



SIR INDUSTRIALE SpA



SIRESTER® UNSATURATED POLYESTER RESINS



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WHO IS **SIR**?

With more than **80 years of experience** in the development and manufacturing of **high quality materials**, **SIR INDUSTRIALE Spa** simply knows how to **find** the best solution for **your specific needs**.

SIR INDUSTRIALE Spa aims at finding the **best solution** for the customers through **cooperation** and **passion** for continuous **improvements**.

Under the brand name **SIRESTER®**, SIR Industriale can offer you a complete range of unsaturated polyester resins and **vinylester**. A rich and versatile product portfolio allows the user to modulate the final behaviours covering all possible applications.

SIRESTER® includes: • Ortophthalic • Isophthalic • Vinylester

ADVANCED R&D CENTER:

SIR avails itself of a **centralized structure** for **study, research** and **development** activities that are indispensable to guarantee a constant **innovation-oriented** work.

MISSION:

To **create optimum value** for all customers, shareholders, employees and social partners applying safe, ethical and environmentally practice.






















THE COMPANY


WE ARE READY FOR THE CHALLENGES
WHICH THE MARKET PROVIDES





HAND LAY-UP / SPRAY-UP


ORTHOPHTHALIC

SIRESTER®	VISCOSITY (25 °C, mPa.s)	MONOMER (%)	GELTIME (25 °C, min)	CATALYSIS	HDT (°C)	NOTES
 FSN 0850/AMT	THIXO	42	18(I) / 24(E)	1,50 % MEKP-50	70	Preaccelerated thixo; superior wetting properties
 FSN 0850/ATC	THIXO	42	10(I) / 16(E)	1,50 % MEKP-50	70	Preaccelerated thixo; superior wetting properties
 FSN 0850/AMTV	THIXO	42	17(I) / 25(E)	1,50 % MEKP-50	70	Preaccelerated thixo; superior wetting properties, low exotherm
 EC 0947/AT*	THIXO	42	8 to 27	1,50 % MEKP-50	70	Preaccelerated thixo with LSE; superior wetting properties * Different grades available
 FS 0994/ATV	THIXO	42	30	2,00 % MEKP-50 @ 20 °C	65	Preaccelerated thixo; high viscosity, low exotherm
  FS 0994/ATF	THIXO	43	18(I) / 24(E)	1,50 % MEKP-50	65	Preaccelerated thixo; low exotherm; food contact
  FS 0994/ATC	THIXO	42	28(I) / 42(E)	2,00 % MEKP-50 @ 20 °C	65	Preaccelerated thixo; high viscosity, low exotherm
 EC 0994/ATH	THIXO	40	18	2,00 % MEKP-50 @ 20 °C	65	Preaccelerated thixo with LSE; very high viscosity, low exotherm
 EC 0994/ATV	THIXO	42	30	2,00 % MEKP-50 @ 20 °C	65	Preaccelerated thixo with LSE; high viscosity, low exotherm
  EC 0994/ATV15	THIXO	42	15	2,00 % MEKP-50 @ 20 °C	65	Preaccelerated thixo with LSE; high viscosity, low exotherm
 FS 0908/AT	THIXO	40	9	1,50 % MEKP-50	75	Preaccelerated thixo; good mechanical properties
 FS 0993/AT	THIXO	Various	Various	Various	75	Preaccelerated thixo; good mechanical properties
 FS 0800/AT	THIXO	43	27	1,50 % MEKP-50	100	Preaccelerated thixo; very high mechanical and thermal properties; thin laminates
 FS 0956/AT	THIXO	Various	Various	1,50 % MEKP-50	75	Preaccelerated thixo; excellent wetting, good mechanical properties
 FS 0992/AT	THIXO	Various	Various	Various	60	Preaccelerated thixo; low viscosity, high filling capability; PMMA backing
 FS 0995/AT	THIXO	Various	Various	Various	65	Preaccelerated thixo; good mechanical properties, storage tanks for agriculture
FS 0995/ATM	THIXO	42	18(I) / 30(E)	1,50 % MEKP-50	65	Preaccelerated thixo; good mechanical properties; general purpose, swimming pools


