

# SIRALES<sup>®</sup> PE 7290

PRODUCT  
DATA SHEET  
RS/289/011401/1

## Description

Carboxylated polyester resin for superdurable outdoor powder coatings.

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

## Application

Sirales<sup>®</sup> PE 7290 in combination with  $\beta$ -hydroxyalkylamides (ratio 93:7) makes achievable outdoor powder coatings for architectural purposes.

The main characteristic of powder paints prepared are:

- high reactivity;
- enhanced weather resistance;
- good flow and flexibility;
- absence of blooming

**Curing cycle :** 12 ... 15 min. at 180°C.  
( in real time ) 20 ... 25 min. at 160°C.

## Sales specifications

Property	Value	U.M	Method
Acid number	46 ... 54	mg.KOH/gr	SIR 10328
Viscosity ICI at 200 °C	1500 ... 3000	mPa.s	SIR 10391
Color <sup>(1)</sup>	2 max.	Sc. Gardner	ASTM D 1544

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

## Typical properties

Property	Value	U.M	Method
Glass transition temperature (Tg) <sup>(2)</sup>	55	°C	ASTM D 3418

(2) Determined on DSC (Perkin Elmer series 7) : 20°C/minute.

## Supply form

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

## Storage

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 (25°C) the resin should have a stability of one year.

## Safety

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

SIRALES<sup>®</sup>, PROSID<sup>®</sup> : SIR INDUSTRIALE registered trade mark.

N.B.: The data given in this brochure do not constitute characteristic properties of the single product.

To our best knowledge, the information contained in this brochure is accurate and corresponds to the truth.

However, any recommendations or suggestions are provided without any guarantee, since the conditions in which the products are used are not under our control. Furthermore, nothing contained in this brochure shall be interpreted as a recommendation for using the product in violation of any patents relating to the material and their uses.

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## Starting formulation

Component	[part by weight]
Sirales PE 7290	611
Prosid 411 or H	46
Benzoin	3
Flow control agent <sup>(§)</sup>	10
Titanium dioxide <sup>(§§)</sup>	330

(§) Byk 360/P from BykChemie GmbH;  
Resiflow PV 88, 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 :

12 minutes at 180°C, 25 minutes at 160°C (object temperature)

Properties of starting formulation cured film	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	800	hours	ASTM G 53

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

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