

**EN** **Product Information**

**Elan-tech**®

EC 130LV/W 132

100:38 by weight

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Resin  
**EC 130LV**

Hardener  
**W 132**

Mixing ratio by weight  
**100:38**

**Applications:** High performance composite parts of large size. Filament winding. Manufacturing of structural parts of boats, model aircrafts, racing vehicles, sport components.

**Processing:** Under vacuum impregnation, manual at atmospheric pressure, under vacuum bag of wood or by infusion or under vacuum infusion (SCRIMP) of glass, carbon, kevlar fabrics. Room temperature curing. Compared to traditional systems, this one also presents a high capability to post-cure with a moderate heat transfer.

**Description:** Un-filled, extra-slow epoxy system with high elastic modulus. Long pot life. 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 (EN13702-2)	mPas	1.200	1.600
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**Hardener**

Viscosity at:	25°C	IO-10-50 (EN13702-2)	mPas	50	100
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**TYPICAL SYSTEM CHARACTERISTICS**

**Processing Data**

Mixing ratio by weight		for 100 g resin	g	100:38
Mixing ratio by volume		for 100 ml resin	ml	100:46
Resin Colour				Violet
Hardener Colour				Pale yellow
Density at: 25°C Resin		IO-10-51 (ASTM D 1475)	g/ml	1,14 1,16
Density at: 25°C Hardener		IO-10-51 (ASTM D 1475)	g/ml	0,93 0,97
Pot life	25°C (40mm;100ml)	IO-10-53 (*)	min	240 280
Exothermic peak	25°C (40mm;100ml)	IO-10-53 (*)	°C	50 60
Initial mixture viscosity at:	25°C	IO-10-50 (EN13702-2)	mPas	350 450
Gelation time	25°C (15ml;6mm)	IO-10-73 (*)	h	7 9
	25°C (2mm)		h	12 14
Gelation time	25°C 100ml	IO-10-52a (UNI 8701)	min	340 380
Demoulding time	25°C (15ml;6mm)	(*)	h	34 38
Post-curing	60°C	(**)	h	15
Maximum recommended thickness			mm	5 - 10

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**TYPICAL CURED SYSTEM PROPERTIES**

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

Colour			Pale yellow	
Machinability			Excellent	
Hardness	IO-10-58 (ASTM D 2240)	Shore D/15	86	88
Glass transition (Tg)	IO-10-69 (ASTM D 3418)	°C	75	80
Maximum Tg	8h 90°C	IO-10-69 (ASTM D 3418)	°C	95 100
Water absorption (24h RT)	IO-10-70 (ASTM D 570)	%	0,08	0,15
Water absorption (2h 100°C)	IO-10-70 (ASTM D 570)	%	0,80	0,90
Flexural strength	IO-10-66 (ASTM D 790)	MN/m <sup>2</sup>	110	115
Maximum strain	IO-10-66 (ASTM D 790)	%	5,0	5,5
Strain at break	IO-10-66 (ASTM D 790)	%	7,2	7,8
Flexural elastic modulus	IO-10-66 (ASTM D 790)	MN/m <sup>2</sup>	3.100	3.300
Tensile strength	IO-10-63 (ASTM D 638)	MN/m <sup>2</sup>	65	75
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/m<sup>2</sup> = 10 kg/cm<sup>2</sup> = 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 safety 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.