 = Lloyds approved

 = available with paraffine additive for LSE






 = WRAS approved

 = food contact approved



BIOSIRCLE® RECYCLED PET

	VISCOSITY (25 °C, mPa.s)	MONOMER (%)	GELTIME (25 °C, min)	CATALYSIS	HDT (°C)	NOTES
 UPFT 0993/ATS	THIXO	45	16	1,00 % MEKP-50 @ 20 °C	70	General purpose, storage tanks

ISOPHTHALIC





SIRESTER®	VISCOSITY (25 °C, mPa.s)	MONOMER (%)	GELTIME (25 °C, min)	CATALYSIS	HDT (°C)	NOTES
 ISN 0841/AT	THIXO	45	18(I) / 25(E)	1,50 % MEKP-50	85	Preaccelerated thixo; superior wetting properties
 ISN 0841/ATV	THIXO	42	18(I) / 24(E)	1,50 % MEKP-50	85	Preaccelerated thixo; superior wetting properties, low exotherm
IS 4245	THIXO	45	17	1,50 % MEKP-50	100	Preaccelerated thixo; high mechanical and thermal properties, chemical resistance
 IS 4245/C	THIXO	44	20	2,00 % MEKP-49	100	Preaccelerated thixo; high mechanical and thermal properties, industrial applications
IS 4245/CE	THIXO	43	20	2,00 % MEKP-50	100	Preaccelerated thixo; higher viscosity, high mechanical and thermal properties
 IS 4245/M	THIXO	45	17	1,50 % MEKP-50	100	Preaccelerated thixo; high mechanical and thermal properties
ISN 0841/ATF	THIXO	41	20(I) / 36(E)	2,00 % MEKP-50	85	Preaccelerated thixo; superior wetting properties, swimming pools
 ISN 0841/ATC	THIXO	41	20(I) / 36(E)	2,00 % MEKP-50	85	Preaccelerated thixo; superior wetting properties, food contact

 = Lloyds approved
 = available with paraffine additive for LSE




 = WRAS approved
 = food contact approved





ORTHO-DCPD

SIRESTER®	VISCOSITY (25 °C, mPa.s)	MONOMER (%)	GELTIME (25 °C, min)	CATALYSIS	HDT (°C)	NOTES
 LSC 0850/AMT	THIXO	≤ 35	18(I) / 25(E)	1,50 % MEKP-50	70	Preaccelerated thixo; superior wetting properties
 LSC 0850/AMT/V	THIXO	≤ 35	25	1,50 % MEKP-50	70	Preaccelerated thixo; superior wetting properties, low exotherm
 ELS 0850/AMT/R	THIXO	≤ 35	25	1,50 % MEKP-50	70	Preaccelerated thixo with LSE; superior wetting properties, low viscosity
 LSC 0994/ATF	THIXO	≤ 35	18	1,50 % MEKP-50	65	Preaccelerated thixo with LSE; low exotherm

VINYLESTER

SIRESTER®	VISCOSITY (25 °C, mPa.s)	MONOMER (%)	GELTIME (25 °C, min)	CATALYSIS	HDT (°C)	NOTES
 VE 45M90/AT	THIXO	43	23	1,25 % MEKP-50	102	Preaccelerated thixo; high chemical and thermal resistance
 VE 14M110/AT	THIXO	38	25	1,50 % MEKP-50	112	Preaccelerated thixo; high chemical and thermal resistance
 VE 12M115/AT	THIXO	35	25	1,50 % MEKP-50	115	Preaccelerated thixo; high chemical and thermal resistance
VI 950/AT	THIXO	41	22	1,50 % MEKP-50	95	ISO-VE blend; very good wetting, high hydrolysis resistance

