

DPC-Laminating resins and paste

System	LW		LT1		LT2		LT3	
DPC-Resin	LN	LG	LN	VPM 1065	LN	LG	T2	
Properties	White, low thixotropic resin with good wetting properties; multi-purpose resin, high strength resin, good heat resistance compared with other ambient temperature curing resins		Low viscosity, well wetting resin for laminates and backings; multi-purpose resin		Medium viscosity resin with good heat resistance compared with other cold-setting resins; well wetting, high mechanical strength		Cold setting system for highest mechanical and thermic claims. Good setting at room temperature, should be tempered for 1 or 2 hours at 100 - 130 °C	
Applications	Foundry patterns and core boxes, pattern negatives, jigs, templates, deep drawing tools		For laminates and for use for multi-purpose backing compounds		For laminates and for multi-purpose backing compound; high-strength fiberglass reinforced laminates		Fiberglass reinforced parts with highest thermic and mechanical claims, which cannot be produced in hot setting processes	

Preparation/Processing

Mixing ratio	100 : X	parts b.w.	15	30	20	40	20	40	20
Mix viscosity (25°C)		mPa.s	1000 - 2000	1500 - 2500	600 - 1500	600 - 900	800 - 1500	1500 - 2000	ca. 700
Pot life (100g/25°C)		min.	30 - 40	50 - 60	30 - 40	50 - 60	30 - 40	90 - 120	40 - 50
Curing		h / °C	24 - 48 / RT	24 - 48 / RT	24 - 48 / RT	24 - 48 / RT	24 - 48 / RT	24 - 48 / RT	24 - 48 RT
Postcuring		h / °C	7 d / RT	7 d / RT	7 d / RT	7 d / RT	7 d / RT	7 d / RT	7 d / RT

Properties of cured material (24 h / RT + 2 h / 120°C)

Glass transition temperature TG	°C	78	69	80	72	82	78	120
Modulus of elasticity (Flex.)	DIN EN ISO 178 MPa	4150	3120	3500	3160	3540	2610	3020
Flexural strength	DIN EN ISO 178 MPa	127	103	133	115	133	93	117
Flexural strain	DIN EN ISO 178 MPa	114	90	109	97	104	75	91
Deflection (at break)	DIN EN ISO 178 mm	8,1	15,7	11,3	> 20	11,0	16,9	15,7
Tensile strength	DIN EN ISO 527-1,-2 MPa	63	49	69	64	74	60	58
Elongation	DIN EN ISO 527-1,-2 %	2,5	6,7	3,7	10,3	4,0	5,1	3,3
Impact strength	DIN ISO EN 179 kJ/mm ²	15 - 21	19 - 23	30 - 35	48 - 56	25 - 30	25 - 29	13 - 20
Hardness	DIN 53505 Shore D	84 - 88	82 - 84	81 - 85	81 - 83	82 - 86	80 - 82	83 - 86

System	LT4	LTT	LTT	VPM 1075 A	VPM 1036	VPM 1062 A	LP 10
DPC-Resin	T4	T	T2	VPM 1075 B	VP 763	VPM 1062 B	H 10 B
Properties	System with very high thermal resistance combined with balanced mechanical properties. Should be tempered for 1 or 2 hours at 80 - 120 °C	Low viscosity resin, quick-setting at room temperature with setting hardener "T", for heat-resistant, high-strength laminates; temper material prior to initial-employment		Very low viscosity, excellent lamination system with outstanding strength, easy workable, for very complicated applications, excellent thermic properties, glossy and non-sticky surfaces	Low viscosity, heat resistant, long pot-life. Non-sticky surfaces, not yellow turning	Highly heat resistant, should be hot setted, at least tempered. Non-sticky surfaces, not yellow turning	A system of fiberglass paste, easy to handle and apply, for quick building-up strong layers up to 15 mm
Preparation/Processing	Fiberglass reinforced parts with higher thermal claims	For laminations as well as high-quality backing resin for heated moulds, vacuum deep drawing moulds, dies etc.		Fiber reinforced-parts for high mechanical and dynamic claims combined with high thermic claims and excellent surfaces i.e. motor-car, aircraft- or ship-making	Difficult lamination parts with special requirements to heat resistance and surface quality, i.e. motor-car or shipbuilding and patterns	For highest claims in moulds for foam or RIM, pressure or deep drawing moulds, fiberglass reinforced parts of high dynamic and thermic requirements	Fiberglass reinforced layers and walls in negative or foundry patterns, core-boxes and jigs, reinforcements (edges a.s.o.) for fiberglass reinforced laminated constructions

Preparation/Processing

Mixing ratio	100 : X	parts b.w.	20	20	20	36	33	33	18
Mix viscosity (25°C)		mPa.s	ca. 700	500 - 1000	500 - 1000	450 - 500	700 - 1000	2000 - 3000	faserige Paste
Pot life (100g/25°C)		min.	40 - 50	30 - 40	80 - 100	ca. 120	120 - 150	90 - 120	ca. 60
Curing		h / °C	24 - 48 / RT	24 - 48 / RT	24 - 48 / RT	24 - 48 / RT	24 / RT	24 / RT	24 - 48 / RT
Postcuring		h / °C	2 / 120	2 / 120	2 / 120	7 d / RT	2 / 120	1/80 + 2/165	7 d / RT

Properties of cured material (24 h / RT + 2 h / 120°C)

Glass transition temperature TG	°C	121	119	123	99	120	160	80
Modulus of elasticity (Flex.)	DIN EN ISO 178 MPa	3580	3990	3740	3130	2810	2730	4000 - 5000
Flexural strength	DIN EN ISO 178 MPa	141	138	148	127	107	108	
Flexural strain	DIN EN ISO 178 MPa	107	117	117	84	86	79	
Deflection (at break)	DIN EN ISO 178 mm	10,2	8,2	9,8	17,5	9,1	11,0	1,9
Tensile strength	DIN EN ISO 527-1,-2 MPa	70	80	86	74	61	55	
Elongation	DIN EN ISO 527-1,-2 %	3,2	3,2	3,9	5,9	3,9	3,5	
Impact strength	DIN ISO EN 179 kJ/mm ²	10 - 13	9 - 12	12 - 15	20 - 27	10 - 12	9 - 13	3 - 5
Hardness	DIN 53505 Shore D	84 - 87	85 - 87	85 - 87	82 - 86	82 - 83	84 - 85	