# SIRESTER® EC 0800/AT

## PRODUCT DATA SHEET

RP/EC0800AT/052021

#### **Description**

Unsaturated orthophthalic polyester resin, diluted in styrene, with high reactivity and medium viscosity, thixotropic and preaccelerated with catalyst indicator.

#### **Applications**

SIRESTER EC 0800/AT is particularly suitable for general purposes, where high mechanical properties are required; fulfil the requirements of type 1140 according to DIN 16946. The material contains an additive that appears on the surface drastically reducing the styrene emission: it is suggested to abrade the hardened surface before applying other layers.

#### Sales specification

Property	Value	Unit	Method
Acid number	≤ 30	mg KOH/gr	SIR 10231

# **Typical Properties**

Property	Value	Unit	Method
Appearance	Blue hazy		SIR 10010
Styrene content	43	%	SIR 10257
Thixotropic index at 25 °C	> 3,0		
- 2 rpm	> 2000	mPa s	SIR 10215
- 20 rpm	< 650	mPa s	
Gel time at 25 °C (1)	27	minute	SIR 10267
Styrene emission	< 50	g/m²	SIR 10295
Stability at 65 °C	6	day	SIR 10242

<sup>(1)</sup> Formulation: 100 gr resin + 1,50 ml MEKP-50.

During long storage a slight increase of the gel time can occur: we suggest to adjust the amount of catalyst in order to obtain correct values.

SIRESTER ®: 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.





# SIRESTER® EC 0800/AT

## PRODUCT DATA SHEET

RP/EC0800AT/052021

### Mechanical properties of pure cured resin (\*)

Property	Value	Unit	Method
Barcol hardness	55		EN 59
Flexural strength	120	MPa	ISO 178
E-Module, flexion	4100	MPa	ISO 178
Tensile strength	70	MPa	EN ISO 527
E-Module, tension	3800	MPa	EN ISO 527
Elongation at break	3,5	%	EN ISO 527
HDT	105	°C	EN ISO 75 A

<sup>(\*)</sup> Typical properties, not suitable for specification; postcuring cycle: 24 hours 25 °C + 2 hours 100 °C

# Mechanical properties of the reinforced resin (glass/resin 30/70) (\*)

Property	Value	Unit	Method
Flexural strength	220	MPa	ISO 14125
E-Module, flexion	9500	MPa	ISO 14125
Tensile strength	100	MPa	EN ISO 527
E-Module, tension	9000	MPa	EN ISO 527

<sup>(\*)</sup> Typical properties, not suitable for specification; postcuring cycle: 24 hours 25 °C + 2 hours 100 °C

#### **Supply Form**

Product is available in a 225 kg lined drum, 1000 kg container or in bulk.

#### **Storage guidelines**

The product is stable for 6 months if stored in the original unopened packaging, below 30 °C and away from direct sunlight and heat sources. Keep away from iron and copper salts, organic and inorganic peroxides. Thixotropy properties are guaranteed for 3 months: a long period of storage can cause slight segregation of the solid part of the product. Stir the resin before use.

#### Safety

The product is flammable and harmful. Further information is provided in the relevant safety data sheet.

SIRESTER ®: 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.





# SIRESTER® EC 0947/AMTV

## PRODUCT DATA SHEET

RP/EC0947AMTV/052021

#### **Description**

Unsaturated orthophthalic polyester resin, diluted in styrene, with medium reactivity and medium viscosity, thixotropic and preaccelerated with catalyst indicator.

#### **Applications**

SIRESTER EC 0947/AMTV is a general purpose resin, with good mechanical strengths and excellent wetting properties, suitable in particular for HLU/SU applications; it contains an additive which appears on the surface reducing drastically the styrene emission: it is suggested to abrade the hardened surface before applying other layers.

#### Sales specification

Property	Value	Unit	Method
Acid number	≤ 30	mg KOH/gr	SIR 10231

## **Typical Properties**

Property	Value	Unit	Method
Appearance	Blue hazy		SIR 10010
Styrene content	40	%	SIR 10257
Thixotropic index at 25 °C	> 3,0		
- 2 rpm	> 2100	mPa s	SIR 10215
- 20 rpm	< 700	mPa s	
Gel time at 25 °C (1)	26	minute	SIR 10267
Hardening time	50	minute	SIR 10267
Exothermic peak	140	°C	SIR 10267
Styrene emission	< 50	g/m²	SIR 10295
Stability at 65 °C	6	day	SIR 10242

<sup>(1)</sup> Formulation: 100 gr resin + 1,50 ml MEKP-50.

During long storage a slight increase of the gel time can occur: we suggest to adjust the amount of catalyst in order to obtain correct values.

SIRESTER ®: 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.





# SIRESTER® EC 0947/AMTV

## PRODUCT DATA SHEET

RP/EC0947AMTV/052021

# Mechanical properties of pure cured resin (\*)

Property	Value	Unit	Method
Barcol hardness	45		EN 59
Flexural strength	100	MPa	ISO 178
E-Module, flexion	4100	MPa	ISO 178
Tensile strength	60	MPa	EN ISO 527
E-Module, tension	3800	MPa	EN ISO 527
Elongation at break	2,0	%	EN ISO 527
HDT	70	°C	EN ISO 75 A

<sup>(\*)</sup> Typical properties, not suitable for specification; postcuring cycle: 24 hours 25 °C + 2 hours 100 °C

# Mechanical properties of the reinforced resin (glass/resin 30/70) (\*)

Property	Value	Unit	Method
Flexural strength	210	MPa	ISO 14125
E-Module, flexion	8600	MPa	ISO 14125
Tensile strength	100	MPa	EN ISO 527
E-Module, tension	8800	MPa	EN ISO 527

<sup>(\*)</sup> Typical properties, not suitable for specification; postcuring cycle: 24 hours 25 °C + 2 hours 100 °C

#### **Supply Form**

Product is available in a 225 kg lined drum, 1000 kg container or in bulk.

#### **Storage guidelines**

The product is stable for 6 months if stored in the original unopened packaging, below 30 °C and away from direct sunlight and heat sources. Keep away from iron and copper salts, organic and inorganic peroxides. Thixotropy properties are guaranteed for 3 months: a long period of storage can cause slight segregation of the solid part of the product. Stir the resin before use.

#### Safety

The product is flammable and harmful. Further information is provided in the relevant safety data sheet.

SIRESTER  $^{\circledR}\!:$  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.





# SIRESTER® EC 0993/AT/E

# PROVISIONAL DATA SHEET

RP/0993ATE/112011

# **Description**

Unsaturated orthophtalic polyester resin, ecological, diluited in styrene, with low reactivity and high viscosity, thixotropic and preaccelerated.

# **Applications**

SIRESTER EC 0993/AT/E is suitable for general purposes and contains a special additive which appears on the surface reducing drastically the styrene emission. It is suggested to abrade the hardened surface before applying other layers.

# Sales specification

Property	Value	Unit	Method
Acid number	< 30	mg KOH/gr	SIR 10231

# **Typical Properties**

Property	Value	Unit	Method
Appearance	Turbid liquid		SIR 10010
Styrene content	46	%	SIR 10352
Gel time at 25 °C (1)	45	minute	SIR 10267
Thixotropic index	> 3,5		
2 rpm	> 3900	mPa s	SIR 10215
20 rpm	< 1100	mPa s	
Exothermic peak	125	°C	SIR 10234
Stability at 65 °C	6	day	SIR 10242

<sup>(1)</sup> Formulation: 100 g resin + 1,0 ml MEKP 50%

SIRESTER ®: 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.







# PROVISIONAL DATA SHEET

RP/0993ATE/112011

# Mechanical properties of pure cured resin

Property	Value	Unit	Method
Flexural strength	140	MPa	EN 63
E-Module, flexion	3800	MPa	EN 63
Tensile strength	80	MPa	EN 61
E-Module, tension	3800	MPa	EN 61
Elongation at break	2,5	%	EN 61
HDT	75	°C	EN ISO 75 A

# Mechanical properties of reinforced resin (glass/resin 30/70)

Property	Value	Unit	Method
Flexural strength	210	MPa	EN 63
E-Module, flexion	7900	MPa	EN 63
Tensile strength	100	MPa	EN 61
E-Module, tension	8300	MPa	EN 61

#### **Supply Form**

Product is available in a 225 Kg lined drum, 1000 Kg container or in bulk.

## **Storage stability**

The product is stable for 3 months if stored in a stainless steel tank or lined drums (avoid glass fibre based containers or tin plated drums), at 20 °C temperature, in a dark/ventilated place. Keep away from iron and copper salts, organic and inorganic peroxides. Stirring the product before using is suggested.

#### Safety

The product is flammable and harmful.

Further information is provided in the relevant safety data sheet.

SIRESTER ®: 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.





# SIRESTER® EC 0994/ATV

**PRODUCT DATA SHEET** 

RP/EC0994ATV/092022

# **Description**

Unsaturated orthophthalic polyester resin, diluted in styrene, with medium-high viscosity and medium reactivity, thixotropic and preaccelerated with catalyst indicator.

## **Applications**

SIRESTER EC 0994/ATV is a general purpose material, suitable for hand lay-up and spray-up, in particular for nautical applications: it provides efficient wetting capability, low exothermic peak and good mechanical strengths; it contains an additive which appears on the surface drastically reducing the styrene emission: it is suggested to sand the hardened surface before applying other layers. Lloyd's Register certification n° LR22412959ALP.

#### **Sales specification**

Property	Value	Unit	Method
Acid number	≤ 30	mg KOH/ g	SIR 10231

# **Typical Properties**

Property	Value	Unit	Method
Appearance	Blue hazy	-	SIR 10010
Styrene content	42	%	SIR 10257
Thixotropic index at 25 °C	≥ 3,0		SIR 10215
- 2 rpm	≥ 3100	mPa.s	SIR 10215
- 20 rpm	≤ 900	mPa.s	SIR 10215
Gel time at 20 °C (1)	30	minutes	SIR 10284
Exothermic peak	125	°C	SIR 10284
Styrene emission	< 35	g/m²	SIR 10295
Stability at 65°C	6	days	SIR 10242

<sup>(1)</sup> Formulation: 100 gr resin + 2,00 ml MEKP-50.

During long storage a slight increase of the geltime can occur: we suggest to adjust the amount of catalyst in order to obtain correct values.

SIRESTER ®: 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.