 = Lloyds approved



 = available with paraffine additive for LSE








FILAMENT WINDING


ORTHOPHTHALIC

SIRESTER®	VISCOSITY (25 °C, mPa.s)	MONOMER (%)	GELTIME (25 °C, min)	CATALYSIS	HDT (°C)	NOTES
 FS 0800/PRA	300	41	15	1,50 % MEKP-50	105	Medium-low viscosity, very high mechanical and thermal properties
 FS 0800	350	40	18	0,20 % Co 6% + 1,50 % MEKP-50	105	Very high mechanical and thermal properties
FS 0995/C	520	36	60	0,25 % Co 6% + 1,50 % MEKP-50	75	Good mechanical properties
FS 4230	500	35	12	0,20 % Co 6% + 1,50 % MEKP-50	75	Superior wetting, good mechanical properties
FS 4235	450	38	12	0,20 % Co 6% + 1,50 % MEKP-50	80	Superior wetting, good mechanical and thermal properties
FS 0995/MA	300	40	5	1,50 % MEKP-50	65	Preaccelerated; good mechanical properties, storage tanks for agriculture

ISOPHTHALIC

SIRESTER®	VISCOSITY (25 °C, mPa.s)	MONOMER (%)	GELTIME (25 °C, min)	CATALYSIS	HDT (°C)	NOTES
 ISN 0841/RF	200	45	15	0,20 % Co 6% + 1,50 % MEKP-50	85	High mechanical properties, chemical resistance
 IS 4240	400	38	20	0,20 % Co 6% + 1,50 % MEKP-50	105	High mechanical properties, chemical resistance
 IS 0785	800	37	28	0,20 % Co 6% + 1,50 % MEKP-50	105	ISO-NEO; high mechanical and thermal properties, chemical resistance


VINYLESTER

SIRESTER®	VISCOSITY (25 °C, mPa.s)	MONOMER (%)	GELTIME (25 °C, min)	CATALYSIS	HDT (°C)	NOTES
VE 45M90	550	38	14	0,10 % DEAA + 0,30 % Co 6% + 1,25 % MEKP	102	Vinylester; excellent chemical resistance, storage tanks and pipelines
 VE 64M140	450	32	20	0,10 % DEAA + 0,30 % Co 6% + 1,25 % MEKP	140	Vinylester; excellent chemical resistance

CIPP

VINYLESTER

SIRESTER®	VISCOSITY (25 °C, mPa.s)	MONOMER (%)	GELTIME (25 °C, min)	CATALYSIS	HDT (°C)	NOTES
VE 755/T	thixo	41	18	1% Co 1% + 0,8% DTBCHP + 1% TBPB @ 60 °C	120	BPA-based vinylester; styrene-free thixo, hot curing, CIPP applications

 = Drinking water approved = food contact approved

PULTRUSION

ORTHOPHTHALIC

SIRESTER®	VISCOSITY (25 °C, mPa.s)	MONOMER (%)	GELTIME (25 °C, min)	CATALYSIS	HDT (°C)	NOTES
FS 0800/P	700	35	7	0,20 % Co 6% + 1,50 % MEKP-50	105	Medium-high viscosity, very high mechanical and thermal properties
FS 0840	700	35	7	0,20 % Co 6% + 1,50 % MEKP-50	90	Medium-high viscosity, superior wetting, high mechanical and thermal properties
FS 0840/PN	200	40	5	2% BPO @ 82,2 °C	90	Low viscosity, superior wetting, high mechanical and thermal properties

ISOPHTHALIC

SIRESTER®	VISCOSITY (25 °C, mPa.s)	MONOMER (%)	GELTIME (25 °C, min)	CATALYSIS	HDT (°C)	NOTES
IS 4240/P	800	35	6	0,20 % Co 6% + 1,50 % MEKP-50	105	Medium-high viscosity, high mechanical and thermal properties, chemical resistance
IS 4240/PC	800	35	10	0,08% Co 6% + 0,8% DTBCHP + 1% TBPB @ 60 °C	100	Medium-high viscosity, very high mechanical and thermal properties



VINYLESTER

SIRESTER®	VISCOSITY (25 °C, mPa.s)	MONOMER (%)	GELTIME (25 °C, min)	CATALYSIS	HDT (°C)	NOTES
VE 45M90/P	900	35	1' 30"	0,40% DTBCHP + 0,50% TBPB @ 82,2 °C	100	Excellent chemical resistance, industrial




