

EPLAM 86

Hand-lay-up Epoxy Resin

DESCRIPTION

EPLAM 86 is two component epoxy system, which is made of a resin and three hardeners. It is used for the production of composite tools by wet lay-up methods.

CHARACTERITIC

- Variable reactivity • Low viscosity
- Easy to use • Compatible hardeners
- Good wettability of fibers

PHYSICAL PROPERTY

		EPLAM86 Resin	EPLAM86F Hardener	EPLAM86S Hardener	EPLAM86L Hardener	EPLAM86XL Hardener
Mixingratio by weight		100	25	25	25	25
Aspect		liquid	liquid	liquid	liquid	liquid
Color		Lightamber	Lightamber	Lightamber	Lightamber	Lightamber
Viscosity at 25°C (mPa.s)	ISO2555:2018	2500-3500	30-40	15-25	30-40	30-40
Density at 25°C (g/cm ³)	ISO1675:1985	1.15	0.94	0.93	0.94	0.94
Mixing viscosity at 25°C (mPa.s)	ISO2555:2018		600-700	450-600	600-700	600-700
Pot-life at 25°C Con 125g (min)	Gel Timer		15-25	25-35	60-90	90-120

			EPLAM86F Hardener	EPLAM86S Hardener	EPLAM86L Hardener	EPLAM86XL Hardener
Shore Hardness	ISO868:1985		86D	88D	88D	88D
Flexural strength	ISO178:2001	MPa	75-90	80-100	80-100	80-100
Flexural modulus	ISO178:2001	GPa	2.0-2.5	2.0-2.5	2.0-2.5	2.0-2.5
Compression strength	ISO604:1997	MPa	>75	>75	>75	>75
Glass transition Temperature	ISO 11357:2002	°C	75	81	83	84
Maximal laminating thickness		mm	4	5	8	12

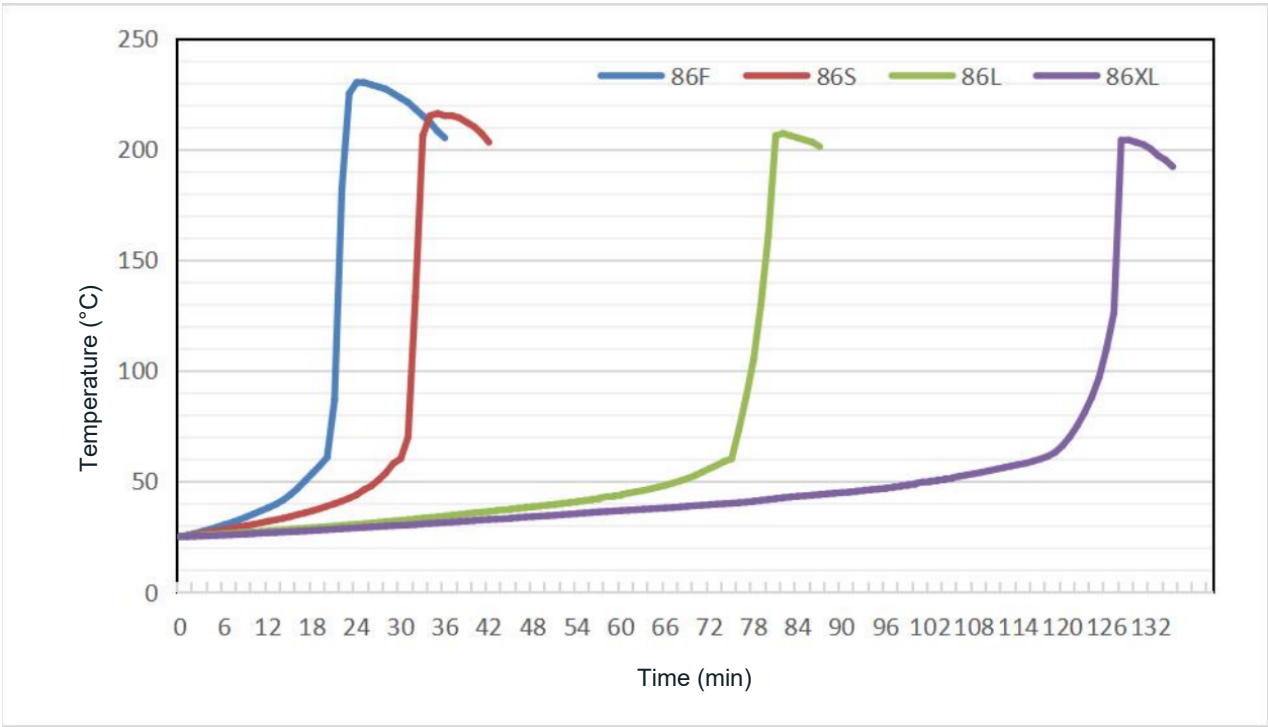
Gelationtimeat 23°Conlamine	5plie/glass fabric290g/m2	min	40	60	140	220
Demoldingtimeat 23°Conlamine	5plies/glass fabric290g/m2	hour	6	9	24	30