# SIRESTER® EC 0994/ATV

**PRODUCT DATA SHEET** 

RP/EC0994ATV/092022

# Mechanical properties of pure cured resin (\*)

Property	Value	Unit	Method
Barcol hardness	40		EN 59
Flexural strength	90	MPa	ISO 178
E-Module, flexion	3500	MPa	ISO 178
Tensile strength	60	MPa	EN ISO 527
E-Module, tension	3300	MPa	EN ISO 527
Elongation at break	2,7	%	EN ISO 527
HDT	65	°C	EN ISO 75 A

<sup>(\*)</sup> typical properties, not suitable for specifications; postcuring cycle: 24 hours 25 °C + 2 hours 100 °C

# Mechanical properties of the reinforced resin (glass/resin 30/70)(\*)

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Property	Value	Unit	Method	
Flexural strength	200	MPa	ISO 14125	
E-Module, flexion	8100	MPa	ISO 14125	
Tensile strength	100	MPa	EN ISO 527	
E-Module, tension	8200	MPa	EN ISO 527	

<sup>(\*)</sup> typical properties, not suitable for specifications; postcuring cycle: 24 hours 25 °C + 2 hours 100 °C

# **Supply Form**

Product is available in a 225 kg lined drum, 1000 kg container or in bulk.

#### Storage stability

The product is stable for 6 months if stored in the original unopened packaging), below 30 °C and away from direct sunlight and heat sources. Keep away from iron and copper salts, organic and inorganic peroxides. Thixotropic properties are guaranteed for 3 months: a long period of storage can cause slight segregation of the solid part of the product. Stir the resin before use

#### **Safety**

The product is flammable and harmful. Further information is provided in the relevant safety data sheet.

SIRESTER ®: SIR INDUSTRIALE registered trade mark.

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

# SIRESTER® EC 0994/AT/V

# PRODUCT DATA SHEET

RP/EC0994ATV/062013

# **Description**

Unsaturated orthophtalic polyester resin, diluited in styrene, with medium reactivity and medium viscosity, thixotropic and preaccelerated.

# **Applications**

SIRESTER EC 0994/AT/V is suitable for general purposes, and grants a low exothermic peak. It contains an additive which appears on the surface reducing drastically the styrene emission. It is suggested to abrade the hardened surface before applying other layers.

## **Sales specification**

Property	Value	Unit	Method
Acid number	≤ 30	mg KOH/g	SIR 10231

### **Typical Properties**

Property	Value	Unit	Method
Appearance	Blue turbid liquid		SIR 10010
Styrene content	45	%	SIR 10352
Gel time at 20 °C (1)	30	minutes	SIR 10284
Exothermic Peak	125	°C	SIR 10284
Thixotropic index	> 3,0		
2 rpm	> 3100	mPa s	SIR 10215
20 rpm	< 900	mPa s	
Stability at 65 °C	6	days	SIR 10242

<sup>(1)</sup> Formulation: 100 g resin + 2,0 ml MEKP 50%

During long storage a slight increase of the gel time can occur: we suggest to adjust the amount of catalyst in order to obtain correct values.

SIRESTER ®: SIR INDUSTRIALE registered trade mark.

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







# PRODUCT DATA SHEET

RP/EC0994ATV/062013

# Mechanical properties of pure cured resin

Property	Value	Unit	Method
Barcol hardness	40		EN 59
Flexural strength	90	MPa	EN 63
E-Module, flexion	3500	MPa	EN 63
Tensile strength	60	MPa	EN 61
E-Module, tension	3300	MPa	EN 61
Elongation at break	2,7	%	EN 61
HDT	65	°C	EN ISO 75 A

# Mechanical properties reinforced resin (glass/resin 30/70)

Property	Value	Unit	Method
Flexural strength	200	MPa	EN 63
E-Module, flexion	8100	MPa	EN 63
Tensile strength	100	MPa	EN 61
E-Module, tension	8200	MPa	EN 61

#### **Supply Form**

Product is available in a 225 Kg lined drum, 1000 Kg container or in bulk.

#### Storage stability

The product is stable for 3 months if stored in a stainless steel tank or lined drums (avoid glass fibre based containers or tin plated drums), at 20 °C temperature, in a dark/ventilated place. Keep away from iron and copper salts, organic and inorganic peroxides. A long period of storage can cause slight segregation of the solid part of the product: stirring the material before using is strictly suggested.

#### Safety

The product is flammable and harmful.

Further information is provided in the relevant safety data sheet.

SIRESTER ®: SIR INDUSTRIALE registered trade mark.

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





RP/ELS0850AMTE/092022

## **Description**

Hybrid unsaturated polyester resin, diluted in styrene, with medium viscosity and medium-low reactivity, thixotropic and preaccelerated with catalyst indicator and LSE system.

#### **Applications**

SIRESTER ELS 0850/AMT/E is a general purpose material suitable for hand lay-up and spray-up, in particular for nautical applications: it assures high wetting capability, low styrene content and good mechanical strengths; it contains an additive which appears on the surface drastically reducing the styrene emission: it is suggested to sand the hardened surface before applying other layers. Lloyd's Register certification n° LR22412943ALP.

# **Sales specification**

Property	Value	Unit	Method
Acid number	≤ 30	mg KOH/g	SIR 10231

# **Typical Properties**

Property	Value	Unit	Method
Appearance	Blue hazy	-	SIR 10010
Styrene content	< 35	%	SIR 10257
Thixotropic index at 25 °C	≥ 3		SIR 10215
- 2 rpm	≥ 2000	mPa.s	SIR 10215
- 20 rpm	≤ 700	mPa.s	SIR 10215
Gel time at 25 °C (1)	25	minutes	SIR 10267
Time to peak	40	minutes	SIR 10267
Exothermic peak	180	°C	SIR 10267
Styrene emission	< 50	g/m²	SIR 10295
Stability at 65°C	6	days	SIR 10242

<sup>(1)</sup> Formulation: 100 gr resin + 1,50 ml MEKP-50.

During long storage a slight increase of the geltime can occur: we suggest to adjust the amount of catalyst in order to obtain correct values.

SIRESTER ®: 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.

# **PRODUCT DATA SHEET**

RP/ELS0850AMTE/092022

# Mechanical properties of pure cured resin (\*)

Property	Value	Unit	Method
Barcol hardness	40		EN 59
Flexural strength	110	MPa	ISO 178
E-Module, flexion	4400	MPa	ISO 178
Tensile strength	70	MPa	EN ISO 527
E-Module, tension	4300	MPa	EN ISO 527
Elongation at break	2,5	%	EN ISO 527
HDT	70	°C	EN ISO 75 A

<sup>(\*)</sup> typical properties, not suitable for specifications; postcuring cycle: 24 hours 25 °C + 2 hours 100 °C

# Mechanical properties of the reinforced resin (glass/resin 30/70)(\*)

Property	Value	Unit	Method
Flexural strength	210	MPa	ISO 14125
E-Module, flexion	8900	MPa	ISO 14125
Tensile strength	110	MPa	EN ISO 527
E-Module, tension	9400	MPa	EN ISO 527

<sup>(\*)</sup> typical properties, not suitable for specifications; postcuring cycle: 24 hours 25 °C + 2 hours 100 °C

#### **Supply Form**

Product is available in a 225 kg lined drum, 1000 kg container or in bulk.

#### Storage stability

The product is stable for 6 months if stored in the original unopened packaging), below 30 °C and away from direct sunlight and heat sources. Keep away from iron and copper salts, organic and inorganic peroxides. Thixotropic properties are guaranteed for 3 months: a long period of storage can cause slight segregation of the solid part of the product. Stir the resin before use

#### Safety

The product is flammable and harmful. Further information is provided in the relevant safety data sheet.

SIRESTER ®: 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.

# SIRESTER® ELS 0850/AMT/V

#### **PRODUCT DATA SHEET**

RP/ELS0850AMTV/092022

# **Description**

Hybrid unsaturated polyester resin, diluted in styrene, with medium viscosity and medium reactivity, thixotropic and preaccelerated with catalyst indicator and LSE system.

#### **Applications**

SIRESTER ELS 0850/AMT/V is a general purpose material suitable for hand lay-up and spray-up, in particular for nautical applications: it assures high wetting capability, low styrene content and good mechanical strengths along with low exothermic peak; it contains an additive which appears on the surface drastically reducing the styrene emission: it is suggested to sand the hardened surface before applying other layers. Lloyd's Register certification n° LR22412943ALP.

#### **Sales specification**

Property	Value	Unit	Method
Acid number	≤ 30	mg KOH/g	SIR 10231

# **Typical Properties**

Property	Value	Unit	Method
Appearance	Blue hazy	-	SIR 10010
Styrene content	< 35	%	SIR 10257
Thixotropic index at 25 °C	≥ 3		SIR 10215
- 2 rpm	≥ 2000	mPa.s	SIR 10215
- 20 rpm	≤ 700	mPa.s	SIR 10215
Gel time at 25 °C (1)	20	minutes	SIR 10276
Time to peak	35	minutes	SIR 10276
Exothermic peak	150	°C	SIR 10276
Styrene emission	< 50	g/m²	SIR 10295
Stability at 65°C	6	days	SIR 10242

<sup>(1)</sup> Formulation: 100 gr resin + 2,00 ml MEKP-50.

During long storage a slight increase of the geltime can occur: we suggest to adjust the amount of catalyst in order to obtain correct values.

SIRESTER ®: 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.

# **PRODUCT DATA SHEET**

RP/ELS0850AMTV/092022

# Mechanical properties of pure cured resin (\*)

Property	Value	Unit	Method
Barcol hardness	45		EN 59
Flexural strength	120	MPa	ISO 178
E-Module, flexion	4100	MPa	ISO 178
Tensile strength	70	MPa	EN ISO 527
E-Module, tension	4000	MPa	EN ISO 527
Elongation at break	2,0	%	EN ISO 527
HDT	80	°C	EN ISO 75 A

<sup>(\*)</sup> typical properties, not suitable for specifications; postcuring cycle: 24 hours 25 °C + 2 hours 100 °C

# Mechanical properties of the reinforced resin (glass/resin 30/70)(\*)

			•
Property	Value	Unit	Method
Flexural strength	210	MPa	ISO 14125
E-Module, flexion	8800	MPa	ISO 14125
Tensile strength	110	MPa	EN ISO 527
E-Module, tension	9100	MPa	EN ISO 527

<sup>(\*)</sup> typical properties, not suitable for specifications; postcuring cycle: 24 hours 25 °C + 2 hours 100 °C

#### **Supply Form**

Product is available in a 225 kg lined drum, 1000 kg container or in bulk.

#### Storage stability

The product is stable for 6 months if stored in the original unopened packaging), below 30 °C and away from direct sunlight and heat sources. Keep away from iron and copper salts, organic and inorganic peroxides. Thixotropic properties are guaranteed for 3 months: a long period of storage can cause slight segregation of the solid part of the product. Stir the resin before use

#### Safety

The product is flammable and harmful. Further information is provided in the relevant safety data sheet.

