EN **Product Information**

Elan-tech®

EC 141 NF / W 241 100: 45

EC 141 NF / W 242 NF 100: 45

Yellowing resistant epoxy system, protected with UV filters

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Resin	Hardener	Weight ratio
EC 141 NF	**W 241**	**100: 45**
	W 242 NF	**100: 45**

Applications: Castings and embedding where adequate transparency and resistance to yellowing are required.

Method of use: Manual casting. Vacuum casting. Hardening at RT.

W 241: Maximum recommended casting thickness 100 mm.
W 242NF: Maximum recommended casting thickness 10 mm.

Description: Two-component epoxy system: transparent colorless composed of an uncharged resin ad high fluidity combined with an amino hardener.

W 241: Long usage time. Contained exothermy. Recommended for casting thicknesses up to 3-5 cm of tops for furniture or castings up to 10 cm for masses of 1 liter.
W 242NF: The W 242NF product is the accelerated version of the W 241 product. Recommended for casting with a maximum thickness of 1 cm and in the vitrification of escutcheons and lenticular labels. Good resistance to yellowing. Exposure for prolonged times to direct radiation causes a slight yellowing of the product.

SYSTEM SPECIFICATIONS

Resin				
Viscosity to:	25 ° C	IO-10-50 (EN13702-2)	mPas	650 950
Hardener W 241				
Viscosity to:	25 ° C	IO-10-50 (EN13702-2)	mPas	180 300
Hardener W 242 NF				
Viscosity to:	25 ° C	IO-10-50 (EN13702-2)	mPas	250 350

TYPICAL SYSTEM FEATURES

Resin					
Resin color				Colorless	
Density'	25 ° C	IO-10-51 (ASTM D 1475)	g / ml	1.10 1.14	
Hardeners				**W 241**	**W 242 NF**
Hardening color				Colorless	Colorless
Density'	25 ° C	IO-10-51 (ASTM D 1475)	g / ml	0.99 1.01	0.98 1.02
Processing data					
Weight ratio		per 100 g resin	g	100: 45	100: 45
Volume ratio		per 100 ml resin	ml	100: 50	100: 50
Usage time (doubling of initial visc.)		25 ° C IO-10-50 (EN13702-2) (*)	min	75 95	55 65 45 55 35 45
Initial mix viscosity at:	25 ° C		mPas	400 700	130 150 170 190 400 600
Gel time	25 ° C (15ml; 6mm)	IO-10-73 (*)	h	10 12	4 5
Frost time system	25 ° C 100ml	IO-10-52a (UNI 8701)	min	140 180	50 70
Demoulding time	25 ° C (15ml; 6mm)	(*)	h	36 48	18 24
Post-hardening at:	60 ° C	(**)	h	(15)	(15)

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TYPICAL FEATURES OF THE FINAL SYSTEM

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

			W 241	W 242 NF
Color			Colorless	Colorless
Density' 25 ° C	IO-10-54 (ASTM D 792)	g / ml	1.08 1.12	1.08 1.12
Hardness 25 ° C	IO-10-58 (ASTM D 2240)	Shore D / 15	80 85	80 85
Glass transition (Tg)	IO-10-69 (ASTM D 3418)	° C	61 67	52 58
Water absorption (24hTA)	IO-10-70 (ASTM D 570)	%	0.15 0.25	
Water absorption (2h 100 ° C)	IO-10-70 (ASTM D 570)	%	0.95 1.15	
Maximum recommended operating temperature	(***)	° C	55	50
Flexural strength	IO-10-66 (ASTM D 790)	MN / m²	90 102	69 78
Maximum deformation	IO-10-66 (ASTM D 790)	%	4.0 5.5	3.5 5.5
Strain at break	IO-10-66 (ASTM D 790)	%	> 15	> 15
Flexural modulus of elasticity	IO-10-66 (ASTM D 790)	MN / m²	2,900 3,200	2,200 2,700
Tensile strength	IO-10-63 (ASTM D 638)	MN / m²	51 58	38 47
Elongation at break	IO-10-63 (ASTM D 638)	%	6.0 9.0	9 13

IO-00-00 = Elantas Italia internal method. Where corresponding, the reference to the international standard is reported.
nd = not determined na = not applicable TA = RT = laboratory ambient temperature (23 ± 2 ° C)
Conversion factors: 1mPas = 1cPs 1MN / m² = 10 Kg / cm² = 1MPa

(*) for larger masses the times are reduced and the peak increases
(**) the sign in brackets indicates the optional
(***) The recommended operating temperature is given on the basis of available laboratory information as it is a function of the conditions of hardening used and the type of coupled materials. For any further indications, see the post-hardening paragraph.

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Instructions: Add the appropriate quantity of hardener to the resin component and mix thoroughly. Avoid entrapping air. In particular cases it may be useful to preheat the pieces and / or perform a vacuum degassing of the mixture.

Hardening / Post-hardening: For systems that harden at room temperature, post-hardening allows for rapid stabilization of the product and the achievement of the best electrical and mechanical characteristics. During hardening it is advisable to avoid temperature changes exceeding 10 ° C / hour.

Storage: Epoxy resins and related hardeners can be stored for one year in the original sealed containers kept in a cool and dry environment. The hardeners are sensitive to humidity, therefore it is recommended to close the container immediately after use.

Precautions: Consult the safety data sheet and comply with the provisions relating to industrial hygiene and waste disposal.

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All information provided in this bulletin is considered accurate to the best of available technical knowledge but it is the user's responsibility to verify the suitability of the product for the specific application considered.