

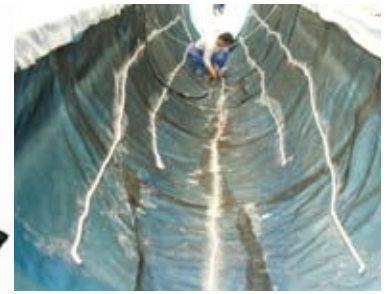
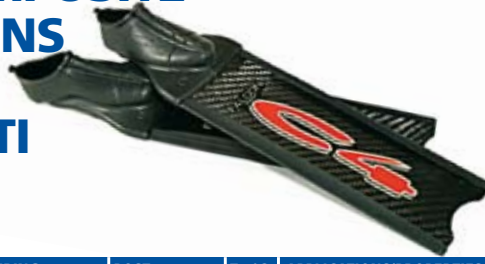


# **Elan-tech<sup>®</sup>**

**Epoxy Resins and Structural  
Adhesives for Composite Materials  
Resine Epossidiche e Adesivi  
Strutturali per i Materiali Compositi**

# EPOXY SYSTEMS FOR COMPOSITE AND MARINE APPLICATIONS

## RESINE EPOSSIDICHE PER MATERIALI COMPOSITI E APPLICAZIONI MARINE



RESIN RESINA	HARDENER INDURENTE	MIXING RATIO (% weight) RAPPORTO MIX (% in peso)	POT LIFE MIN 25 °C TEMPO D'UTILIZ. 25 °C	CURING TEMP. TEMP. POLIMER.	POST CURING POST INDURIMENTO	Tg °C MAX	APPLICATIONS/PROPERTIES APPLICAZIONI/PROPRIETA'
-----------------	-----------------------	---	--	--------------------------------	---------------------------------	--------------	--

### COLD TO HOT CURING

### WET-LAYUP

EC 130LV Light violet	W 341 Neutral	100:30	8 - 15 min. (100 ml)	Room tem. / 70 °C	(120 °C)	125	Short, medium, long, extra long pot-life, thermal resistant, high performance system. W 342 UV resistant. W 132, W 152 XLR, W340 are recommended for medium and large surface vacuum bag laminating.  <i>Resina ad alte prestazioni termoresistente, con indurenti a breve, medio, lungo, extra lungo pot-life. W 342 è resistente agli UV. W 132, W152 XLR, W 340 sono indicati per laminazione di medie e ampie superfici con sacco a vuoto.</i>
	W 342 Neutral	100:30	22 - 27 min. (100 ml)	Room tem. / 70 °C	(120 °C)	118	
	W 340 Neutral	100:30	50 - 70 min. (100 ml)	Room tem. / 70 °C	(120 °C)	135	
	W 152 XLR Neutral	100:30	180 - 200 min. (100 ml)	Room tem. / 70 °C	( 80 °C)	103	
	W 132 Neutral	100:38	240 - 280 min. (100 ml)	Room tem. / 70 °C	( 80 °C)	100	
EC 152	AW 90 AW 91 AW 92	100:50	10-14 min 35-45 min 65-80 min	Room tem. / 70 °C	( 70 °C)	75 85 82	Coupling layer between cured and wet lay-up laminating (also on vinylester cured layer) <i>Strato di collegamento tra laminati induriti e laminazione a umido (anche su vinilestere).</i>
EC 152 Neutral	W 152 HR Neutral	100:30	12 - 17 min. (200 ml)	Room tem. / 70 °C	( 70 °C)	80	High performance resin with short, medium, long, extra long pot-life hardeners, for: - small pieces wet-lay-up laminating at R.T - medium and large surface vacuum bag laminating  <i>Resina ad alte prestazioni con indurenti a breve, medio, lungo, extra lungo pot-life indicati per laminazione: - di piccoli manufatti in ambiente - di medie e ampie superfici con sacco a vuoto</i>
	W 152 MR Neutral	100:30	35 - 45 min. (200 ml)	Room tem. / 70 °C	( 70 °C)	107	
	W 152 LR Neutral	100:30	90 - 110 min. (200 ml)	Room tem. / 70 °C	( 70 °C)	104	
	W 152 XLR Neutral	100:30	100 - 120 min. (200 ml)	Room tem. / 70 °C	( 70 °C)	97	
EC 255 Neutral	W 152 HR W 152 XLR	100:24	14 - 20 min. 125 - 160 min.	Room temperature	( 70 °C)	67 77	Thixotropic resin, fast or extra long gelification, for bonding PVC foam core in sandwich laminating structures. <i>Resina tissotropica, rapido o extra lunga gelificazione per incollaggio anime in schiuma di PVC nelle strutture sandwich.</i>
EC 155 Neutral	W 155 Neutral	100:35	9 - 13 min. (100 ml)	Room tem. / 50 °C	( 60 °C)	87	Resin with very fast reaction hardeners for large scale sport items production. W155 for laminating parts; W558 as binder for putty.  <i>Resina abbinata a indurenti molto reattivi per produzione su larga scala di articoli sportivi. W155 per laminazione. W 558 come base per stucchi.</i>
	W 558 Neutral	100:35 For putty add: - EF18T or - EF 23 or - EF 232	7 - 10 min. (100 ml)	Room temperature	( 60 °C)	85	

