

EN

Product Information

Elan-tech®

AS 119/W 242 NF

100:37

2-components medium-fast curing epoxy adhesive

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Resin
AS 119

Hardener
W 242 NF

Mixing ratio by weight
100:37

Application: Adhesive for heterogenous materials: wood, composite materials, glass, ceramic and honeycomb panels.

Processing: Apply by brush or spatula with mixing/dispensing devices. Room temperature or hot curing.

Description: Two components unfilled epoxy system. Solvents free. The system is RoHS compliant (European directive 2002/95/EC) and the new RoHS Directive 2011/65/EU (RoHS 2) entered into force on 21 July 2011 and requires Member States to transpose the provisions into their respective national laws by 2 January 2013.

TYPICAL SYSTEM CHARACTERISTICS

Resin

			Milky	
Colour resin				
Viscosity	25°C	IO-10-50 (ISO3219)	mPas	2.500 5.000
Density	25°C	IO-10-51 (ASTM D 1475)	g/ml	1,13 1,17

Hardener

			Colourless	
Colour hardener				
Viscosity at:	25°C	IO-10-50 (ISO3219)	mPas	250 350
Density	25°C	IO-10-51 (ASTM D 1475)	g/ml	0,98 1,02

Processing Data

Mixing ratio by weight		for 100 g resin	g	100:37
Mixing ratio by volume		for 100 ml resin	ml	100:42
Pot life	25°C (40mm;100ml)	IO-10-53 (*)	min	10 17
Exothermic peak	25°C (40mm;100ml)	IO-10-53 (*)	°C	130 145
Initial mixture viscosity at:	25°C	IO-10-50 (ISO3219)	mPas	1.500 2.500
Gelation time	25°C tack start (1mm)	IO-10-88 (ASTM D5895-03)	h	1,5 2,5
	25°C tack end (1mm)		h	2,5 3,5
Suggested curing cycles		(**)		24h RT+15h 60°C

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TYPICAL CURED SYSTEM PROPERTIES

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

Colour				Milky
Machinability				Excellent
Density 25°C		IO-10-54 (ASTM D 792)	g/ml	1,12 1,16
Hardness 25°C		IO-10-58 (ASTM D 2240)	Shore D/15	81 85
Glass transition (Tg)	1,5h 60°C	IO-10-69 (ASTM D 3418)	°C	33 39
	24h RT	IO-10-69 (ASTM D 3418)	°C	38 44
Maximum Tg	24h RT+ 15h 60°C	IO-10-69 (ASTM D 3418)	°C	72 78
Flexural strength		IO-10-66 (ASTM D 790)	MN/m ²	90 105
Maximum strain		IO-10-66 (ASTM D 790)	%	4,0 6,0
Strain at break		IO-10-66 (ASTM D 790)	%	5,0 9,0
Flexural elastic modulus		IO-10-66 (ASTM D 790)	MN/m ²	2.600 3.200
Tensile strength		IO-10-63 (ASTM D 638)	MN/m ²	70 78
Elongation at break		IO-10-63 (ASTM D 638)	%	4,0 6,0
Compressive strength		IO-10-72 (ASTM D 695)	MN/m ²	73 82

IO-00-00 = ELANTAS Europe's test method. The corresponding 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:** Prepare the surfaces to be bonded by removing moisture, dust, dirt and loose parts. For metals is normally enough a mechanical abrasion or sand blasting followed by degreasing with acetone. When gluing composite parts it is not required any specific surface treating other cleaning with acetone. In case of plastic substrate it is important to check its solvent resistance before cleaning. Generally is suggested a light sanding followed by cleaning with alcohol. Plasma or corona treatment will improve adhesion and consequently bonding strength: it's recommended in case of specific needs. Add the appropriate amount of hardener into the resin and mix carefully using a slow speed stirrer or by hand with a spatula. Apply the adhesive in a homogeneous thickness maintaining a uniform contact pressure on the joint. Before setting, the adhesive is moisture and carbon dioxide sensitive: once applied cover the joined parts as soon as possible or, better, hot cure if possible. Further general information are available in the brochure "Elantech Adhesive & Sealants".
- Curing/Post-curing:** The system cures at room temperature ($T > 10^{\circ}\text{C}$). Manufactured goods should be considered operative after 48 hrs at room temperature. Anyway the maximum mechanical properties of the system are reached after 7 days at Room Temperature.
- Storage:** Epoxy resin and its amine based hardener can be stored for two years in the original sealed containers stored in a cool, dry place. The hardener is moisture sensitive therefore it is good practice to close the container 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.