

SURF CLEAR - GLASS ONE

Epoxy Systems for translucent laminates

SURF CLEAR and **GLASS ONE** are specially formulated for the manufacturing of wind-surf boards and surf boards. These systems are adapted for hand lay up of glass fibre, carbon, aramid and polyester. These formulations are compatible with all commercial foams: polystyrenes, polyurethanes, cross- linked and linear PVC foams.

Characteristics :

- Very good UV stability
- Hardening without tack
- High gloss
- Low viscosity
- Transparency of laminates
- Self levelling
- Ease of abrasion
- Scratch resistance
- Standard and slow hardeners

GLASS ONE

System recommended for slalom and surf boards in polyurethane foam or polystyrene.
Other applications: Jewellery, detailed work using small amounts, models, pattern coating.

SURF CLEAR

Very tough resin with high thermo-mechanical performances.
Recommended for wave riding boards and competition slalom boards.
Creates composite parts with high mechanical resistance and UV stability, light structures from sandwich construction.
Surface preparation / Plug finishing, high-gloss requirement
Other applications: Jewellery, pattern coating, models.

Advices for application

- Work in a clean environment with heating facility.
- Working temperature : 20°C minimum 35-40°C maximum
- Maintain a constant temperature during lamination.
- Avoid high ambient humidity. Hygrometry must be lower than 70%.
- Avoid exposure to U.V. during the cure. Laminates or coatings having a polymerization of 14 days at 25 °C or a post cure will have greater U.V resistance.
- Do not wet sand a laminate or coating before 4 days at 25 C
- Do not dilute with acetone, ester or alcohol based solvents.
- Keep packaging well sealed as hardeners are sensitive to carbonic gas and humidity.
- A polyurethane paint finish can be applied without primer after sanding the final layer of resin.

Curing profile

- Wait before post-curing : 24 hours
- Minimum cure : 12 hours 40 °C
- Optimum cure : 8 hours 60 °C

Hardeners

Reference		SD GO	SD SC	SD 7561
Reactivity		"standard"	"standard"	"slow"
Appearance / color		Water clear liquid	Water clear liquid	Water clear liquid
Viscosity (mPa.s)	@ 20°C	38	33	50
	@ 25°C	36	29	40
Density (g/cm ³)	@ 20°C	0.95	0.960	0.958

Epoxy resins

Reference		GLASS ONE	SURF CLEAR
Appearance / color		Clear Liquid	Light purple liquide
Viscosity	@ 20°C	3 000	2 600
(mPa.s)	@ 25°C	1 780	1 800
Density (g/cm ³)	@ 20°C	1.13	1.17
Storage		Can cristalize at low temperature	Cristalization free

System Resin / Hardener

		GO / GO	GO / 7561	SC / SC	SC / 7561
Viscosity of the mixes (mPa.s)	@ 20°C	400		540	620
	@ 25°C	310		370	460
Mixing ratio by weight		100 g / 39 g	100 g / 36 g	100 g / 38 g	100 g / 38 g
Mixing ratio by volume :		100 ml / 50 ml 2 / 1	100 ml / 43 ml	100 ml / 50 ml 2 / 1	100 ml / 50 ml 2 / 1

Reactivity

Resins / Hardeners		GO / GO	GO / 7561	SC / SC	SC / 7561
Gel time 150 g mix	@ 25°C	38'		20'	50'
dry to touch on 500 microns film :	@ 25°C	2 h 15		2 h	3 h
Thru-dry, sandable	@ 25°C	10 h		10 h	12 h

Packaging (in Kg)

Kits	Resin	Hardeners
	SR Surf Clear	SD Surf Clear or SD 7561
323	1 x 233	9 x 10
36	1 x 26	1 x 10
5	1 x 3.6	1 x 1.4
5 x 1	5 x 0.72	5 x 0.28
1	1 x 0.72	1 x 0.28
	SR Glass One	SD Glass One
350	1 x 250	10 x 10
35.6	1 x 25.6	1 x 10
5	1 x 3.6	1 x 1.4
5 x 1	5 x 0.72	5 x 0.28
1	0.72	0.28
	SR Glass One	SD 7561
340	1 x 250	9 x 10
35.6	1 x 25.6	1 x 10
5	1 x 3.6	1 x 1.4
5	5 x 0.72	5 x 0.28
1	1 x 0.72	1 x 0.28

Safety data - (According Directive 67 / 548 / EEC)

Products	Symbol	Safety Code	Risk Code
SR GO		Xi: Irritating N Environmentally harmful	R 36/38 R 51/53: R 43
SR SC		Xn : Nocif N Environmentally harmful	R 36/38 R 51/53 R 40 R 43
SD GO SD SC SD 7561		C: Corrosive	R 20/21/22 R 34 R 43

For further informations please consult health and safety tables.

The informations that we give by writing or verbally, in the context of our technical assistance and our trials, do not engage our responsibility. We advice the users of SICOMIN's epoxy system, to verify by some practical trials if our products are suitable for the envisaged processes and applications. The use, the implementation and the transformation of the supplied products, are not under our controle and your responsibility only will respond for it. If our responsibility should nevertheless be involved, it would be, for all the damages, limited to the value of the goods supplied by us and implement by you. We guaranty the non-reproachable quality of our products, in the general context of sales and delivery.

Mechanical properties on cast resin

	SR GLASS ONE / SD GLASS ONE			SR SURF CLEAR / SD SURF CLEAR			SR SURF CLEAR / SD 7561			
	Cure Schedule	7 days 23°C	24 h 23°C + 24 h 40°C	24 h 23°C + 8 h 60°C	24 h 23°C + 24 h 40°C	24 h 23°C + 8 h 60°C	14 days 23°C	24 h 23°C + 24 h 40°C	24 h 23°C + 16 h 60°C	24 h 23°C + 8 h 80°C
Tension Modulus of elasticity Maximum resistance Resistance at break Elongation at max.load Elongation at break	N/mm ²	2920	2790	2690	3250	3130	3260	3080	3000	2830
	N/mm ²	61	64	70	75	81	63	76	80	79
	N/mm ²	61	62	65	75	77	63	75	73	74
	%	2.7	3.2	4.5	3.3	4.5	2.2	3.6	4.4	4.6
	%	2.7	3.5	5.4	3.3	5.5	2.2	3.8	5.8	5.8
Flexion Modulus of elasticity Maximum resistance Elongation at max.load Elongation at break	N/mm ²	3060	2960	2830	3360	3280	3780	3400	3280	3280
	N/mm ²	95	107	108	124	130	100	118	122	123
	%	3.3	4.9	5.5	5.0	5.7	2.9	4.7	5.5	5.7
	%	3.3	8.5	8.7	5.6	7.6	2.9	7.5	8.6	7.5
	Compressive Compressive yield strenght Offset compressive yield	N/mm ²							106	
%								6.0		7.4
Charpy impact strength Resilience		KJ/m ²	18	23	23	18	23	16	27	37
Glass Transition / DSC Tg 1 Tg 1 max	°C	55	64	73	66	79	55	64	79	89
	°C			78		84				91

Tests carried out on samples of pure cast resin, without prior degasing, between steel plates.

Measures undertaken according to Afnor normes :

Tension: NF T 51-034

Flexion : NF T 51-001

Choc Charpy: NF T 51-035

Glass transition DSC : Tg1: 1st point à 10°C / mn, Tg 1 max.: 2nd passage 180°C