### COLD TO HOT CURING

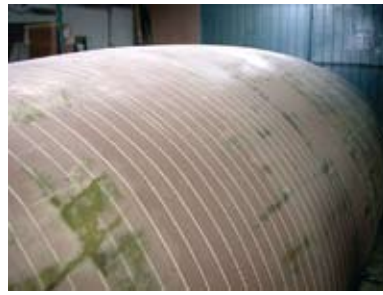
### PRESS MOULDING - RTM

EC 14	W 340	100:27	80 - 100 min. (8 min. 80°C)	Room tem. / 100 °C	(100-130 °C)	150	Room temperature long pot-life system with high reactivity in hot press moulding (ex. for wakeboards, snowboards, etc.). <i>Sistema a lungo pot-life per stampaggio a pressa, con elevata reattività a caldo (es. per wakeboards, snowboards, ecc.).</i>
EC 577 Neutral	K 12	100:25	20 - 30 min. (100 ml)	50 - 70°C	(70 °C)	85	Fast curing systems for high temperature RTM process).  <i>Sistemi a rapido indurimento perr stampaggio RTM).</i>
	W 342 Neutral	100:30	15 - 25 min. (100 ml)	60 °C	(120 °C)	120	
EC 131LV Light violet	W 342 Neutral	100:25	22 - 32 min. (100 ml)	Room tem. / 50 °C	(120 °C)	92	
EC 157 Neutral	W 557 Neutral	100:18	20 - 30 min. (100 ml)	Room tem. / 100 °C	(120 °C)	100	

### COLD CURING + POST CURING

### INFUSION

EC 157 Neutral	W 152 MR		40 - 50 min. (200 ml)			102	Very low viscosity and medium - long pot-life system. Suitable for medium and large infusion component (i.e. wind turbine blades and boats).  <i>Sistema a bassissima viscosità e medio e lungo pot-life. Specifico per l'infusione di parti di medie e grandi dimensioni (es.pale eoliche, barche).</i>
	W 152 MLR Neutral	100:30	80 - 100 min. (200 ml)	Room tem. / 50 °C	( 70 °C)	90	
	W 152 XLR Neutral		120 - 150 min. (100 ml)			90	



RESIN RESINA	HARDENER INDURENTE	MIXING RATIO (% weight) RAPPORTO MIX (% in peso)	POT LIFE MIN 25 °C TEMPO D'UTILIZ. 25 °C	CURING TEMP. TEMP. POLIMER.	POST CURING POST INDURIMENTO	Tg °C MAX	APPLICATIONS/PROPERTIES APPLICAZIONI/PROPRIETA'
-----------------	-----------------------	---	---	--------------------------------------	---------------------------------------	--------------	--

#### COLD CURING

#### BOATS MAINTENANCE

EC 148 Neutral	W 147 Neutral	100:45	15 - 20 min. (100 ml)			65	Room temperature fast curing system. Easy mixing ratio 2:1 in volume. EC398Tix/W147 is a light thixotropic contrasting colour system to check the proper mixing. For antiosmosis barrier, wet-layup laminating and putty.
EC 398 Tix Yellow or Neutral	W 147 Red or Neutral	For putties add: - EF 18T or - EF 23 or - EF 232	12 - 20 min. (100 ml)	Room temperature	( 50 °C)	75	<i>Rapido indurimento a temperatura ambiente. Facile rapporto di impiego 2:1 in volume. EC398Tix/W147 è leggermente tixotropico e con colorazione in contrasto per il controllo della miscelazione. Indicato per barriera antiosmosi, laminazione e stucchi da rasatura.</i>
EC 360 Neutral	W 222 Neutral	100:45:40 (filler EF18T)	180 - 300 min.  90 - 150 min. with EF 18T (100 ml)	Room temperature	( 50 °C)	63	Long pot-life system to be filled with hollow microspheres for light and large surface casting.  <i>Sistema lungo pot-life da caricare con microsfere cave per colate leggere e di grandi superfici.</i>
EC 141 NF Neutral	W 242 Neutral	100:45	35 - 45 min.	Room temperature	( 50 °C)	58	Transparent systems for small and large casting (W242=10mm, W243=25mm, W241=50mm). Good UV resistance.
EC 141 NF Neutral	W 243 Neutral	100:40	40 - 60 min. (200 ml)	Room temperature	( 50 °C)	70	<i>Sistemi trasparenti per colate di piccole e grandi dimensioni (W242=10mm, W243=25mm, W241=50mm). Buona resistenza agli UV.</i>
EC 141 NF Neutral	W 241 Neutral	100:45	75 - 95 min.	Room temperature	( 50 °C)	65	

