

SR SURF CLEAR EVO / SD EVO

EPOXY SYSTEM FOR SURFBOARDS

DESCRIPTION

Sicomín Surf Clear EVO epoxy system is specially formulated for the manufacturing of surf boards. Surf Clear EVO is suitable for hand lay up of glass, carbon, aramid, natural and synthetic fibers. Surf Clear EVO is compatible with all commercial foams: polystyrene, polyurethane, cross-linked & linear PVC foams and others. Surf Clear EVO is compatible with all typical fillers used in the surf industry.

CHARACTERISTICS:

High mechanical performance epoxy system recommended for surfboard production. Yields surfboards with a flexible touch, high temperature and UV stability. High surface and plug finishing, for high gloss requirement. Other applications: surf repairs, fin boxes & plugs, pattern and model coating, etc... Low odor and reduced skin aggression for a better work environment

ADVICES FOR APPLICATION:

Work in a clean environment with heating facility.
Ideal working temperature from 18 °C to 30 °C.
Maintain a constant temperature during lamination.
Avoid high ambient humidity.
Avoid exposure to U.V. during the cure. Laminates and coatings benefitting from a sun free post cure or polymerized for at least 7 days at 18°C will obtain greater U.V. resistance and mechanical properties
Do not dilute with solvents. Please consult our technical assistance.
The use of compatible pigments is possible. Keep packaging well-sealed as hardeners are sensitive to carbonic gas and humidity. A polyurethane or other top coat paint can (for best UV protection) be applied, without primer, after sanding the final layer of Surf Clear EVO.

GREEN TECHNOLOGY:

SICOMIN is heavily involved in green chemistry. When technology and availability of raw materials allows, we choose raw materials from biomass sourcing. Surf Clear EVO epoxy resin is manufactured with a bio-based carbon content of about 40 % (resin alone)

OH ADDITIVE, THE SHINIEST SURF RESIN IN THE WORLD

Sicomín offers the possibility to use an extra additive to mix with the resin Surf Clear EVO to improve the light radiance of the laminates applied on top of white PS or PU foams. Used for colored board, OH additive can modify the color perception (blue effect with carbon or pink effect with wood or linen fabrics), please test before to avoid any surprises.

Mixing: 1 g of OH for 1 kg of resin SR Surf Clear EVO - First mix resin and OH additive, then mix with hardener.

EPOXY RESIN SR SURF CLEAR EVO

Appearance		liquid
Color		purple
Viscosity (mPa.s)	@ 15 °C	5500 ± 1100
	@ 20 °C	2925 ± 575
	@ 25 °C	1680 ± 320
	@ 30 °C	1070 ± 220
Density	@ 20 °C	1,1817
Refractive index	@ 25 °C	1,545 ± ,002
% Bio-based Carbon content		40 ± 2
Storage (months)	@ Ta	24

HARDENER(S)

		SD EVO Slow	SD EVO Medium	SD EVO Fast
Appearance		liquid	liquid	liquid
Color		colourless	light yellow	colourless
Gardner color		≤ 2	≤ 1	≤ 1
Reactivity level		Slow	Standard	Fast
Viscosity (mPa.s)	@ 15 °C	80 ± 15	180 ± 40	290 ± 60
	@ 20 °C	60 ± 15	120 ± 25	190 ± 40
	@ 25 °C	45 ± 10	80 ± 20	125 ± 25
	@ 30 °C	32 ± 6	60 ± 12	90 ± 20
Density	@ 20 °C	0,9710	0,9920	1,0000
Refractive index	@ 25 °C	1,471 ± ,002	1,5113 ± ,002	1,5169 ± ,002
Storage (months)	@ Ta	24	24	24

MIXE(S) SR SURF CLEAR EVO / SD EVO

		SD EVO Slow	SD EVO Medium	SD EVO Fast
Appearance		liquid	liquid	liquid
Color		purple	purple	purple
Mixing ratio	By weight	100 / 38	100 / 39	100 / 41
	By volume	100 / 50	100 / 50	100 / 50
Initial viscosity	@ 20 °C	1020	1570	2000
PP 50 mm / 10 s	@ 30 °C -1 (mPa.s)	440	610	660
Density	@ 20 °C	1,1	1,1	1,1



MECHANICAL PROPERTIES ON CAST RESIN:

PHYSICAL PROPERTIES

Property	Test	Unit	Value
Color	-	-	Light green
Structure	-	-	Laminated
Reinforcement	-	-	Glass fiber fabric
Resin	-	-	Epoxy
Density (ρ)	ISO 1183	g/cm ³	1.9
Water absorption at 23°C	ISO 62	%	0.16
Moisture absorption at 23°C, 50% RH	ISO 62	%	0.07
Flammability classification	UL 94	-	HB

MECHANICAL PROPERTIES

Property	Test	Unit	Value
Tensile strength	ISO 527	MPa	280
Compressive strength (parallel)	ISO 527	MPa	200
Compressive strength (perpendicular)	ISO 527	MPa	350
Charpy impact strength	ISO 179-2	kJ/m ²	50
Ball indentation hardness (HK)	ISO 2039	MPa	110
Shore hardness	ISO 868	Shore D	90
Flexural strength	ISO 178	MPa	350
Shear strength	ISO 14130	MPa	30
Modulus of elasticity	ISO 527	MPa	18000

THERMAL PROPERTIES

Property	Test	Unit	Value
Thermal classification	IEC 85	-	B
Max temp (short)	UL 746B	°C	150
Max service temp	UL 746B	°C	130
Min service temp	UL 746B	°C	-45
Thermal conductivity	ISO 22007-4	W/m·K	0.3
Thermal expansion coeff.	ISO 11359	10 ⁻⁵ /K	2

ELECTRICAL PROPERTIES

Property	Test	Unit	Value
Volume resistivity	IEC 60093	Ohm·cm	1e14
Surface resistivity	IEC 60093	Ohm	1e13
Voltage test $\perp$ lamination	DIN 53481	kV	40
Voltage test $\parallel$ lamination	DIN 53481	kV	40
Dielectric constant	IEC 60250	-	5.5
Dissipation factor	IEC 60250	-	0.04
Dielectric strength (oil)	IEC 60243-1	kV/mm	10.2
Breakdown voltage (oil)	IEC 60243-1	kV	45
Tracking resistance	IEC 60112	V	CTI 175

