SIRION® VP 1016

PRODUCT DATA SHEET
VP1016/101903/1

Description
Matting agent for outdoor powder coatings based on triglycidilisocyanurate and hybrids epoxy-polyesters made with EPOSIR 7175, EPOSIR 7168 and EPONAC 825.

Applications
The matting agent SIRION® VP 1016 is suitable to obtain high matt powder coatings without change the mechanical characteristic and the ageing of the hardened films. It has to be added before extruding during the pre-mixing of the fillers/pigments with the resins and the hardeners. The right quantity depends on the desired matting properties and, in any case, it has to be not higher than 6 … 7%.

Sales Specification

Property	Value	Unit	Method
Aspect	light yellow powder		SIR 10010
Melting range	105 … 117	°C	SIR 10000 (ASTM E 324)

Typical properties

Property	Value	Unit	Method
Particles size	< 2	mm	SIR 10048

Supply Form
Product is available as coarse powder.

Storage stability
The product should be stored in the original bags kept tightly closed, away from sunshine and heat sources and at a temperature between 2 – 40°C. Under these conditions the product should have a stability of two years.

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

SIRION® VP 1016

APPLICATION DATAS
VP1016/061102/1

Outdoor powder coating

Components	A	B
Sirales PE 7112.T	570	570
Araldit PT 810	30	30
Byk 360/P	8	8
Benzoin	4	4
Titanium dioxide Kronos 2310	378	368
Sirion VP 1016	10	20

Curing cycle: 15 min at 200°C

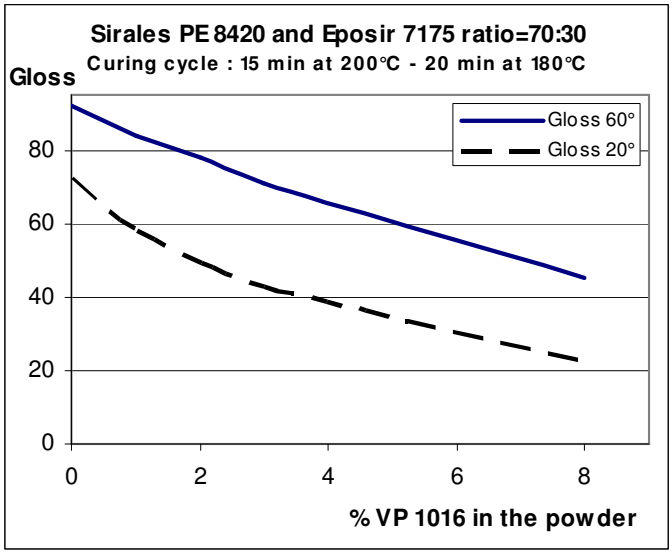
Gloss 60°	40	30
Gloss 20°	10	6
Imact front/rev	>99 / >99	>99 / >99

Curing cycle: 20 min at 180°C

Gloss 60°	38	32
Gloss 20°	10	8
Imact front/rev	>99 / >99	>99 / >99

Epoxy-polyester powder coating

Components	P.b.w.
Sirales PE 8420	420
Eposir 7175 PG	180
Acrylic flow agent	6
Benzoin	5
Titanium dioxide Kronos 2310	300
Blanc Fixe Super F	100
Sirion VP 1016	See diagram



SIRION® VP 1035

TEMPORARY PRODUCT DATA SHEET
VP1035/020101/1

Description
Matting agent for powder coatings based on hybrids epoxy-polyesters made with EPOSIR 7175, EPOSIR 7168 and EPONAC 825.

Applications
The matting agent SIRION® VP 1035 is suitable to obtain high matt powder coatings without change the mechanical characteristic of the hardened films. It has to be added before extruding during the pre-mixing of the fillers/pigments with the resins and the hardeners. The right quantity depends on the desired matting properties and, in any case, it has to be not higher than 4 … 5%.

Typical properties

Property	
Aspect	light yellow powder
Particles size	< 100μm
Glass transition temperature℘	60°C

(℘) DSC Series 7 Perkin Elmer, 20 deg/min

Supply Form
Product is available as fine powder.

Storage stability
The product should be stored in the original bags kept tightly closed, away from sunshine and heat sources and at a temperature not higher than 25°C. Under these conditions the product should have a stability of one year.

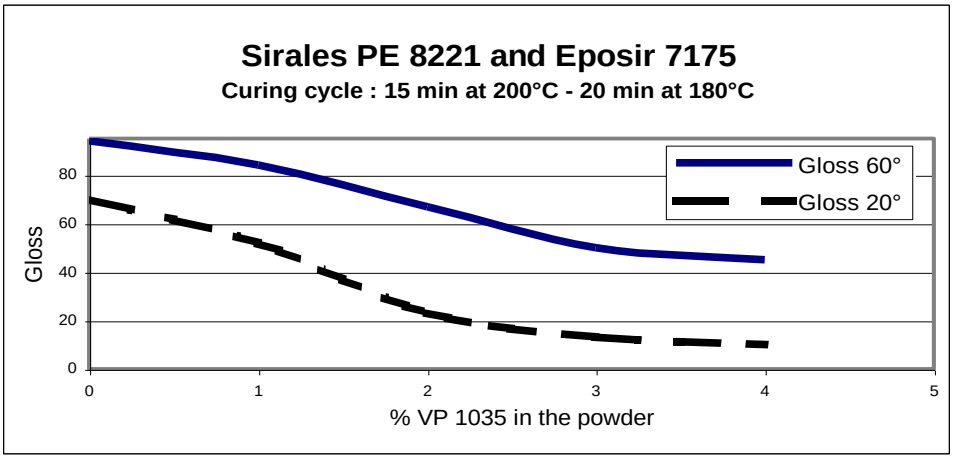
Safety
The product is not flammable and no toxic effect has been determinated.
Further information are provided in the relevant safety data sheet.