#### COLD CURING + POST CURING

#### MASTER MODELS AND TOOLS COMPOSITES

MS 658 A Grey	MS 658 B White	100:100	35 - 45 min. (500 ml)	Room temperature	( 50 °C)	63	Machine applied epoxy paste for CNC and Style models or medium and large mould. <i>Pasta epossidica estrudibile a macchina mix-dos per modelli CNC e di stile e per stampi di media e grande dimensione.</i>
MC 1164 Filled Alu	W 341 Neutral	100:9	25 - 35 min. (200 ml)	Room temperature	100-130 °C	133	Aluminium filled thermal conductive system for gelcoat and casting mould.
MC 1164 Filled Alu	W 340 Neutral	100:9	150 - 180 min. (200 ml)	Room temperature	100-130 °C	135	<i>Sistemi caricati alluminio termoconduttivi per gelcoat e stampi colati.</i>
EC 130LV Light violet	W 340 Neutral	100:30	50 - 70 min. (100 ml)	Room temperature	100-120 °C	135	Medium pot-life wet-lay up systems for thermoresistant tools up to 135 and 150°C.
EC 138 Neutral	W 340 Neutral	100:30	75 - 85 min. (100 ml)	Room temperature	120-140 °C	150	<i>Sistemi a medio pot-life per laminazione di stampi termoresistenti fino a 135°C e 150°C.</i>
EPIBLOCK EB 690	EPOXY BOARD d=650 *standard size: 1500x500x100/75/50 mm  TAVOLA EPOSSIDICA d=650 *dimensione standard: 1500x500x100/75/50 mm					135	Master models and thermoresistant tools for epoxy pre-pregs tools and parts.  <i>Modelli master e stampi termoresistenti per pre-pregs epossidici</i>

Notes / Note

---



---



---



---



---



---



---



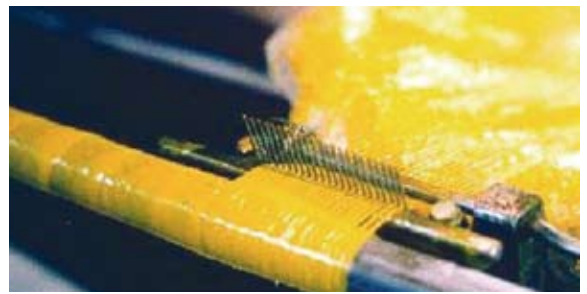
---



---



---



RESIN RESINA	HARDENER INDURENTE	ACCELERATOR CATALIZZATORE	MIXING RATIO (% weight) RAPPORTO MIX (% in peso)	POT LIFE at 25 °C TEMPO D'UTILIZ. 25 °C	POST CURING POST INDURIMENTO	Tg °C MAX	APPLICATIONS/PROPERTIES APPLICAZIONI/PROPRIETA'
-----------------	-----------------------	------------------------------	---	--	---------------------------------------	--------------	--

HOT CURING			PULTRUSION/FILAMENT WINDING (*)				
EC 01 Neutral	WH 850 Neutral	W 45 Neutral	100:90:1,5+3	6-24 h	80 °C+120 °C	130	Long pot-life system. High temperature curing only. Filament winding or pultrusion process item. <i>Sistemi a lungo pot-life con indurimento solo a caldo. Per manufatti composti realizzati con tecnica filament winding o pultrusione.</i>
EC 01 Neutral	WH 102 Neutral	W 47 Neutral	100:90:1,5+3	6-24 h	80 °C+120 °C	150	<i>Sistemi a medio-lungo pot-life con indurimento a temperatura moderata. Filament winding di composti di piccole/medie dimensioni.</i>
EC 14 Neutral	W 222 Neutral	-	100:42	440 - 480 min. (100 ml)	50 °C+80 °C	83	Medium-long pot-life system. Moderate temperature curing. Filament winding for small-medium dimension composite parts. <i>Sistemi a medio-lungo pot-life con indurimento a temperatura moderata. Filament winding di composti di piccole/medie dimensioni.</i>
	W 282 Neutral	-	100:32	330 - 370 min. (100 ml)	50 °C+80 °C	83	
MC 103 Light Filled	WH 113 Pale Yellow	-	100:77	6-8 h	5-15 min 160 °C-190 °C + post-curing	120	Long pot life system. Very high temperature curing only. Containing wax. High speed pultrusion for glass, carbon fibre profiles, pipes and tubes. <i>Sistemi a lungo pot-life con Indurimento solo ad alta T, contenente distaccante interno. Profili, tubi, condotte in fibra di vetro o carbonio, realizzati con alta velocità di poltrusione di poltrusione.</i>
EC 327 Neutral	WH 102 Neutral	W 45 Neutral	100:115:1,5-3	6-24 h	80 °C+140 °C +180 °C	200	Very low viscosity and long pot-life system. Very high temperature curing only. Filament Winding and press moulding for high thermal resistant composite part.
EC 328 Neutral	WH 102 Neutral	W 45 Neutral	100:115:1-2	6-24 h	100 °C+120 °C +170 °C	210	<i>Sistemi a bassissima viscosità, Lungo pot-life con indurimento solo ad alta T. Filament winding e stampaggio sotto pressa di parti in composito ad alta resistenza termica.</i>

