

EN Product Information

Elan-tech®

EC 254LB/W 254 N 100:50

EC 254LB/W 242 NF 100:50

2-component epoxy system protected with UV filters

ELANTAS Italia S.r.l.

Strada Antolini n°1 loc. Lemignano
43044 Collecchio (PR)

Italy

Tel +39 0521 304777

Fax +39 0521 804410

EEMEurope.ELANTAS@altana.com

info.elantas.italia@altana.com

www.elantas.com

Resin
EC 254LB

Hardener
W 254 N
W 242 NF

Mixing ratio by weight
100:50
100:50

Application: Transparent coating of surface finishing composite parts in front.

Processing: Application by brush or for casting thin thickness. Room temperature curing.

Description: Two component unfilled epoxy system, fluid. High reactivity with W 254 N and medium reactivity with W 254 NF. Good resistance towards UV. The cured material doesn't show residual greasiness. The system is protected with UV filters for improved resistance to yellowing. Can be painted with transparent varnish containing UV filters.

SYSTEM SPECIFICATIONS

Resin

Viscosity at:	25°C	IO-10-50 (EN13702-2)	mPas	800	1100
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Hardener W 254 N

Viscosity at:	25°C	IO-10-50 (EN13702-2)	mPas	60	120
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Hardener W 242 NF

Viscosity at:	25°C	IO-10-50 (EN13702-2)	mPas	250	350
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TYPICAL SYSTEM CHARACTERISTICS

Resin

Resin Colour				Light/blue	
Density resin 25°C		IO-10-51 (ASTM D 1475)	g/ml	1,13	1,17

Hardeners

				W 254 N	W 242 NF
Hardener Colour				Colourless	Colourless
Density 25°C		IO-10-51 (ASTM D 1475)	g/ml	0,99 1,03	0,98 1,02

Processing Data

Mixing ratio by weight		for 100 g resin	g	100:50	100:50
Mixing ratio by volume		for 100 ml resin	ml	100:57	100:57
Pot life	25°C (40mm;100ml)	IO-10-53 (*)	min	13 23	30 40
Exothermic peak	25°C (40mm;100ml)	IO-10-53 (*)	°C	175 190	155 175
Initial mixture viscosity at:	25°C	IO-10-50 (EN13702-2)	mPas	300 500	400 600
Gelation time	25°C (15ml;6mm)	IO-10-73 (*)	h	2 3	5 6
Demoulding time	25°C (15ml;6mm)	(*)	h	10 15	18 24
Maximum recommended thickness			mm	0,5 - 1,0	1,0 - 5,0

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TYPICAL CURED SYSTEM PROPERTIES

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

			W 254 N	W 242 NF	
Colour			Light blue	Light blue	
Machinability			Excellent	Excellent	
Density 25°C	IO-10-54 (ASTM D 792)	g/ml	1,06 1,10	1,10 1,14	
Hardness 25°C	IO-10-58 (ASTM D 2240)	Shore D/15	85 89	84 88	
Glass transition (Tg)	IO-10-69 (ASTM D 3418)	°C	65 70	72 78	
Maximum Tg	8h 80°C	IO-10-69 (ASTM D 3418)	°C	67 73	75 80
Water absorption (24h RT)	IO-10-70 (ASTM D 570)	%	0,08 0,10	0,10 0,20	
Water absorption (2h 100°C)	IO-10-70 (ASTM D 570)	%	0,80 1,00	1,45 1,75	
Max recommended operating temperature	(***)	°C	60	70	
Flexural strength	IO-10-66 (ASTM D 790)	MN/m ²	75 85	95 100	
Maximum strain	IO-10-66 (ASTM D 790)	%	4,0 6,0	4,5 6,5	
Strain at break	IO-10-66 (ASTM D 790)	%	>15	>15	
Flexural elastic modulus	IO-10-66 (ASTM D 790)	MN/m ²	2.200 2.700	2.700 3.200	
Tensile strength	IO-10-63 (ASTM D 638)	MN/m ²	45 55	60 68	
Elongation at break	IO-10-63 (ASTM D 638)	%	5,0 7,0	7 9	
Compressive strength	IO-10-72 (ASTM D 695)	MN/m ²	55 65	70 80	

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:** Verify and when necessary, homogenize the components before use. Add the appropriate quantity of hardener to the resin, mix carefully. Avoid air trapping.
- 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. Cool it down slowly. 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 one year in the original sealed containers stored in a cool, dry place. The hardeners are 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.