SIRESTER ®: 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.

# SIRESTER® FS 0956/AT

PRODUCT DATA SHEET

RP/0956AT/052021

#### **Description**

Orthophthalic unsaturated polyester resin, diluted in styrene, with medium reactivity and low viscosity, thixotropic and preaccelerated with catalyst indicator.

#### **Applications**

SIRESTER FS 0956/AT is a general purpose material, suitable in particular for industrial applications; it provides excellent wetting capability and good mechanical properties, along with a reduced styrene content.

#### Sales specification

Property	Value	Unit	Method
Acid number	18 – 25	mg KOH/gr	SIR 10231

# **Typical Properties**

Property	Value	Unit	Method
Appearance	Blue hazy		SIR 10010
Styrene content	35	%	SIR 10257
Thixotropic index at 25 °C	> 2,5		
- 2 rpm	> 1750	mPa s	SIR 10215
- 20 rpm	< 750	mPa s	
Gel time at 25 °C (1)	16	minute	SIR 10267
Stability at 65 °C	6	day	SIR 10242
1			

<sup>(1)</sup> Formulation: 100 gr resin + 1,50 ml MEKP-50.

During long storage a slight increase of the gel time can occur: we suggest to adjust the amount of catalyst in order to obtain correct values.

SIRESTER ®: 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.





# SIRESTER® FS 0956/AT

## PRODUCT DATA SHEET

RP/0956AT/052021

#### Mechanical properties of pure cured resin (\*)

Property	Value	Unit	Method
Barcol hardness	45		EN 59
Flexural strength	130	MPa	ISO 178
E-Module, flexion	3800	MPa	ISO 178
Tensile strength	70	MPa	EN ISO 527
E-Module, tension	3600	MPa	EN ISO 527
Elongation at break	3,5	%	EN ISO 527
HDT	75	°C	EN ISO 75 A

<sup>(\*)</sup> Typical properties, not suitable for specification; postcuring cycle: 24 hours 25 °C + 2 hours 100 °C

# Mechanical properties of the reinforced resin (glass/resin 30/70) (\*)

Property	Value	Unit	Method
Flexural strength	210	MPa	ISO 14125
E-Module, flexion	8300	MPa	ISO 14125
Tensile strength	100	MPa	EN ISO 527
E-Module, tension	8100	MPa	EN ISO 527

<sup>(\*)</sup> Typical properties, not suitable for specification; postcuring cycle: 24 hours 25 °C + 2 hours 100 °C

#### **Supply Form**

Product is available in a 225 kg lined drum, 1000 kg container or in bulk.

#### Storage guidelines

The product is stable for 6 months if stored in the original unopened packaging, below 30 °C and away from direct sunlight and heat sources. Keep away from iron and copper salts, organic and inorganic peroxides. Thixotropy properties are guaranteed for 3 months: a long period of storage can cause slight segregation of the solid part of the product. Stir the resin before use.

#### Safetv

The product is flammable and harmful. Further information is provided in the relevant safety data sheet.

SIRESTER  $^{\circledR}\!:$  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.





# SIRESTER® FS 0995/ATM/E

## PRODUCT DATA SHEET

RP/0995ATME/052021

#### **Description**

Unsaturated orthophthalic polyester resin, diluted in styrene, with medium reactivity and medium viscosity, thixotropic and preaccelerated with catalyst indicator.

#### **Applications**

SIRESTER FS 0995/ATM/E is suitable for general purposes and in particular for the production of fibreglass storage tanks by Hand Lay-up or Spray-up technology. Summer version for warm season/environment.

### **Sales specification**

Property	Value	Unit	Method
Acid number	≤ 30	mg KOH/gr	SIR 10231

#### **Typical Properties**

Property	Value	Unit	Method
Appearance	Blue hazy		SIR 10010
Styrene content	40	%	SIR 10257
Thixotropic index at 25 °C	> 3,0		
- 2 rpm	> 2300	mPa s	SIR 10215
- 20 rpm	< 800	mPa s	
Gel time at 25 °C (1)	30	minute	SIR 10267
Exothermic peak	180	°C	SIR 10267
Stability at 65 °C	6	day	SIR 10242

<sup>(1)</sup> Formulation: 100 gr resin + 1,50 ml MEKP-50.

During long storage a slight increase of the gel time can occur: we suggest to adjust the amount of catalyst in order to obtain correct values.

SIRESTER ®: 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.





# SIRESTER® FS 0995/ATM/E

## PRODUCT DATA SHEET

RP/0995ATME/052021

#### Mechanical properties of pure cured resin (\*)

Property	Value	Unit	Method
Barcol hardness	45		EN 59
Flexural strength	100	MPa	ISO 178
E-Module, flexion	3900	MPa	ISO 178
Tensile strength	70	MPa	EN ISO 527
E-Module, tension	3700	MPa	EN ISO 527
Elongation at break	2,5	%	EN ISO 527
HDT	65	°C	EN ISO 75 A

<sup>(\*)</sup> Typical properties, not suitable for specification; postcuring cycle: 24 hours 25 °C + 2 hours 100 °C

# Mechanical properties of the reinforced resin (glass/resin 30/70) (\*)

Property	Value	Unit	Method
Flexural strength	220	MPa	ISO 14125
E-Module, flexion	8700	MPa	ISO 14125
Tensile strength	110	MPa	EN ISO 527
E-Module, tension	8800	MPa	EN ISO 527

<sup>(\*)</sup> Typical properties, not suitable for specification; postcuring cycle: 24 hours 25 °C + 2 hours 100 °C

#### **Supply Form**

Product is available in a 225 kg lined drum, 1000 kg container or in bulk.

#### Storage guidelines

The product is stable for 6 months if stored in the original unopened packaging, below 30 °C and away from direct sunlight and heat sources. Keep away from iron and copper salts, organic and inorganic peroxides. Thixotropy properties are guaranteed for 3 months: a long period of storage can cause slight segregation of the solid part of the product. Stir the resin before use.

#### Safety

The product is flammable and harmful. Further information is provided in the relevant safety data sheet.

SIRESTER ®: SIR INDUSTRIALE registered trade mark.

 $N.B.: The \ data \ given \ in \ this \ brochure \ \bar{do} \ not \ constitute \ characteristic \ properties \ of \ the \ single \ product.$ 

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





# SIRESTER® FS 0995/ML

## PRODUCT DATA SHEET

RP/0995ML/052021

## **Description**

Unsaturated orthophthalic polyester resin, diluted in styrene, with medium reactivity and medium-low viscosity.

#### **Applications**

SIRESTER FS 0995/ML is a general purpose material, suitable in particular for casting application with high percentage of mineral fillers; the material is UV stabilized.

# **Sales specification**

Property	Value	Unit	Method
Acid number	< 30	mg KOH/gr	SIR 10231
Viscosity at 25 °C	270 - 350	mPa s	SIR 10017

# **Typical Properties**

Property	Value	Unit	Method
Appearance	Clear liquid		SIR 10010
Colour	< 100	Sc. Co/Pt	SIR 10017
Styrene content	38	%	SIR 10257
Gel time at 25 °C (1)	8	minute	SIR 10234
Stability at 65 °C	6	day	SIR 10242

<sup>(1)</sup> Formulation: 100 gr resin + 0,20 ml Co (octoate) 6% + 1,50 ml MEKP-50.

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# SIRESTER® FS 0995/ML

# PRODUCT DATA SHEET

RP/0995ML/052021

# Mechanical properties of pure cured resin (\*)

Property	Value	Unit	Method
Barcol hardness	40		EN 59
Flexural strength	130	MPa	ISO 178
E-Module, flexion	3800	MPa	ISO 178
Tensile strength	75	MPa	EN ISO 527
E-Module, tension	3900	MPa	EN ISO 527
Elongation at break	3,0	%	EN ISO 527
HDT	70	°C	EN ISO 75 A

<sup>(\*)</sup> Typical properties, not suitable for specification; postcuring cycle: 24 hours 25 °C + 2 hours 100 °C

# Mechanical properties of the reinforced resin (glass/resin 30/70) (\*)

Property	Value	Unit	Method
Flexural strength	220	MPa	ISO 14125
E-Module, flexion	8600	MPa	ISO 14125
Tensile strength	110	MPa	EN ISO 527
E-Module, tension	8700	MPa	EN ISO 527

<sup>(\*)</sup> Typical properties, not suitable for specification; postcuring cycle: 24 hours 25 °C + 2 hours 100 °C

#### **Supply Form**

Product is available in a 225 kg lined drum, 1000 kg container or in bulk.

#### Storage guidelines

The product is stable for 6 months if stored in the original unopened packaging, below 30 °C and away from direct sunlight and heat sources. Keep away from iron and copper salts, organic and inorganic peroxides.

#### Safety

The product is flammable and harmful. Further information is provided in the relevant safety data sheet.

SIRESTER ®: SIR INDUSTRIALE registered trade mark.

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# SIRESTER® FS 0800/AT

# PRODUCT DATA SHEET

RP/0800AT/112011

### **Description**

Unsaturated orthophtalic polyester resin, diluted in styrene, with high reactivity and medium viscosity, thixotropic and preaccelerated with metallic promoter.

# **Applications**

SIRESTER FS 0800/AT is particularly suitable for general purposes, where high mechanical properties are requested .

The resin conforms to the requirements of DIN 1140.

## **Sales specification**

Property	Value	Unit	Method
Acid number	≤ 30	mg KOH/g r	SIR 10231

# **Typical Properties**

Property	Value	Unit	Method
Appearance	Turbid liquid		SIR 10010
Styrene content	43	%	SIR 10352
Thixotropic index	> 3,0		
2 rpm	>1650	mPa s	SIR 10215
20 rpm	< 750	mPa s	
Gel time at 25°C <sup>(1)</sup>	27	minutes	SIR 10267
Stability at 65°C	6	days	SIR 10242

<sup>(1)</sup> Formulation: 100g resin + 1.5ml MEKP 50%

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

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# SIRESTER® FS 0800/AT

# PRODUCT DATA SHEET

RP/0800AT/112011

# Mechanical properties of the cured resin

Property	Value	Unit	Method
Barcol hardness	55		EN 59
Flexural strength	120	MPa	EN 63
E-Module, flexion	4100	MPa	EN 63
Tensile strength	70	MPa	EN 61
E-Module, tension	3800	MPa	EN 61
Elongation at break	3,5	%	EN 61
HDT	105	°C	EN ISO 75 A

# Mechanical properties of glass fiber reinforced resin (glass/resin 30/70)

Property	Value	Unit	Method
Flexural strength	220	MPa	EN 63
E-Module, flexion	9500	MPa	EN 63
Tensile strength	100	MPa	EN 61
E-Module, tension	9000	MPa	EN 61

# **Supply Form**

Product is available in a 225 Kg lined drum, 1000 Kg container or in bulk.