SIRION® VP 1035

APPLICATION DATAS
VP1035/020101/1

Epoxy-polyester powder coating

Components	**P.b.w.**
Sirales PE 8221	342
Eposir 7175 PG	258
Acrylic flow agent	6
Benzoin	4
Titanium dioxide Kronos 2310	270
Hydrocarb	100
Sirion VP 1035	See diagram



SIRION®: 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.

SIRION® VP 1110

TEMPORARY PRODUCT DATA SHEET
VP1110/030102

Description
Accelerator for powder coatings.

Applications
The accelerator SIRION® VP 1110 allow to increase the reactivity of hybrids, polyester/TGIC and polyester/epoxy esters. It can easily be dispersed in powder coating pre-mix and allow to maintains the weather resistance of outdoor polyester coatings. It do not cause fumes or unpleasant smell at the normal curing temperatures of powder coatings.

Recommended quantity (%) calculated on the polyester resin of the powder.

System	Curing temperature 200°C	Curing temperature 140°C
Hybrid	2	15
Polyester/TGIC	1	8
Polyester/Epoxy ester	1	10

Sales Specifications

Property	Value	Unit	Method
Aspect	white powder		SIR 10010
Melting range	80 … 100	°C	SIR 10000

Typical properties

Property	
Particles size	< 200 µm
Glass transition temperature (℘)	60°C

(℘) DSC Series 7 Perkin Elmer, 20 deg/min

Supply Form
Product is available as fine powder.

Storage stability
The product should be stored in the original bags kept tightly closed, away from sunshine and heat sources and at a temperature not higher than 25°C. Under these conditions the product should have a stability of one year.

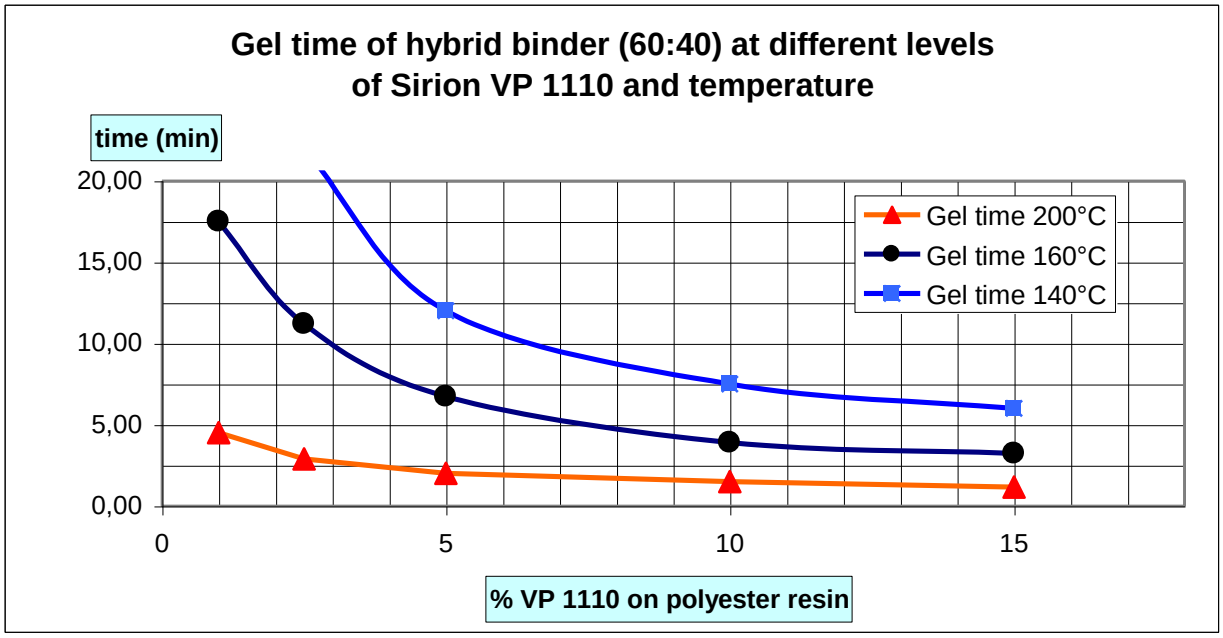
Safety
The product is not flammable and no toxic effect has been determined.
Further information are provided in the relevant safety data sheet.