MOULDING



ORTHOPHTHALIC

SIRESTER®	VISCOSITY (25 °C, mPa.s)	MONOMER (%)	GELTIME (25 °C, min)	CATALYSIS	HDT (°C)	NOTES
 FSN 0850/AR	100	46	45	2,00 % MEKP-50	75	Preaccelerated, infusion; superior wetting properties
FS 0940/RD	200	40	10	0,20 % Co 6% + 1,50 % MEKP-50	75	Excellent wetting properties; internal release agent; injection/RTM
FS 0956/AM40	Various	Various	Various	Various	75	Excellent wetting properties; superior surface; infusion/injection/RTM
 FS 0994/AR	120	46	45	1,50 % MEKP-50	65	Preaccelerated, infusion; low viscosity; general purpose
FS 0995/VAM	300	39	6(I) / 10(E)	1,50 % MEKP-50	75	Medium viscosity, high mechanical; injection/RTM





ISOPHTHALIC


SIRESTER®	VISCOSITY (25 °C, mPa.s)	MONOMER (%)	GELTIME (25 °C, min)	CATALYSIS	HDT (°C)	NOTES
IS 4240/AR	120	45	16	1,50 % MEKP-50	105	Preaccelerated, infusion; superior mechanical properties
 ISN 0841/AR	140	46	45	1,50 % MEKP-50	85	Preaccelerated, infusion; superior wetting properties
ISN 0841/R	350	40	7	0,20 % Co 6% + 1,50 % MEKP-50	85	Medium viscosity, high mechanical properties, chemical resistance, injection/RTM

ORTHO-DCPD

SIRESTER®	VISCOSITY (25 °C, mPa.s)	MONOMER (%)	GELTIME (25 °C, min)	CATALYSIS	HDT (°C)	NOTES
 LSC 0850/AM	220	38	12	2,00 % MEKP-50	75	Preaccelerated, injection/RTM; superior wetting properties, general purpose
 LSC 0850/AR	100	42	45	2,00 % MEKP-50	75	Preaccelerated, infusion; superior wetting properties



VE-VINYLESTER

SIRESTER®	VISCOSITY (25 °C, mPa.s)	MONOMER (%)	GELTIME (25 °C, min)	CATALYSIS	HDT (°C)	NOTES
 VE 12MT15/AR	100	40	40	2,00 % MEKP-50	115	Preaccelerated, infusion; high chemical and thermal resistance
 VE 12MT15/ARM	100	40	80	1,60 % MEKP/CHP	115	Preaccelerated, infusion; high chemical and thermal resistance
 VE 14MT10/A	130	40	70	2,00 % MEKP-50	110	Preaccelerated, infusion; high chemical and thermal resistance
 VE 45M90/AR	150	45	60	1,25 % MEKP-50	102	Preaccelerated, infusion; high chemical and thermal resistance; general purpose


 = Lloyds approved

RESINS FOR GELCOAT

ORTHOPHTHALIC

SIRESTER®	VISCOSITY (25 °C, mPa.s)	MONOMER (%)	GELTIME (25 °C, min)	CATALYSIS	HDT (°C)	NOTES
 FSG 0827	1200	32	5	0,20 % Co 6% + 2,00 % MEKP-50	75	High mechanical properties; food contact
FSG 0819	450	34	13	0,20 % Co 6% + 1,50 % MEKP-50	< 20	Flexibilizer; blending grade
FSG 0820/X	600	37	8	0,20 % Co 6% + 1,50 % MEKP-50	65	Superior brightness
 FSG 0829	1350	31	7	0,20 % Co 6% + 2,00 % MEKP-50	65	Superior wetting; food contact
FSG 0765	550	34	8	0,20 % Co 6% + 1,50 % MEKP-50	80	ORTHO-NEO; high chemical and UV resistance