#### Storage stability

The product is stable for 3 months if stored in lined steel drums or in stainless steel tankers at 20°C, away from sources of light and free of iron or copper salts, organic and inorganic peroxides.

#### **Safety**

The product is flammable and harmful.

Further information is provided in the relevant safety data sheet.

SIRESTER ®: SIR INDUSTRIALE registered trade mark.

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# SIRESTER® FS 0992/AT

# PRODUCT DATA SHEET

RP/0992AT/122011

## **Description**

Unsaturated orthophtalic, polyester resin, thixotropic and accelerated, with medium reactivity and medium viscosity.

# **Applications**

SIRESTER FS 0992/AT is particularly suitable for spray-up and lay-up technology. The resin is also suggested for the reinforcement of PMMA.

# **Sales specification**

Property	Value	Unit	Method
Acid number	≤ 30	mg. KOH/gr	SIR 10231

# **Typical Properties**

Property	Value	Unit	Method
Appearance	Blue turbid liquid		SIR 10010
Styrene content	38	%	SIR 10352
Thixotropic index at 25 °C	> 3.0		SIR 10215
2 rpm	> 1800	mPa.s	
20 rpm	< 600	mPa s	
Gel time at 25 °C (1)	13	minute	SIR 10267
Stability at 65 °C	6	day	SIR 10242

(1) Formulation: 100 g resin + 1,5 ml MEKP 50%

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# PRODUCT DATA SHEET

RP/0992AT/122011

# Mechanical properties of pure cured resin

Property	Value	Unit	Method
Barcol hardness	55		EN 59
Flexural strength	90	MPa	EN 63
E-Module, flexion	4000	MPa	EN 63
Tensile strength	55	MPa	EN 61
E-Module, tension	3700	MPa	EN 61
Elongation at break	2,0	%	EN 61
HDT	60	°C	EN ISO 75 A

# Mechanical properties reinforced resin (glass/resin 30/70)

Property	Value	Unit	Method
Flexural strength	220	MPa	EN 63
E-Module, flexion	7900	MPa	EN 63
Tensile strength	110	MPa	EN 61
E-Module, tension	7800	MPa	EN 61

#### **Supply Form**

Product is available in a 225 Kg. lined drum, 1000 Kg. container or in bulk.

#### Storage stability

The product is stable for 3 months if stored in a stainless steel tank or lined drums (avoid glass fibre based containers or tin plated drums), at 20 °C temperature, in a dark/ventilated place. Keep away from iron and copper salts, organic and inorganic peroxides. Stirring the product before using is suggested.

#### **Safety**

The product is flammable and harmful.

Further information is provided in the relevant safety data sheet.

SIRESTER ®: SIR INDUSTRIALE registered trade mark.

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# SIRESTER® FS 0994/AT/F

# PRODUCT DATA SHEET

RP/FS0994ATF/012019

#### **Description**

Unsaturated orthophtalic polyester resin, diluted in styrene, with medium reactivity and medium viscosity, thixotropic and preaccelerated with catalyst indicator.

#### **Applications**

SIRESTER FS 0994/AT/F is a general purposes product, suitable in particular for hand lay-up and spray-up applications, with good wetting properties. Properly fabricated and postcured parts may be used for food contact applications according to UE no 10/2011.

#### **Sales specification**

Property	Value	Unit	Method
Acid number	≤ 30	mg KOH/g	SIR 10231

#### **Typical Properties**

Property	Value	Unit	Method
Appearance	Blue hazy		SIR 10010
Styrene content	41	%	SIR 10352
Gel time at 25 °C (1)	18	minutes	SIR 10284
Hardening time at 25 ° C (1)	30	minutes	SIR 10284
Exothermic peak (1)	140	°C	SIR 10284
Thixotropic index	> 3,0		
2 rpm	> 2400	mPa s	SIR 10215
20 rpm	< 800	mPa s	
Stability at 65 °C	6	days	SIR 10242

<sup>(1)</sup> Formulation: 100 gr resin + 1,50 ml MEKP-50

During long storage a slight increase of the gel time can occur: we suggest to adjust the amount of catalyst in order to obtain correct values.

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

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# SIRESTER® FS 0994/AT/F

# PRODUCT DATA SHEET

RP/FS0994ATF/012019

# Mechanical properties of pure cured resin (\*)

Property	Value	Unit	Method
Barcol hardness	40		EN 59
Flexural strength	105	MPa	EN 63
E-Module, flexion	3600	MPa	EN 63
Tensile strength	65	MPa	EN 61
E-Module, tension	3300	MPa	EN 61
Elongation at break	2,5	%	EN 61
HDT	65	°C	EN ISO 75 A

<sup>(\*)</sup> Typical properties, not suitable for specification; postcuring cycle: 24 hours 25 °C + 2 hours 100 °C

# Mechanical properties reinforced resin (glass/resin 30/70)(\*)

Property	Value	Unit	Method
Flexural strength	200	MPa	EN 63
E-Module, flexion	8100	MPa	EN 63
Tensile strength	100	MPa	EN 61
E-Module, tension	8200	MPa	EN 61

<sup>(\*)</sup> Typical properties, not suitable for specification; postcuring cycle: 24 hours 25 °C + 2 hours 100 °C

#### **Supply Form**

Product is available in a 225 Kg lined drum, 1000 Kg container or in bulk.

#### Storage stability

The product is stable for 4 months if stored in a stainless steel tank or lined drums (avoid glass fibre based containers or tin plated drums), at 20 °C temperature, in a dark/ventilated place. Keep away from iron and copper salts, organic and inorganic peroxides. A long period of storage can cause slight segregation of the solid part of the product: stirring the material before using is strictly suggested.

# **Safety**

The product is flammable and harmful.

Further information is provided in the relevant safety data sheet.

SIRESTER  $^{\circledR}\!:$  SIR INDUSTRIALE registered trade mark.

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# SIRESTER® FSG 0754/A

# PRODUCT DATA SHEET

RP/0754A/052021

#### **Description**

Orthophthalic unsaturated polyester resin based on neopentylglycol, diluted in styrene, preaccelerated with fast reactivity and medium-high viscosity; contains a UV stabilizer.

#### **Applications**

SIRESTER FSG 0754/A is indicated for filled castings with bright colour after cure, in particular for sanitary, onyx and marble imitations by solid surface application; the specific composition provides higher chemical and UV resistances than a standard orthophthalic polyester.

#### Sales specification

Property	Value	Unit	Method
Acid number	< 18	mg KOH/gr	SIR 10231
Viscosity at 25 °C	1000 - 1200	mPa s	SIR 10017

# **Typical Properties**

Property	Value	Unit	Method
Appearance	Clear ochre		SIR 10010
Styrene content	34	%	SIR 10257
Gel time at 25 °C (1)	12	minute	SIR 10296
Hardening time	25	minute	SIR 10296
Exothermic peak	185	°C	SIR 10296
Stability at 65 °C	6	day	SIR 10242

<sup>(1)</sup> Formulation: 100 gr resin + 1,0 ml MEKP-50.

During long storage a slight increase of the gel time can occur: we suggest to adjust the amount of catalyst in order to obtain correct values.

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 $N.B.: The \ data \ given \ in \ this \ brochure \ \bar{do} \ not \ constitute \ characteristic \ properties \ of \ the \ single \ product.$ 

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# SIRESTER® FSG 0754/A

# PRODUCT DATA SHEET

RP/0754A/052021

# Mechanical properties of pure cured resin (\*)

Property	Value	Unit	Method
Barcol hardness	45		EN 59
Flexural strength	120	MPa	ISO 178
E-Module, flexion	4100	MPa	ISO 178
Tensile strength	70	MPa	EN ISO 527
E-Module, tension	3800	MPa	EN ISO 527
Elongation at break	2,5	%	EN ISO 527
HDT	85	°C	EN ISO 75 A

<sup>(\*)</sup> Typical properties, not suitable for specification; postcuring cycle: 24 hours 25 °C + 2 hours 100 °C

# Mechanical properties of the reinforced resin (glass/resin 30/70) (\*)

Property	Value	Unit	Method
Flexural strength	220	MPa	ISO 14125
E-Module, flexion	8700	MPa	ISO 14125
Tensile strength	110	MPa	EN ISO 527
E-Module, tension	8700	MPa	EN ISO 527

<sup>(\*)</sup> Typical properties, not suitable for specification; postcuring cycle: 24 hours 25 °C + 2 hours 100 °C

#### **Supply Form**

Product is available in a 225 kg lined drum, 1000 kg container or in bulk.

#### Storage guidelines

The product is stable for 6 months if stored in the original unopened packaging, below 30 °C and away from direct sunlight and heat sources. Keep away from iron and copper salts, organic and inorganic peroxides.

#### Safety

The product is flammable and harmful. Further information is provided in the relevant safety data sheet.

SIRESTER  $^{\circledR}\!:$  SIR INDUSTRIALE registered trade mark.

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# SIRESTER® IS 0868/T

## PRODUCT DATA SHEET

RP/0868T/052021

#### **Description**

Unsaturated isophthalic polyester resin, thixotropic, with low reactivity and mediumhigh viscosity, with catalyst indicator.

#### **Applications**

SIRESTER ISN 0868/T is suitable for nautical applications; it provides very good wetting properties, superior capability to impregnate heavy glass tissue without sagging, also in vertical application, and good mechanical strengths; the very low exothermic peak allows the production of thick laminates in a single application. Rina Type Approval Certification n° DIP281120CS.

#### Sales specification

Property	Value	Unit	Method
Acid number	≤ 15	mg KOH/gr	SIR 10231

# **Typical Properties**

Property	Value	Unit	Method
Appearance	Blue hazy		SIR 10010
Styrene content	40 - 44	%	SIR 10257
Thixotropic index at 25 °C	> 3,5		
- 2 rpm	> 3000	mPa s	SIR 10215
- 20 rpm	< 1000	mPa s	
Gel time at 25 °C (1)	55 – 65	minute	SIR 10376
Exothermic Peak	95 - 115	°C	SIR 10376
Stability at 65 °C	6	day	SIR 10242

<sup>(1)</sup> Formulation: 100 gr resin + 1,60 ml Co (oct) 1% + 2,00 ml Trigonox 61.

SIRESTER ®: SIR INDUSTRIALE registered trade mark.

