

EN Product Information

Elan-tech®

EC 131LV/W 342
100:25 by weight

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Resin
EC 131LV

Hardener
W 342

Mixing ratio by weight
100:25

Applications: Composite parts of small and medium size. Filament winding. Structural parts for boats, model aircrafts, racing vehicles, sport components.

Processing: Manual, under vacuum impregnation at atmospheric pressure and under vacuum bag for wood, glass, carbon or kevlar fiber tissue. Room temperature or moderate temperature curing.

Description: Un-filled epoxy system. The system EC 131LV/W 342 allows the obtainment of a good surface finish. Very good resistance towards UV. The post-curing at a moderate temperature is suggested to obtain the best performance for the system.

SYSTEM SPECIFICATIONS

Resin

Viscosity at:	25°C	IO-10-50	mPas	1.000	1.600
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Hardener

Viscosity at:	25°C	IO-10-50	mPas	30	70
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TYPICAL SYSTEM CHARACTERISTICS

Processing Data

Mixing ratio by weight		for 100 g resin	g	100:25
Mixing ratio by volume		for 100 ml resin	ml	100:30
Resin Colour				Violet
Hardener Colour				Colourless
Density at: 25°C Resin		IO-10-51 (ASTM D 1475)	g/ml	1,10 1,15
Density at: 25°C Hardener		IO-10-51 (ASTM D 1475)	g/ml	0,94 0,96
Pot life	25°C (40mm;100ml)	IO-10-53 (*)	min	22 32
Exothermic peak	25°C (40mm;100ml)	IO-10-53 (*)	°C	160 170
Initial mixture viscosity at:	25°C	IO-10-50 (EN13702-2)	mPas	300 800
Gelation time	25°C (15ml;6mm)	IO-10-73 (*)	h	3,0 4,0
Demoulding time	25°C (15ml;6mm)	(*)	h	15 20
Post-curing	60°C	(**)	h	(10 - 15)
Maximum recommended thickness			mm	5

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TYPICAL CURED SYSTEM PROPERTIES

Properties determined on specimens cured: 24 h TA + 15 h 60°C

Colour			Colourless	
Density 25°C	IO-10-54 (ASTM D 792)	g/ml	1,08	1,12
Hardness	IO-10-58 (ASTM D 2240)	Shore D/15	86	88
Glass transition (Tg)	IO-10-69 (ASTM D 3418)	°C	78	82
Maximum Tg (15h 60°C + 5h 80°C)	IO-10-69 (ASTM D 3418)	°C	88	92
Water absorption (24h RT)	IO-10-70 (ASTM D 570)	%	0,12	0,22
Water absorption (2h 100°C)	IO-10-70 (ASTM D 570)	%	1,00	1,40
Max recommended operating temperature	(***)	°C	75	
Flexural strength	IO-10-66 (ASTM D 790)	MN/m ²	110	120
Maximum strain	IO-10-66 (ASTM D 790)	%	5,8	6,2
Strain at break	IO-10-66 (ASTM D 790)	%	8,0	8,4
Flexural elastic modulus	IO-10-66 (ASTM D 790)	MN/m ²	2.800	3.000
Tensile strength	IO-10-63 (ASTM D 638)	MN/m ²	74	78
Elongation at break	IO-10-63 (ASTM D 638)	%	5	6

IO-00-00 = Elantas Italia's test method. The correspondent international method is indicated whenever possible.

nd = not determined na = not applicable RT = TA = laboratory room temperature (23±2°C)

Conversion units: 1 mPas = 1 cPs 1MN/m² = 10 kg/cm² = 1 MPa

(*) for larger quantities pot life is shorter and exothermic peak increases

(**) the brackets mean optionality

(***) The maximum operating temperature is given on the basis of laboratory information available being it function of the curing conditions used and of the type of coupled materials. For further possible information see post-curing paragraph.

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- Instructions:** Add the appropriate quantity of hardener to the resin, mix carefully. Avoid air trapping. For the surface preparation (mould or model) refer to the release agents data sheet.
- Curing**
Post-curing: Post curing is always advisable for RT curing systems in order to stabilize the component and to reach the best properties. It is necessary when the component works at a high temperature. Post cure the tool as stated in the table, increasing gradually 10°C/hour. The rate of heating and the indicated post-curing time are referred to standard specimen size. Users should evaluate the best conditions of curing or post-curing depending on the component size and shape. For big size components decrease the thermal gradient and increase the post-curing time. In the case of thin layer applications and composites, post cure on the jig.
- Storage:** Epoxy resins and their hardeners can be stored for two years in the original sealed containers stored in a cool, dry place. The hardeners are moisture sensitive therefore it is good practice to close the vessel immediately after each use.
- Handling precautions:** Refer to the data sheet and comply with regulations relating to industrial health and waste disposal.

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The information given in this publication is based on the present state of our technical knowledge but buyers and users should make their own assessments of our products under their own application conditions.