ISOPHTHALIC

SIRESTER®	VISCOSITY (25 °C, mPa.s)	MONOMER (%)	GELTIME (25 °C, min)	CATALYSIS	HDT (°C)	NOTES
IS 0821	1300	31	10	0,20 % Co 6% + 2,00 % MEKP-50	70	High mechanical properties, nautical
ISG 0818/L	750	37	17	0,30 % Co 6% + 1,00 % MEKP-50	95	High mechanical and thermal properties
 ISN 0841/C	500	38	8	0,30 % Co 6% + 2,00 % MEKP-5	85	Superior wetting, high mechanical properties
ISG 0839	500	38	7	0,20 % Co 6% + 1,50 % MEKP-50	100	ISO-NEO; high mechanical and thermal properties, superior UV resistance


ALIPHATIC

SIRESTER®	VISCOSITY (25 °C, mPa.s)	MONOMER (%)	GELTIME (25 °C, min)	CATALYSIS	HDT (°C)	NOTES
CD4	500	38	12	0,20 % Co 6% + 1,50 % MEKP-50	100	Superior mechanical and thermal resistance, excellent UV resistance

RESINS FOR PIGMENT PASTE

ADIPATE

SIRESTER®	VISCOSITY (25 °C, mPa.s)	MONOMER (%)	GELTIME (25 °C, min)	CATALYSIS	HDT (°C)	NOTES
FSG 0583	2400	–	–	–	–	Saturated resin for pigment paste
FSG 0885	1000	–	–	–	–	Unsaturated resin for pigment paste

 = food contact approved

CASTING

ORTHOPHTHALIC

SIRESTER®	VISCOSITY (25 °C, mPa.s)	MONOMER (%)	GELTIME (25 °C, min)	CATALYSIS	HDT (°C)	NOTES
FS 9900	Various	Various	Various	Various	55	High transparency; clear and filled casting; encapsulation
FS 4427	250	41	5	0,20 % Co 6% + 1,50 % MEKP-50	80	Abrasive chips
FS 4424/AR	250	40	25	1,50 % MEKP-50	85	Preaccelerated; abrasive chips
FS 0995/ML	300	37	8	0,20 % Co 6% + 1,50 % MEKP-50	70	Polymer concrete, UV stabilized
FS 0993/M	500	35	12	0,20 % Co 6% + 1,50 % MEKP-50	50	Artificial marble
FS 0948	500	38	14	0,20 % Co 6% + 1,50 % MEKP-50	60	High wetting properties; sanitary castings
FSG 0754/A	1100	34	12	1,00 % MEKP-50	85	ORTHO-NEO; high mechanical properties, superior UV resistance; solid surface, onyx
EC 0763/D	250	40	10	0,20 % Co 6% + 2,00 % MEKP-50 @ 20 °C	70	ORTHO-NEO with LSE; superior UV resistance, internal release agent; polymer concrete

ISOPHTHALIC

SIRESTER®	VISCOSITY (25 °C, mPa.s)	MONOMER (%)	GELTIME (25 °C, min)	CATALYSIS	HDT (°C)	NOTES
ISG 0839/MMA	1100	34	26	1,50 % MEKP-50	95	ISO-NEO; high mechanical properties, superior UV resistance; solid surface, onyx



CONTINUOUS LAMINATES

ORTHOPHTHALIC

SIRESTER®	VISCOSITY (25 °C, mPa.s)	MONOMER (%)	GELTIME (25 °C, min)	CATALYSIS	HDT (°C)	NOTES
FS 0912	200	39	4	0,20 % Co 6% + 1,50 % AAP	85	High wetting properties and thermal resistance
FS 0910/B	500	36	6	0,10 % Co 6% + 1,50 % MEKP-50 @ 20 °C	90	High wetting properties and thermal resistance
FS 0908/BR	200	39	4	0,20 % Co 6% + 1,50 % AAP	75	Fast kinetic, low viscosity
FS 0924	200	40	4	0,20 % Co 6% + 1,50 % AAP	85	ORTHO-NEO; increased UV resistance, high thermal resistance