 $N.B.: \ \, \text{The data given in this brochure do not constitute characteristic properties of the single product.}$ 

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





# SIRESTER® IS 0868/T

## PRODUCT DATA SHEET

RP/0868T/052021

# Mechanical properties of pure cured resin (\*)

Property	Value	Unit	Method
Barcol hardness	40		EN 59
Flexural strength	100	MPa	ISO 178
E-Module, flexion	4300	MPa	ISO 178
Tensile strength	70	MPa	EN ISO 527
E-Module, tension	3900	MPa	EN ISO 527
Elongation at break	2,5	%	EN ISO 527
HDT	65	°C	EN ISO 75 A

<sup>(\*)</sup> Typical properties, not suitable for specification; postcuring cycle: 24 hours 25 °C + 2 hours 100 °C

# Mechanical properties of reinforced resin (glass/resin 30/70) (\*)

Property	Value	Unit	Method
Flexural strength	210	MPa	ISO 14125
E-Module, flexion	9200	MPa	ISO 14125
Tensile strength	115	MPa	EN ISO 527
E-Module, tension	9000	MPa	EN ISO 527

<sup>(\*)</sup> Typical properties, not suitable for specification; postcuring cycle: 24 hours 25 °C + 2 hours 100 °C

#### **Supply Form**

Product is available in a 225 kg lined drum, 1000 kg container or in bulk.

#### Storage guidelines

The product is stable for 6 months if stored in the original unopened packaging, below 30 °C and away from direct sunlight and heat sources. Keep away from iron and copper salts, organic and inorganic peroxides. Thixotropy properties are guaranteed for 3 months: a long period of storage can cause slight segregation of the solid part of the product. Stir the resin before use.

#### Safety

The product is flammable and harmful. Further information is provided in the relevant safety data sheet.

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# SIRESTER® IS 4245

PRODUCT DATA SHEET

RP/4245/092014

#### **Description**

Unsaturated, isophtalic, polyester resin, diluited in styrene, with high reactivity and low viscosity, thixotropic and preaccelerated.

# **Applications**

SIRESTER IS 4245 is particularly suitable for the production of large reinforced plastic parts requiring mechanical and chemical resistance properties higher than obtainable with standard orthophtalic resins.

### **Sales specification**

Property	Value	Unit	Method
Acid number	≤ 20	mg KOH/g	SIR 10231

#### **Typical Properties**

Property	Value	Unit	Method
Appearance	Hazy rose liquid		SIR 10010
Styrene content	45	%	SIR 10352
Stability at 65 °C	6	days	SIR 10242
Thixotropic Index at 25 °C	> 2,5		CID 10215
- 2 rpm	> 1500	mPa s	SIR 10215
- 20 rpm	< 650	mPa s	
Gel time at 25 °C (1)	17	minutes	SIR 10267
SPI	11	minutes	
peak temperature	220	°C	SIR 10232
time to peak	13	minutes	

<sup>(1)</sup> Formulation: 100 g resin + 1,5 ml MEKP 50%.

During long storage a slight increase of the gel time can occur: we suggest to adjust the amount of catalyst in order to obtain correct values.

SIRESTER  $^{\circledR}\!:$  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.





# SIRESTER® IS 4245

PRODUCT DATA SHEET

RP/4245/092014

#### Mechanical properties of pure cured resin

Property	Value	Unit	Method
Barcol hardness	45		EN 59
Flexural strength	115	MPa	EN 63
E-Module, flexion	4100	MPa	EN 63
Tensile strength	70	MPa	EN 61
E-Module, tension	3700	MPa	EN 61
Elongation at break	2,3	%	EN 61
HDT	100	°C	EN ISO 75 A

#### Mechanical properties of reinforced resin (glass/resin 30/70)

Property	Value	Unit	Method
Flexural strength	230	MPa	EN 63
E-Module, flexion	9100	MPa	EN 63
Tensile strength	110	MPa	EN 61
E-Module, tension	8900	MPa	EN 61

#### **Supply Form**

Product is available in a 225 Kg lined drum, 1000 Kg container or in bulk.

#### Storage stability

The product is stable for 3 months if stored in a stainless steel tank or lined drums (avoid glass fibre based containers or tin plated drums), at 20 °C temperature, in a dark/ventilated place. Keep away from iron and copper salts, organic and inorganic peroxides. Stirring the product before using is suggested. A long period of storage can cause slight segregation of the solid part of the product: stirring the material before using is strictly suggested.

#### **Safety**

The product is flammable and harmful.

Further information is provided in the relevant safety data sheet.

SIRESTER  $^{\circ}$ : SIR INDUSTRIALE registered trade mark.

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# SIRESTER® IS 4245/M

PRODUCT DATA SHEET

RP/4245M/072013

#### **Description**

Unsaturated, isophtalic, polyester resin, diluited in styrene, with high reactivity and low viscosity, thixotropic and preaccelerated.

# **Applications**

SIRESTER IS 4245/M is particularly suitable for the production of large reinforced plastic parts requiring high mechanical and chemical resistance properties; suitable for food contact applications.

## **Sales specification**

Property	Value	Unit	Method
Acid number	≤ 20	mg KOH/g	SIR 10231

#### **Typical Properties**

Property	Value	Unit	Method
Appearance	Hazy rose liquid		SIR 10010
Styrene content	45	%	SIR 10352
Stability at 65 °C	6	days	SIR 10242
Thixotropic Index at 25 °C	> 2,5		
- 2 rpm	> 1500	mPa s	SIR 10215
- 20 rpm	< 650	mPa s	
Gel time at 25 °C (1)	17	minutes	SIR 10267
SPI	11	minutes	
peak temperature	220	°C	SIR 10232
time to peak	13	minutes	

<sup>(1)</sup> Formulation: 100 g resin + 1,5 ml MEKP 50.

During long storage a slight increase of the gel time can occur: we suggest to adjust the amount of catalyst in order to obtain correct values.

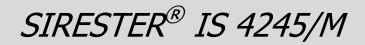
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N.B.: The data given in this brochure do not constitute characteristic properties of the single product.

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







PRODUCT DATA SHEET

RP/4245M/072013

### Mechanical properties of pure cured resin

Property	Value	Unit	Method
Flexural strength	100	MPa	EN 63
E-Module, flexion	4000	MPa	EN 63
Tensile strength	55	MPa	EN 61
E-Module, tension	3800	MPa	EN 61
Elongation at break	2,0	%	EN 61
HDT	100	°C	EN ISO 75 A

# Mechanical properties of reinforced resin (glass/resin 30/70)

Property	Value	Unit	Method
Flexural strength	220	MPa	EN 63
E-Module, flexion	9100	MPa	EN 63
Tensile strength	110	MPa	EN 61
E-Module, tension	8900	MPa	EN 61

#### **Supply Form**

Product is available in a 225 Kg lined drum, 1000 Kg container or in bulk.

#### Storage stability

The product is stable for 3 months if stored in a stainless steel tank or lined drums (avoid glass fibre based containers or tin plated drums), at 20 °C temperature, in a dark/ventilated place. Keep away from iron and copper salts, organic and inorganic peroxides. A long period of storage can cause slight segregation of the solid part of the product: stirring the material before using is strictly suggested.

#### Safety

The product is flammable and harmful.

Further information is provided in the relevant safety data sheet.

SIRESTER ®: SIR INDUSTRIALE registered trade mark.

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

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# SIRESTER® ISN 0841/ATF/E

## PRODUCT DATA SHEET

RP/0841ATFE/052021

#### **Description**

Unsaturated isophthalic polyester resin, diluted in styrene, with medium-low reactivity and medium viscosity, thixotropic and pre-accelerated with catalyst indicator.

#### **Applications**

SIRESTER ISN 0841/ATF/E is a general purpose material, particularly suitable for nautical applications and industrial parts, when good mechanical strengths and chemical resistance are required; its particular formulation grants high wettability and allows perfect workability also in vertical laminates.

#### **Sales specification**

Property	Value	Unit	Method
Acid number	≤ 18	mg KOH/gr	SIR 10231

# **Typical Properties**

Property	Value	Unit	Method
Appearance	Blue hazy		SIR 10010
Styrene content	42	%	SIR 10257
Thixotropic index at 25 °C	> 3,0		
- 2 rpm	> 2400	mPa s	SIR 10215
- 20 rpm	< 800	mPa s	
Gel time at 25 °C (1)	38	minute	SIR 10276
Stability at 65 °C	6	day	SIR 10242

<sup>(1)</sup> Formulation: 100 gr resin + 2,00 ml MEKP-50.

During long storage a slight increase of the gel time can occur: we suggest to adjust the amount of catalyst in order to obtain correct values.

SIRESTER ®: 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.





## SIRESTER® ISN 0841/ATF/E

### PRODUCT DATA SHEET

RP/0841ATFE/052021

### Mechanical properties of pure cured resin (\*)

Property	Value	Unit	Method
Barcol hardness	45		EN 59
Flexural strength	130	MPa	ISO 178
E-Module, flexion	4100	MPa	ISO 178
Tensile strength	80	MPa	EN ISO 527
E-Module, tension	3900	MPa	EN ISO 527
Elongation at break	3,0	%	EN ISO 527
HDT	85	°C	EN ISO 75 A

<sup>(\*)</sup> Typical properties, not suitable for specification; postcuring cycle: 24 hours 25 °C + 2 hours 100 °C

## Mechanical properties of the reinforced resin (glass/resin 30/70) (\*)

Property	Value	Unit	Method
Flexural strength	250	MPa	ISO 14125
E-Module, flexion	9000	MPa	ISO 14125
Tensile strength	120	MPa	EN ISO 527
E-Module, tension	8800	MPa	EN ISO 527

<sup>(\*)</sup> Typical properties, not suitable for specification; postcuring cycle: 24 hours 25 °C + 2 hours 100 °C

#### **Supply Form**

Product is available in a 225 kg lined drum, 1000 kg container or in bulk.

#### Storage guidelines

The product is stable for 6 months if stored in the original unopened packaging, below 30 °C and away from direct sunlight and heat sources. Keep away from iron and copper salts, organic and inorganic peroxides. Thixotropy properties are guaranteed for 3 months: a long period of storage can cause slight segregation of the solid part of the product. Stir the resin before use.

#### Safety

The product is flammable and harmful. Further information is provided in the relevant safety data sheet.

SIRESTER ®: SIR INDUSTRIALE registered trade mark.

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

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# SIRESTER® ISN 0841/ATV

## PROVISONAL DATA SHEET

RP/0841ATV/122016

### **Description**

Unsaturated isophtalic polyester resin, with medium reactivity and low viscosity, thixotropic and pre-accelerated.