*Averagevaluesobtainedon standard specimens/Hardening 8hat25°C + 12hat 80°C

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Exothermic curve

100g mixing weight of EPLAM 86 at 25°C



Temperature (°C)

Time (min)

	EPLAM86F	EPLAM86S	EPLAM86L	EPLAM86XL
Mixingratio	100:25	100:25	100:25	100:25
Timetoreachpeak temperature(min)	24	35	82	128
Exothermicpeak temperature(°C)	230	216	207	204

PROCESSING

Choose the adopted hardener according to the dimension and complexity of the application, mix it with resin homogeneously and then impregnate the fiber reinforcement by appropriate method. To obtain the desired temperature resistance and the optimal mechanical properties it is necessary to make a post treatment. The thermal treatment takes place 12 to 24 hours after application according to the hardener.

PACKAGE

EPLAM86 Resin	EPLAM86F Hardener	EPLAM86S Hardener	EPLAM86L Hardener	EPLAM86XL Hardener
20kg	5kg	5kg	5kg	5kg

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STORAGE

While stored in dry place and in original unopened containers at temperature between 15°C and 25°C, the shelf of resin is 24 months and the shelf life of hardener is 12 months. Exposure to low temperature for longer time might cause crystallization. In case crystallization occurs, heat it up to 50-60°C until it becomes to transparent liquid. Heating the product will not have any defective effect on the property of the product. Any open can must be tightly closed under dry air or nitrogen blanket. The remaining product should be used up as soon as possible.

PRECAUTION

Avoid contact with skin while in application, wear mask, gloves and protection close when necessary; used in well ventilated area. For further information, please consult product safety data sheet.

WARRANTY INFORMATION

The information contained herein is offered in good faith and is believed to be accurate. However, because conditions and methods of use of our products are beyond our control, this information should not be used in substitution for customer's tests to ensure that our products are safe, effective and fully satisfactory for the intended end use.

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US customary-unit equivalents

US customary-unit equivalents are provided for convenience alongside the original SI test data. The original source values and test methods remain the controlling reference. Converted values are rounded.

Source value	US equivalent
75-90 MPa	10878 to 13053 psi
80-100 MPa	11603 to 14504 psi
2.0-2.5 GPa	290.1 to 362.6 ksi
>75 MPa	>10878 psi
75 °C	167 °F
81 °C	177.8 °F
83 °C	181.4 °F
84 °C	183.2 °F
4 mm	0.1575 in
5 mm	0.1969 in
8 mm	0.315 in
12 mm	0.4724 in
80 °C	176 °F
100 g	0.2205 lb
25 °C	77 °F
20 kg	44.1 lb
5 kg	11 lb
15 °C	59 °F
50-60 °C	122 to 140 °F