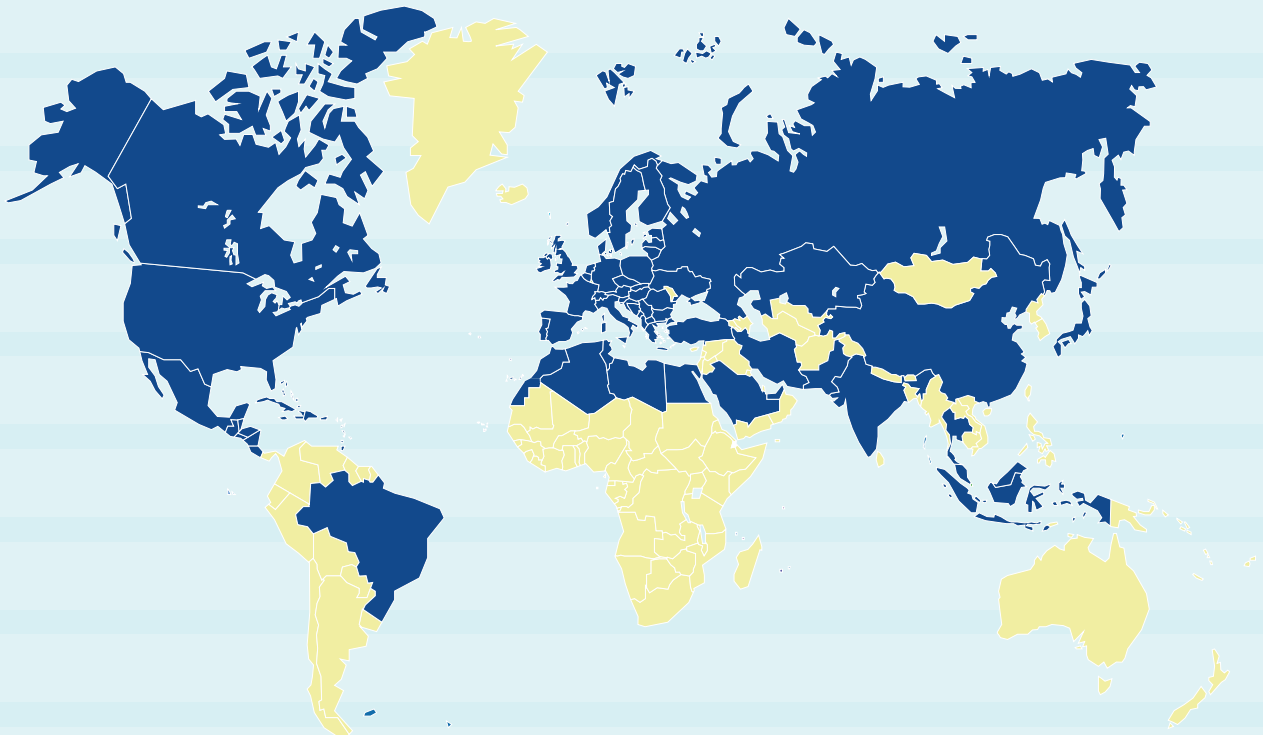
HOT MOULD / SANDWICH PANELS

ORTHOPHTHALIC

SIRESTER®	VISCOSITY (25 °C, mPa.s)	MONOMER (%)	GELTIME (25 °C, min)	CATALYSIS	HDT (°C)	NOTES
FS 0906	350	35	18(I) / 23(E)	0,20 % Co 6% + 1,50 % AAP	65	Low styrene content; isothermal trucks
FS 0908/B	300	38	18	0,20 % Co 6% + 1,50 % AAP	85	Medium kinetic & medium viscosity; isothermal trucks



**WE ARE PRESENT IN OVER 50 COUNTRIES
WITH A LARGE PORTFOLIO OF RESINS**



Do you know our other products?

■ OUR PRESENCE

EPoSIR®:

- Liquid epoxy resins & solution
- Reactive diluents
- Modified epoxy resins
- Waterborne epoxy emulsions

EPONAC®: Solid epoxy resins & solution

SIRALES®: Saturated polyester resins for powder coating

SIRION®: Additives, hardeners and resins

PROSID®: β – HAA

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SIRESTER®





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OUR GROUP



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SIR INDUSTRIALE SpA