

Synolite™ 5410-P-1

Multi-purpose Hand lay-up resin with Low Styrene Emission capability

Synolite™ 5410-P-1 is a versatile Ortho resin for Hand lay-up and Spray-up processes with Low Styrene Emission (LSE) system.

The resin is particularly suited for Marine applications and is Lloyd's Register approved.

Benefits

- Easy and robust processing
- Can be used both for making thick and thin laminates
- Enhanced secondary bonding capability
- Reduced Styrene emissions compared to equivalent competitive Ortho resins

Major Applications

Synolite™ 5410-P-1 resin has been specially developed for Hand lay-up and Spray-up applications to produce a variety of constructional laminates.

Synolite™ 5410-P-1 resin combines optimal processability with great mechanical properties. This resin shows good fiber wetting and impregnation properties and can be used with a broad range of glass mats.

Thick laminates can be made in one go due to low exothermic heat development combined with good through cure, even in thin laminates.

An LSE system is incorporated in the resins for obtaining excellent low styrene emissions.

Product Specifications

Property	Value	Unit	TM
Appearance	Hazy		TM 2265
Solids content	53 - 57	%	TM 2033
Viscosity 23 °C, 2 s ⁻¹	950 - 1200	mPa.s	TM 2313
Viscosity 23 °C, 20 s ⁻¹	330 - 450	mPa.s	TM 2313
Viscosity 23 °C, 250 s ⁻¹	190 - 220	mPa.s	TM 2313
Gel time 25 until 35 °C	21 - 27	min	TM 2625
Peak time	38 - 50	min	TM 2625
Peak temperature	70 - 90	°C	TM 2625

Viscosity measurement: TM 2313: spindle Z2, 23°C. Curing conditions at 25°C, TM 2625: 2.0 g Medium reactive Methyl Ethyl Ketone Peroxide (MEKP) in 100 g resin.

Liquid			
Property	Value	Unit	TM
Density 23 °C	1100	kg/m ³	TM 2160
Flash point	33	°C	TM 2800
Stability (no initiator, dark, 25°C)	6	month	
Color	Blue	-	

Solid Unfilled			
Property	Value	Unit	TM
Density 23 °C	1150	kg/m ³	DIN 53479
Tensile strength	70	MPa	ISO 527-2
Tensile modulus	4	GPa	ISO 527-2
Elongation at break	2.1	%	ISO 527-2
Flexural strength	115	MPa	ISO 178
Flexural E-Modulus	4	GPa	ISO 178
HDT	63	°C	ASTM D648
Impact strength	12	kJ/m ²	ISO 179

Cured with 1% Methyl Ethyl Ketone Peroxide (MEKP) peroxide. Post cured 24 h at RT followed by 24 h at 70°C.

Application Guidelines

Synolite™ 5410-P-1 resin contains barrier forming agents to reduce emission of styrene. These agents may reduce the bonding strength of over laminates. Good strength can be obtained with over-laminating of the base laminate after delayed lay-up if the surface is not too resin rich. In other cases the surface may require sanding.

The resin should be conditioned at 15°C minimum before use to obtain a sufficient cure when MEKP is used as a curing system. Stir the resin mechanically before use. Do not use air bubbles to stir the resin.

Storage Guidelines

The resin should be stored indoors in a dry place at tempera tight and undamaged packaging.

The properties of the resin may change slightly during storag

Material Safety

A Material Safety Data Sheet of this product is available on request.

Test Methods

Test methods (TM) referred to in the table(s) are available on request.

ISO 9001:2015 Certified

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Contact us for more information

We will help you to choose the right resin solution.

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