LAMINATING SYSTEMS

LAMINATING AND MULTIPURPOSE RESINS

Sika Advanced Resins laminating systems result in high-grade laminates with excellent strength.

Biresin® LS / Epolam 2002:
- Proven standard laminating systems for multipurpose use (ordinary laminates, coupling layer and backfillings)
- Biresin® LS with different hardeners to reach various viscosity and potlife
- EPOLAM 2002 with low exothermic temperature for large moulds in ceramic industry

Epopast 400 and 402:
- Green standard laminating pastes which are easy to mix and to apply
- For fast reinforcement of large negatives, foundry patterns and diverse moulds of low weight
- EPOPAST 402 offers lowest density of 0.72 g/l for large lightweight laminates

Biresin® L84:
- High-grade laminating system for multipurpose use
- Different hardeners to reach various viscosity and potlife
- With L84 T hardener for heat resistant moulds (e.g. vacuumforming)

High-grade laminates with excellent strength can be reached with Sika Advanced Resinslaminating resins

STANDARD LAMINATING RESINS AND LAMINATING PASTES

	A	Biresin® LS				Epolam 2002	Biresin® L80			Epopast 400		Epopast 402		Biresin® L90
	B	Biresin® LS	Biresin® F4	GC 11	Biresin® S12	Epolam 2002	Biresin® CH80-1	Biresin® CH80-2	Biresin® S12	Epopast 400	Epopast 401	Epopast 400	Epopast 401	Biresin® L90
Mixing ratio [g]	A	100				100	100			100		100		100
	B	12	18	19	16	12	16	16	12	14		14		14
Colour		yellowish-transparent				clear transparent	yellowish-transparent		amber	green		green		blue
Characteristics		all-purpose, variable potlife and viscosity				low odour, low exothermic temperature – good dimensional stability	white colour, filled, high dimensional accuracy			standard laminating paste, very easy to mix, very low shrinkage		low density laminating paste, very easy to mix, very low shrinkage		high dimensional accuracy, very smooth and with good adhesion, very easy to mix, high thickness in one operation
Applications		ordinary laminates, coupling layers and backfillings				big moulds and negatives in ceramic industry	true-to-size laminates for gauges and models			for reinforcement of large negatives, models and moulds of low weight (e.g. foundry and ceramic industry)				for reinforcement of big negatives, models, moulds and tools, true-to-size laminate for difficult reinforcement layers
Processing data (approx. values)														
Mixed viscosity [mPas]		580	350	2,150	1,230	950	1,600	1,100	2,000	4,400	4,600	4,000	4,100	pasty
Potlife [min]		55	80	16	60	45	45	90	60	120	90 – 110	120	90 – 110	60
Demoulding time [h]		12	16	8	12	–	20 – 24	20 – 24	16 – 20	24	12	24	12	24
Physical data (approx. values)														
Density [g/cm³]		1.2				1.17	1.35			0.91		0.72		1.0
Shore hardness		D 83	D 80	D 84	D 82	D 86	D 86	D 86	D 85	D 81		D 80	D 77	D 73
Flexural strength [MPa]		95	88	95	96	90	71	72	78	48	43	42	43	50
HDT [°C]		51 / 70*	46 / 53*	50 / 61*	72*	–	53 / 78*	52 / 69*	54 / 80*	–	–	–	–	60
T_G [°C]		–	–	–	–	65	–	–	–	70	60	70	60	-

* after appropriate treatment

LAMINATING SYSTEMS OF HIGHER HEAT RESISTANCE

	A	Biresin® L84			Biresin® CR172	Epolam 2080	
	B	Biresin® L84	Biresin® S12	Biresin® L84 T	Biresin® CH170-3	Epolam 2080	Epolam 2025
Mixing ratio [g]	A	100			100	100	100
	B	25	20	24	17	41	35
Colour		yellowish-transparent			colourless to brownish	amber	dark green
Characteristics		all-purpose, high mechanical strength and heat resistance			high heat resistance after post curing	MDA free, very good temperature resistance	
Applications		laminating moulds, vacuumforming moulds, heat resistant backfillings			injection moulds and other heat resistant moulds, prototype injection	heat resistant moulds, backfillings and composite structures	
Processing data (approx. values)							
Mixed viscosity [mPas]		390	1,090	590	800	2,000	650
Potlife [min]		40	20	60	110	150	300
Demoulding time [h]		24	24	24+ post curing	24 + post curing	24/RT + 24 h 60 °C	24/RT + 24 h 60 °C
Physical data (approx. values)							
Density [g/cm³]		1.1			0.94	1.12	1.09
Shore hardness		D 82	D 84	D 86	D 85	D 90	
Flexural strength [MPa]		76	130	131*	140	62	105
HDT [°C]		100*	91*	110*	162	–	–
T_G [°C]		104*	-	123*	170	190*	185

* after appropriate treatment