SIRION® VP 1110	APPLICATION DATA VP1110/030102/1

Influence on the Gel time of SIRION® VP 1110 in an epoxypolyester binder

Polyester resin	60
SIRION® VP 1110	as percent of polyester resin
Epoxy resin	40

Polyester: SIRALES® PE 8253 : trimellitic anhydride capped resin with an acid number of about 50 mg KOH/gr and without internal accelerators;
Epoxy: EPOSIR® 7178 PG : type 3 epoxy resin with an epoxy equivalent weight of about 800.



SIRION® VP 1115

PRODUCT DATA SHEET
VP1115/051701

Description
Masterbatch of an antioxidant in carboxylated polyester resin for outdoor.
Experimental product. The specifications could be refined without any notice. In case of any question, please contact our sales department.

Applications
Sirion® VP 1115 is particularly indicated to prevent yellowing of powder coatings during curing in presence of NOx (gas oven). It can easily be dispersed in powder coating pre-mix in a quantity from 1 till 4% of powder coating formulation. The right amount depends from concentration of NOx in gas fumes of the oven.

Sales Specifications

Property	Value	Unit	Method
Aspect	Yellow/brown small flakes (*)		SIR 10010
Melting range	80 … 100	°C	SIR 10000

(*) ageing of material can change colour to light brown.

Typical properties

Property	Value	Unit	Method
Particles size	< 8	mm	SIR 10048
Glass transition temperature(℘)	50	°C	ASTM D 3418

(℘) DSC Series 7 Perkin Elmer, 20 deg/min

Supply Form
Product is available as irregular small flakes packed in 20 kg box.

Storage stability
The product should be stored in the original bags kept tightly closed, away from sunshine and heat sources and at a temperature not higher than 25°C. Under these conditions the product should have a stability of one year.

Safety
The product is not flammable. Further information are provided in the relevant safety data sheet.

SIRION® VP 1115

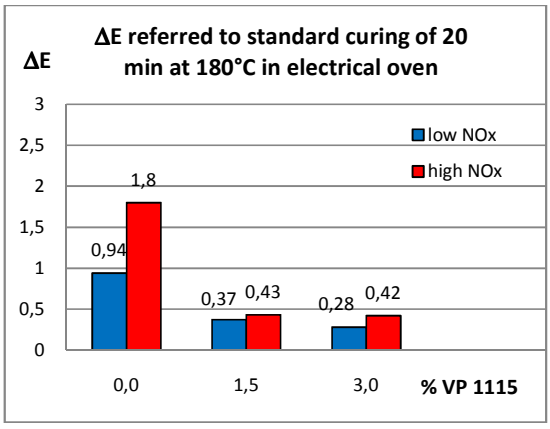
APPLICATION DATAS
VP1115/051701/1

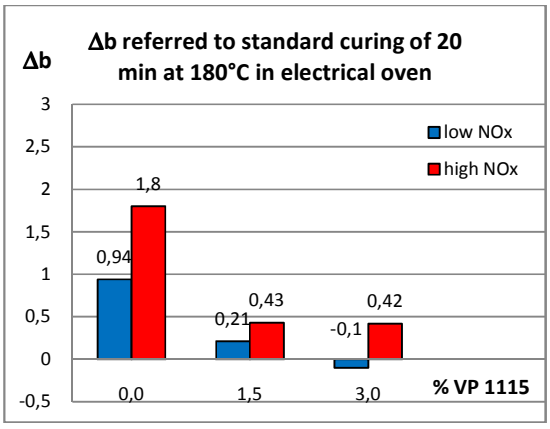
Outdoor powder coating: architectural PT 912 (93:7)

Component	Weight A	Weight B	Weight C
Sirales PE 7901.T	605	590	575
Sirion VP 1115	/	15	30
Araldit PT 912	45	45	45
Benzoin	2	2	2
Flow agent on silica	10	10	10
Titanium dioxide	338	338	338

Simulation of **low NOx** concentration: 0.5 g of sodium nitrite + 1.25 ml of 30% acetic acid in non ventilated electric oven of 60 lt. Curing cycle: 30 minutes at 180°C

Simulation of **high NOx** concentration: 1.0 g of sodium nitrite + 2.5 ml of 30% acetic acid in non ventilated electric oven of 60 lt. Curing cycle: 30 minutes at 180°C





SIRION® VP 1115

APPLICATION DATAS
VP1115/051701/2

Outdoor powder coating: architectural HAA (95:5)

Component	Weight A	Weight B	Weight C
Sirales PE 7816.T	618	603	588
Sirion VP 1115	/	15	30
HAA (Prosid 411)	32	32	32
Benzoin	2	2	2
Flow agent on silica	10	10	10
Titanium dioxide	338	338	338

Simulation of **low NOx** concentration: 0.5 g of sodium nitrite + 1.25 ml of 30% acetic acid in non ventilated electric oven of 60 lt. Curing cycle: 30 minutes at 180°C

Simulation of **high NOx** concentration: 1.0 g of sodium nitrite + 2.5 ml of 30% acetic acid in non ventilated electric oven of 60 lt. Curing cycle: 30 minutes at 180°C