#### **Applications**

SIRESTER ISN 0841/ATV is particularly suitable for production of storage tanks and pipelines by hand lay-up technique: its formulation grants medium-low exothermic peak and contains an additive which appears on the surface reducing drastically the styrene emission: it is suggested to abrade the hardened surface before applying other layers.

## **Sales specification**

Property	Value	Unit	Method
Acid number	≤ 18	mg KOH/g	SIR 10231

#### **Typical Properties**

Property	Value	Unit	Method
Appearance	Turbid blue liquid		SIR 10010
Styrene content	44	%	SIR 10352
Time from 25 to 35 °C (1)	24	minute	SIR 10276
Time from 25 C to peak	45	minute	SIR 10276
Exothermic peak	135	°C	SIR 10276
Thixotropic index	> 2,5		
- 2 rpm	> 1000	mPa s	SIR 10215
- 20 rpm	< 400	mPa s	
Stability at 65 °C	6	day	SIR 10242

<sup>(1)</sup> Formulation: 100 g resin + 2,00 ml MEKP 50%

During long storage a slight increase of the gel time can occur: we suggest to adjust the amount of catalyst in order to obtain correct values.

SIRESTER ®: 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.







### PROVISONAL DATA SHEET

RP/0841ATV/122016

#### Mechanical properties of pure cured resin

Property	Value	Unit	Method
Barcol hardness	40		EN 59
Flexural strength	130	MPa	EN 63
E-Module, flexion	4000	MPa	EN 63
Tensile strength	75	MPa	EN 61
E-Module, tension	3800	MPa	EN 61
Elongation at break	2,5	%	EN 61
HDT	85	°C	EN ISO 75 A

## Mechanical properties of glass fiber reinforced resin (glass/resin 30/70)

Property	Value	Unit	Method
Flexural strength	210	MPa	EN 63
E-Module, flexion	9200	MPa	EN 63
Tensile strength	110	MPa	EN 61
E-Module, tension	9200	MPa	EN 61

#### **Supply Form**

Product is available in a 225 Kg lined drum, 1000 Kg container or in bulk.

#### Storage stability

The product is stable for 3 months if stored in lined steel drums or in stainless steel tankers at 20 °C, away from sources of light and free of iron or copper salts, organic and inorganic peroxides. A long period of storage can cause slight segregation of the solid part of the product: stirring the material before using is strictly suggested.

#### **Safety**

The product is flammable and harmful.

Further information is provided in the relevant safety data sheet.

SIRESTER  $^{\circledR}\!:$  SIR INDUSTRIALE registered trade mark.

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

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# SIRESTER® ISN 0841/AT

PRODUCT DATA SHEET

RP/0841AT/122011

#### **Description**

Unsaturated isophtalic polyester resin, with medium reactivity and medium viscosity, thixotropic and pre-accelerated.

#### **Applications**

SIRESTER ISN 0841/AT is particularly suitable in the ship-building and GFRP sectors.

## **Sales specification**

Property	Value	Unit	Method
Acid number	≤ 18	mg KOH/g	SIR 10231

## **Typical Properties**

Property	Value	Unit	Method
Appearance	Turbid blue liquid		SIR 10010
Styrene content	46	%	SIR 10352
Stability at 65 °C	6	day	SIR 10242
Gel time at 25 °C (1)	19	minute	SIR 10267
Thixotropic index	> 2,8		
- 2 rpm	> 1500	mPa s	SIR 10215
- 20 rpm	< 600	mPa s	
Stability at 65 °C	6	Day	SIR 10242

<sup>(1)</sup> Formulation: 100 g resin + 1,50 ml MEKP-50

During long storage a slight increase of the gel time can occur: we suggest to adjust the amount of catalyst in order to obtain correct values.

SIRESTER ®: 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.







## PRODUCT DATA SHEET

RP/0841AT/122011

#### Mechanical properties of pure cured resin

Property	Value	Unit	Method
Barcol hardness	50		EN 59
Flexural strength	140	MPa	EN 63
E-Module, flexion	4400	MPa	EN 63
Tensile strength	80	MPa	EN 61
E-Module, tension	4000	MPa	EN 61
Elongation at break	3,0	%	EN 61
HDT	85	°C	EN ISO 75 A

## Mechanical properties of glass fiber reinforced resin (glass/resin 30/70)

Property	Value	Unit	Method
Flexural strength	230	MPa	EN 63
E-Module, flexion	9100	MPa	EN 63
Tensile strength	105	MPa	EN 61
E-Module, tension	9200	MPa	EN 61

#### **Supply Form**

Product is available in a 225 Kg lined drum, 1000 Kg container or in bulk.

#### Storage stability

The product is stable for 3 months if stored in lined steel drums or in stainless steel tankers at 20 °C, away from sources of light and free of iron or copper salts, organic and inorganic peroxides. It is suggested to stir the product before using.

#### Safety

The product is flammable and harmful.

Further information is provided in the relevant safety data sheet.

SIRESTER  $^{\circledR}\!:$  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.





## SIRESTER® ISN 0841/ATV/E

## PRODUCT DATA SHEET

RP/0841ATVE/062020

#### **Description**

Unsaturated isophtalic polyester resin, with medium reactivity and medium viscosity, thixotropic and pre-accelerated, with catalyst indicator.

#### **Applications**

SIRESTER ISN 0841/ATV/E is a general purpose material, particularly suitable in the ship-building and GFRP sectors; it provides excellent wettability and high mechanical properties; its low exothermic peak allows the production of thick layers in a single application.

### **Sales specification**

Property	Value	Unit	Method
Acid number	≤ 18	mg KOH/g	SIR 10231

## **Typical Properties**

Property	Value	Unit	Method
Appearance	Turbid blue		SIR 10010
Styrene content	42	%	SIR 10352
Thixotropic index	> 3,0		
- 2 rpm	> 2100	mPa s	SIR 10215
- 20 rpm	< 700	mPa s	
Gel time at 25 °C (1)	25	minutes	SIR 10267
Hardening time	45	minutes	SIR 10267
Exothermic peak	150	°C	SIR 10267
Stability at 65 °C	6	months	SIR 10242

<sup>(1)</sup> Formulation: 100 g resin + 1,50 ml MEKP-50

During long storage a slight increase of the gel time can occur: we suggest to adjust the amount of catalyst in order to obtain correct values.

SIRESTER  $^{\circledR}\!:$  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.







### PRODUCT DATA SHEET

RP/0841ATVE/062020

### Mechanical properties of pure cured resin

Property	Value	Unit	Method
Barcol hardness	45		EN 59
Flexural strength	125	MPa	EN 63
E-Module, flexion	4200	MPa	EN 63
Tensile strength	75	MPa	EN 61
E-Module, tension	4000	MPa	EN 61
Elongation at break	3,0	%	EN 61
HDT	85	°C	EN ISO 75 A

## Mechanical properties of glass fibre reinforced resin (glass/resin 30/70)

Property	Value	Unit	Method
Flexural strength	210	MPa	EN 63
E-Module, flexion	9100	MPa	EN 63
Tensile strength	110	MPa	EN 61
E-Module, tension	9200	MPa	EN 61

#### **Supply Form**

Product is available in a 225 kg lined drum, 1000 kg container or in bulk.

#### Storage stability

The product is stable for 3 months if stored in lined steel drums or in stainless steel tankers at 20 °C, away from sources of light and free of iron or copper salts, organic and inorganic peroxides. A long period of storage can cause slight segregation of the solid part of the product: stirring the material before using is strictly suggested.

#### Safety

The product is flammable and harmful.

Further information is provided in the relevant safety data sheet.

SIRESTER  $^{\circledR}\!:$  SIR INDUSTRIALE registered trade mark.

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## **PRODUCT DATA SHEET**

RP/LSC0850AMTE/092022

## **Description**

Hybrid unsaturated polyester resin, diluted in styrene, with medium viscosity and medium reactivity, thixotropic and preaccelerated with catalyst indicator.

## **Applications**

SIRESTER LSC 0850/AMT/E is a general purpose material suitable for hand lay-up and spray-up, in particular for nautical applications: it assures high wetting capability, low styrene content and good mechanical strengths. Lloyd's Register certification n° LR22412943ALP.

## **Sales specification**

Property	Value	Unit	Method
Acid number	≤ 30	mg KOH/g	SIR 10231

## **Typical Properties**

Property	Value	Unit	Method
Appearance	Blue hazy	-	SIR 10010
Styrene content	< 35	%	SIR 10257
Thixotropic index at 25 °C	≥ 3		SIR 10215
- 2 rpm	≥ 2400	mPa.s	SIR 10215
- 20 rpm	≤ 800	mPa.s	SIR 10215
Gel time at 25 °C (1)	25	minutes	SIR 10267
Time to peak	40	minutes	SIR 10267
Exothermic peak	180	°C	SIR 10267
Stability at 65°C	6	days	SIR 10242

<sup>(1)</sup> Formulation: 100 gr resin + 1,50 ml MEKP-50.

During long storage a slight increase of the geltime can occur: we suggest to adjust the amount of catalyst in order to obtain correct values.

SIRESTER ®: 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.

## Mechanical properties of pure cured resin (\*)

Property	Value	Unit	Method
Barcol hardness	50		EN 59
Flexural strength	110	MPa	ISO 178
E-Module, flexion	4400	MPa	ISO 178
Tensile strength	70	MPa	EN ISO 527
E-Module, tension	4300	MPa	EN ISO 527
Elongation at break	2,5	%	EN ISO 527
HDT	70	°C	EN ISO 75 A

<sup>(\*)</sup> typical properties, not suitable for specifications; postcuring cycle: 24 hours 25 °C + 2 hours 100 °C

## Mechanical properties of the reinforced resin (glass/resin 30/70)(\*)

Property	Value	Unit	Method
Flexural strength	210	MPa	ISO 14125
E-Module, flexion	8900	MPa	ISO 14125
Tensile strength	110	MPa	EN ISO 527
E-Module, tension	9700	MPa	EN ISO 527

<sup>(\*)</sup> typical properties, not suitable for specifications; postcuring cycle: 24 hours 25 °C + 2 hours 100 °C

#### **Supply Form**

Product is available in a 225 kg lined drum, 1000 kg container or in bulk.

#### Storage stability

The product is stable for 6 months if stored in the original unopened packaging), below 30 °C and away from direct sunlight and heat sources. Keep away from iron and copper salts, organic and inorganic peroxides. Thixotropic properties are guaranteed for 3 months: a long period of storage can cause slight segregation of the solid part of the product. Stir the resin before use

#### Safety

The product is flammable and harmful. Further information is provided in the relevant safety data sheet.

SIRESTER ®: SIR INDUSTRIALE registered trade mark.

