours light at 50°C, 4 hours condensation at 40°C