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## SIRESTER® LSC 0994/ATF

PRODUCT DATA SHEET

RP/LSC0994ATF/112022

## **Description**

Hybrid unsaturated polyester resin, diluted in styrene, thixotropic with medium viscosity and medium-fast reactivity, with catalyst indicator.

## **Applications**

SIRESTER LSC 0994/ATF is a general-purpose material suitable for hand lay-up and spray-up applications: it assures efficient wetting capability, low styrene content and good mechanical strengths.

## Sales specification

Property	Value	Unit	Method
Acid number	≤ 30	mg KOH/ g	SIR 10231

## **Typical Properties**

Property	Value	Unit	Method
Appearance	Blue hazy	-	SIR 10010
Styrene content	≤ 35	%	SIR 10257
Thixotropic index at 25 °C	≥ 3		SIR 10215
- 2 rpm	≥ 2400	mPa.s	SIR 10215
- 20 rpm	≤ 800	mPa.s	SIR 10215
Gel time at 25 °C (1)	18	minutes	SIR 10267
Time to peak	30	minutes	SIR 10267
Exothermic peak	160	°C	SIR 10267
Stability at 65°C	6	days	SIR 10242

<sup>(1)</sup> Formulation: 100 gr resin + 1,50 ml MEKP-50.

During long storage a slight increase of the geltime can occur: we suggest to adjust the amount of catalyst in order to obtain correct values.

SIRESTER ®: 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.

## SIRESTER® LSC 0994/ATF

## PROVISIONAL DATA SHEET

RP/LSC0994ATF/112022

## Mechanical properties of pure cured resin (\*)

Property	Value	Unit	Method
Barcol hardness	45		EN 59
Flexural strength	90	MPa	ISO 178
E-Module, flexion	3800	MPa	ISO 178
Tensile strength	60	MPa	EN ISO 527
E-Module, tension	3700	MPa	EN ISO 527
Elongation at break	2,0	%	EN ISO 527
HDT	72	°C	EN ISO 75 A

<sup>(\*)</sup> typical properties, not suitable for specifications; postcuring cycle: 24 hours 25 °C + 2 hours 100 °C

## Mechanical properties of the reinforced resin (glass/resin 30/70)(\*)

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Property	Value	Unit	Method	
Flexural strength	200	MPa	ISO 14125	
E-Module, flexion	8200	MPa	ISO 14125	
Tensile strength	100	MPa	EN ISO 527	
E-Module, tension	8200	MPa	EN ISO 527	

<sup>(\*)</sup> typical properties, not suitable for specifications; postcuring cycle: 24 hours 25 °C + 2 hours 100 °C

#### **Supply Form**

Product is available in a 225 kg lined drum, 1000 kg container or in bulk.

## Storage stability

The product is stable for 6 months if stored in the original unopened packaging), below 30 °C and away from direct sunlight and heat sources. Keep away from iron and copper salts, organic and inorganic peroxides. Thixotropic properties are guaranteed for 3 months: a long period of storage can cause slight segregation of the solid part of the product. Stir the resin before use

#### Safety

The product is flammable and harmful. Further information is provided in the relevant safety data sheet.

SIRESTER ®: 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.

## SIRESTER® LSC 0994/ATP

**PRODUCT DATA SHEET** 

RP/LSC0994ATP/062024

## **Description**

Hybrid unsaturated polyester resin, diluted in styrene, thixotropic with medium viscosity and medium reactivity, with catalyst indicator.

## **Applications**

SIRESTER LSC 0994/ATP is a general-purpose material suitable for hand lay-up and spray-up applications: it assures efficient wetting capability, low styrene content and good mechanical strengths.

## Sales specification

Property	Value	Unit	Method
Acid number	≤ 30	mg KOH/ g	SIR 10231

### **Typical Properties**

Property	Value	Unit	Method
Appearance	Blue hazy	-	SIR 10010
Styrene content	≤ 35	%	SIR 10257
Thixotropic index at 25 °C	≥ 3		SIR 10215
- 2 rpm	≥ 2400	mPa.s	SIR 10215
- 20 rpm	≤ 800	mPa.s	SIR 10215
Gel time at 25 °C (1)	28	minutes	SIR 10267
Time to peak	40	minutes	SIR 10267
Exothermic peak	150	°C	SIR 10267
Stability at 65°C	6	days	SIR 10242

<sup>(1)</sup> Formulation: 100 gr resin + 1,50 ml MEKP-50.

During long storage a slight increase of the geltime can occur: we suggest to adjust the amount of catalyst in order to obtain correct values.

SIRESTER ®: 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.

## SIRESTER® LSC 0994/ATP

**PRODUCT DATA SHEET** 

RP/LSC0994ATP/062024

## Mechanical properties of pure cured resin (\*)

Property	Value	Unit	Method
Barcol hardness	45		EN 59
Flexural strength	90	MPa	ISO 178
E-Module, flexion	3800	MPa	ISO 178
Tensile strength	60	MPa	EN ISO 527
E-Module, tension	3700	MPa	EN ISO 527
Elongation at break	2,0	%	EN ISO 527
HDT	72	°C	EN ISO 75 A

<sup>(\*)</sup> typical properties, not suitable for specifications; postcuring cycle: 24 hours 25 °C + 2 hours 100 °C

## Mechanical properties of the reinforced resin (glass/resin 30/70)(\*)

Property	Value	Unit	Method
Flexural strength	200	MPa	ISO 14125
E-Module, flexion	8200	MPa	ISO 14125
Tensile strength	100	MPa	EN ISO 527
E-Module, tension	8200	MPa	EN ISO 527

<sup>(\*)</sup> typical properties, not suitable for specifications; postcuring cycle: 24 hours 25 °C + 2 hours 100 °C

#### **Supply Form**

Product is available in a 225 kg lined drum, 1000 kg container or in bulk.

#### **Storage stability**

The product is stable for 6 months if stored in the original unopened packaging), below 30 °C and away from direct sunlight and heat sources. Keep away from iron and copper salts, organic and inorganic peroxides. Thixotropic properties are guaranteed for 3 months: a long period of storage can cause slight segregation of the solid part of the product. Stir the resin before use

#### Safety

The product is flammable and harmful. Further information is provided in the relevant safety data sheet.

SIRESTER ®: 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.

## SIRESTER® VE 14-M-110/AT

### PRODUCT DATA SHEET

RV/14M110AT/022022

#### **Description**

Epoxy bisphenol-A based vinylester resin, diluted in styrene, thixotropic and preaccelerated with medium reactivity and medium viscosity.

#### **Applications**

SIRESTER® VE 14M110/AT is a general purpose material, suitable in particular for marine industry, by skin or bulk laminate applications; its special formulation assures high hydrolysis resistance in association with superior mechanical strengths and heat resistance; Lloyd's Register approval n° LR2252731ALP.

#### Sales specification

Properties	Value	Unit	Method
Acid number	< 15	mg KOH/gr	SIR 10231

#### **Typical Properties**

Properties	Value	Unit	Method
Appearance	Rose hazy		SIR 10010
Styrene content	38	%	SIR 10257
Thixotropic index at 25 °C	> 2,5		SIR 10215
- 2 rpm	> 2000	mPa s	CID 1021F
- 20 rpm	< 800	mPa s	SIR 10215
Gel time at 25 °C (1)	25	minute	SIR 10267
Time to peak	36	minute	SIR 10267
Exothermic peak	170	°C	SIR 10267
Shelf life at 65 °C	6	day	SIR 10242

<sup>(1)</sup> Formulation: 100 gr resin + 1,50 ml MEKP-50.

During long storage a slight increase of the gel time can occur: we suggest to adjust the amount of catalyst in order to obtain correct values.

SIRESTER ®: 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.





## SIRESTER® VE 14-M-110/AT

### PRODUCT DATA SHEET

RV/14M110AT/022022

#### Mechanical properties of pure cured resin (\*)

Property	Value	Unit	Method
Barcol hardness	40		EN 59
Flexural strength	130	MPa	ISO 178
E-Module, flexion	3600	MPa	ISO 178
Tensile strength	80	MPa	EN ISO 527
E-Module, tension	4000	MPa	EN ISO 527
Elongation at break	3,5	%	EN ISO 527
HDT	112	°C	EN ISO 75 A

<sup>(\*)</sup> Typical properties, not suitable for specification; postcuring cycle: 24 hours 25 °C + 3 hours 100 °C

## Mechanical properties of glass fibre reinforced resin (glass/resin 30/70) (\*)

Property	Value	Unit	Method
Flexural strength	200	MPa	ISO 14125
E-Module, flexion	8600	MPa	ISO 14125
Tensile strength	120	MPa	EN ISO 527
E-Module, tension	8500	MPa	EN ISO 527

<sup>(\*)</sup> Typical properties, not suitable for specification; postcuring cycle: 24 hours 25 °C + 3 hours 100 °C

#### **Supply Form**

Product is available in a 200 kg lined drum, 1000 kg container or in bulk.

#### Storage guidelines

The product is stable for 6 months if stored in the original unopened packaging, below 30 °C and away from direct sunlight and heat sources. Keep away from iron and copper salts, organic and inorganic peroxides. Thixotropy properties are guaranteed for 3 months: a long period of storage can cause slight segregation of the solid part of the product. Stir the resin before use.

#### Safety

The product is flammable and harmful. Further information is provided in the relevant safety data sheet.

SIRESTER ®: 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.





#### SIRESTER $^{\tiny{\circledR}}\!:$ SIR INDUSTRIALE registered trade mark.

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## SIRESTER® VE 45-M-90

**PRODUCT DATA SHEET** 

RP/VE45M90/052024

## **Description**

Epoxy Bisphenol-A based vinylester resin, diluted in styrene, with medium viscosity and medium reactivity.

## **Applications**

SIRESTER VE 45-M-90 is indicated for general purposes, in all those cases where high chemical resistance towards a wide range of substances is required; the excellent mechanical properties make it suitable for different and wide fields of application. Drinkable water contact certification n° 067/12 by Politecnico di Milano. Lloyd's Register approval n° LR21112933ALP.

## **Sales specification**

Property	Value	Unit	Method
Acid number	≤ 15	mg KOH/g	SIR 10231
Viscosity at 25°C	500 - 600	mPa s	SIR 10017

### **Typical Properties**

Property	Value	Unit	Method
Appearance	Clear	-	SIR 10010
Styrene content	38	%	SIR 10257
Gel time at 25 °C (1)	15	minutes	SIR 10277
Time to peak	10	minutes	SIR 10277
Exothermic peak	175	°C	SIR 10277
Stability at 65°C	6	days	SIR 10242

<sup>(1)</sup> Formulation: 100 gr resin + 0,30 ml Co (octoate) 6% + 0,10 ml DEAA + 1,25 ml MEKP-50.

SIRESTER ®: 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.

## SIRESTER® VE 45-M-90

**PRODUCT DATA SHEET** 

RP/VE45M90/052024

## Mechanical properties of pure cured resin (\*)

Property	Value	Unit	Method
Barcol hardness	40		EN 59
Flexural strength	150	MPa	ISO 178
E-Module, flexion	3800	MPa	ISO 178
Tensile strength	85	MPa	EN ISO 527
E-Module, tension	3500	MPa	EN ISO 527
Elongation at break	5,0	%	EN ISO 527
HDT	105	°C	EN ISO 75 A

<sup>(\*)</sup> typical properties, not suitable for specifications; postcuring cycle: 24 hours 25 °C + 3 hours 100 °C

## Mechanical properties of the reinforced resin (glass/resin 30/70)(\*)

		(5 /	/
Property	Value	Unit	Method
Flexural strength	230	MPa	ISO 14125
E-Module, flexion	8500	MPa	ISO 14125
Tensile strength	130	MPa	EN ISO 527
E-Module, tension	8600	MPa	EN ISO 527

<sup>(\*)</sup> typical properties, not suitable for specifications; postcuring cycle: 24 hours 25 °C + 3 hours 100 °C

#### **Supply Form**

Product is available in a 200 kg lined drum, 1000 kg container or in bulk.

#### Storage stability

The product is stable for 6 months if stored in the original unopened packaging), below 30 °C and away from direct sunlight and heat sources. Keep away from iron and copper salts, organic and inorganic peroxides.

### **Safety**

The product is flammable and harmful. Further information is provided in the relevant safety data sheet.

SIRESTER ®: 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.

## SIRESTER® VE 45-M-90/AT

### PRODUCT DATA SHEET

RV/45M90AT/052021

#### **Description**

Epoxy bisphenol-A based vinylester resin, diluted in styrene, preaccelerated and thixotropic, with medium reactivity and medium viscosity.

## **Applications**

SIRESTER® VE 45-M-90/AT is indicated for general purposes, in all those cases where high chemical resistance towards a wide range of substances is required. The excellent mechanical properties make it suitable for different and wide fields of application. Lloyd's Register approval n° LR21112933ALP.

#### Sales specification

Properties	Value	Unit	Method
Acid number	< 15	mg KOH/gr	SIR 10231

#### **Typical Properties**

Properties	Value	Unit	Method
Appearance	Rose hazy		SIR 10010
Styrene content	43	%	SIR 10257
Thixotropic index at 25 °C	> 2,5		SIR 10215
- 2 rpm	> 2000	mPa s	CID 1021F
- 20 rpm	< 800	mPa s	SIR 10215
Gel time at 25 °C (1)	23	minute	SIR 10334
Shelf life at 65 °C	6	day	SIR 10242

<sup>(1)</sup> Formulation: 100 gr resin + 1,25 ml MEKP-50.

During long storage a slight increase of the gel time can occur: we suggest to adjust the amount of catalyst in order to obtain correct values.

SIRESTER  $^{\scriptsize \text{\tiny B}}\!:$  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.





## SIRESTER® VE 45-M-90/AT

### PRODUCT DATA SHEET

RV/45M90AT/052021

#### Mechanical properties of pure cured resin (\*)

Property	Value	Unit	Method
Barcol hardness	45		EN 59
Flexural strength	150	MPa	ISO 178
E-Module, flexion	3800	MPa	ISO 178
Tensile strength	85	MPa	EN ISO 527
E-Module, tension	3300	MPa	EN ISO 527
Elongation at break	5	%	EN ISO 527
HDT	102	°C	EN ISO 75 A

<sup>(\*)</sup> Typical properties, not suitable for specification; postcuring cycle: 24 hours 25 °C + 3 hours 100 °C

## Mechanical properties of the reinforced resin (glass/resin 30/70) (\*)

Property	Value	Unit	Method
Flexural strength	230	MPa	ISO 14125
E-Module, flexion	8000	MPa	ISO 14125
Tensile strength	130	MPa	EN ISO 527
E-Module, tension	8300	MPa	EN ISO 527

<sup>(\*)</sup> Typical properties, not suitable for specification; postcuring cycle: 24 hours 25 °C + 3 hours 100 °C

#### **Supply Form**

Product is available in a 200 kg lined drum, 1000 kg container or in bulk.

#### Storage guidelines

The product is stable for 6 months if stored in the original unopened packaging, below 30 °C and away from direct sunlight and heat sources. Keep away from iron and copper salts, organic and inorganic peroxides. Thixotropy properties are guaranteed for 3 months: a long period of storage can cause slight segregation of the solid part of the product. Stir the resin before use.

#### Safety

The product is flammable and harmful. Further information is provided in the relevant safety data sheet.

SIRESTER  $^{\circledR}\!:$  SIR INDUSTRIALE registered trade mark.

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## SIRESTER® VE 64-M-140

**PRODUCT DATA SHEET** 

RP/VE64M140/052024

## **Description**

Epoxy-novaloc based vinylester resin, diluted in styrene, with medium viscosity and medium reactivity.

## **Applications**

SIRESTER VE 64-M-140 is suitable for general purposes, in particular for filament winding applications, in all those cases where high chemical resistance towards a wide range of substances is required: it provides good wetting properties and very high mechanical strengths. Drinkable water contact certification no 067/12 by Politecnico di Milano.

## **Sales specification**

Property	Value	Unit	Method
Acid number	≤ 15	mg KOH/g	SIR 10231
Viscosity at 25°C	400 - 500	mPa s	SIR 10017

## **Typical Properties**

Property	Value	Unit	Method
Appearance	Clear	-	SIR 10010
Styrene content	32	%	SIR 10257
Gel time at 25 °C (1)	20	minutes	SIR 10277
Time to peak	6	minutes	SIR 10277
Exothermic peak	190	°C	SIR 10277
Stability at 65°C	6	days	SIR 10242

<sup>(1)</sup> Formulation: 100 gr resin + 0,30 ml Co (octoate) 6% + 0,10 ml DEAA + 1,25 ml MEKP-50.

SIRESTER ®: 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.

## SIRESTER® VE 64-M-140

**PRODUCT DATA SHEET** 

RP/VE64M140/052024

## Mechanical properties of pure cured resin (\*)

Property	Value	Unit	Method
Barcol hardness	45		EN 59
Flexural strength	120	MPa	ISO 178
E-Module, flexion	4200	MPa	ISO 178
Tensile strength	70	MPa	EN ISO 527
E-Module, tension	3800	MPa	EN ISO 527
Elongation at break	3,0	%	EN ISO 527
HDT	150	°C	EN ISO 75 A

<sup>(\*)</sup> typical properties, not suitable for specifications; postcuring cycle: 24 hours 25 °C + 3 hours 120 °C

## Mechanical properties of the reinforced resin (glass/resin 30/70)(\*)

		(5 /	
Property	Value	Unit	Method
Flexural strength	210	MPa	ISO 14125
E-Module, flexion	8800	MPa	ISO 14125
Tensile strength	120	MPa	EN ISO 527
E-Module, tension	9500	MPa	EN ISO 527

<sup>(\*)</sup> typical properties, not suitable for specifications; postcuring cycle: 24 hours 25 °C + 3 hours 120 °C

#### **Supply Form**

Product is available in a 200 kg lined drum, 1000 kg container or in bulk.

## Storage stability

The product is stable for 6 months if stored in the original unopened packaging), below 30 °C and away from direct sunlight and heat sources. Keep away from iron and copper salts, organic and inorganic peroxides.

### **Safety**

The product is flammable and harmful. Further information is provided in the relevant safety data sheet.

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## SIRESTER® VI 950/AT

**PRODUCT DATA SHEET** 

RP/VI950AT/022022

## **Description**

Modified Bisphenol-A vinylester resin, diluted in styrene, with medium viscosity and slow reactivity, thixotropic and preaccelerated with catalyst indicator.

## **Applications**

SIRESTER VI 950/AT is a general purpose material, suitable for hand lay-up and sprayup applications: it provides efficient wetting capability and good mechanical strengths.

## **Sales specification**

Property	Value	Unit	Method
Acid number	≤ 30	mg KOH/ g	SIR 10231

#### **Typical Properties**

Property	Value	Unit	Method
Appearance	Blue hazy	-	SIR 10010
Styrene content	41	%	SIR 10257
Thixotropic index at 25 °C	≥ 2.5		SIR 10215
- 2 rpm	≥ 1800	mPa.s	SIR 10215
- 20 rpm	≤ 700	mPa.s	SIR 10215
Gel time at 25 °C (1)	22	minutes	SIR 10267
Time to peak	35	minutes	SIR 10267
Exothermic peak	180	°C	SIR 10267
Stability at 65°C	6	days	SIR 10242

<sup>(1)</sup> Formulation: 100 gr resin + 1,50 ml MEKP-50.

During long storage a slight increase of the geltime can occur: we suggest to adjust the amount of catalyst in order to obtain correct values.

SIRESTER ®: SIR INDUSTRIALE registered trade mark.

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## SIRESTER® VI 950/AT

**PRODUCT DATA SHEET** 

RP/VI950AT/022022

## Mechanical properties of pure cured resin (\*)

Property	Value	Unit	Method
Barcol hardness	40		EN 59
Flexural strength	130	MPa	ISO 178
E-Module, flexion	3600	MPa	ISO 178
Tensile strength	75	MPa	EN ISO 527
E-Module, tension	4000	MPa	EN ISO 527
Elongation at break	2,5	%	EN ISO 527
HDT	95	°C	EN ISO 75 A

<sup>(\*)</sup> typical properties, not suitable for specifications; postcuring cycle: 24 hours 25 °C + 3 hours 100 °C

## Mechanical properties of the reinforced resin (glass/resin 30/70)(\*)

Property	Value	Unit	Method
Flexural strength	250	MPa	ISO 14125
E-Module, flexion	9400	MPa	ISO 14125
Tensile strength	110	MPa	EN ISO 527
E-Module, tension	8300	MPa	EN ISO 527

<sup>(\*)</sup> typical properties, not suitable for specifications; postcuring cycle: 24 hours 25 °C + 3 hours 100 °C

#### **Supply Form**

Product is available in a 200 kg lined drum, 1000 kg container or in bulk.

#### Storage stability

The product is stable for 6 months if stored in the original unopened packaging), below 30 °C and away from direct sunlight and heat sources. Keep away from iron and copper salts, organic and inorganic peroxides. Thixotropic properties are guaranteed for 3 months: a long period of storage can cause slight segregation of the solid part of the product. Stir the resin before use

### Safety

The product is flammable and harmful. Further information is provided in the relevant safety data sheet.

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