(\*) Other systems available for specific needs (ie. different reactivity)  
Altri sistemi sono disponibili per specifiche necessità (es. differente reattività)

#### U.V. CURE RESIN WITH SPECIAL LAMP AND ANCILLARY PRODUCTS CLEAR FINISH RETOUCH

#### RESINA INDURENTE CON LAMPADA U.V. E ACCESSORI RITOCCHI DI FINITURE TRASPARENTI

<p>DYMAX SYSTEM</p> <p>SISTEMA DYMAX</p>		<p>UV cure system complete with lamp, protected resin cartridge DYMAX, ancillary products for fast retouch of transparent surfaces finish and carbon look composite.</p> <p><i>Sistema completo composto da lampada U.V. e cartucce di resina protetta DYMAX per il ritocco rapido di superfici a finitura trasparente quali i manufatti in materiale composito con fibra di carbonio a vista.</i></p>
--	--	--

Note / Nota

---



---



---



---



---



---



---



# STRUCTURAL ADHESIVES

ADH version available in cartridges

## ADESIVI STRUTTURALI

ADH: versione disponibile in cartucce



FAST ↓ ↓ ↓ SLOW	ASPECT	MIX RATIO by WEIGHT MIX RATIO by VOLUME	POT LIFE (100ml, RT) minutes	RECOMMENDED CURING CYCLE (*)	Tg C MAX	SHEAR STRENGTH (N/mm <sup>2</sup> )	APPLICATIONS/PROPERTIES
-----------------------------	--------	--	------------------------------------	------------------------------------	-------------	---	-------------------------

### 2-COMPONENT SYSTEMS - COLD OR MODERATE TEMPERATURE CURING

E P O X Y	AS52/AW11 (ADH52.11)	Fluid Transparent Lightly yellow	100:100 100:100	3-4	2h 25 °C or more	45	11-13 Alum 11-13 Inox	Aluminium, steel, plastic, composite fast repairing and bonding. AS88 is recommended for bonding vertical surfaces. <i>Riparazioni e incollaggi rapidi di alluminio, acciaio, compositi, plastici. AS88 è consigliato per incollaggi sopra testa o in verticale.</i>
	AS44/AW09	Lightly thixo Amber	100:80 100:100	40-50	7 days at RT or 6 h at 60±80 °C	70	21-26 Alum 21-26 Inox	Universal adhesives with different viscosity. Aluminium, steel, carbon composite and FRP part, wood, glass, ceramic, plastic and machinable board structural bonding. <i>Adesivi universali a diversa viscosità. Incollaggi strutturali di alluminio, acciaio, legno, materiali compositi, vetro, ceramici, plastici, tavole lavorabili</i>
	AS90/AW42 (ADH90.42)	Heavy thixo Milky	100:80 100:100	30-45	7 days at RT or 6 h at 60±80 °C	70	30-37 Alum 17-21 Inox	Composite part fatigue resistant structural bonding (car, bike, sporting goods) and different nature material bonding (aluminium, steel, FRP, glass, ceramic). High thermal and chemical resistance. <i>Incollaggio strutturale di parti in composito resistenti alla fatica (auto, bici, moto, articoli sportivi) e per materiali di natura diversa (alluminio, acciaio, FRP, ceramica). Elevata resistenza termica e chimica.</i>
	AS89/AW89 and new AS89.1/AW89.1 (ADH89.89)	Thixotropic Black Contrasting colours	100:45 100:50	20-30	2h at 80 °C or 5h at 50 °C	90	27-33 Alum 27-33 Inox 32-39 Carbon fiber laminated	Composite part fatigue resistant structural bonding (car, bike, sporting goods) and different nature material bonding (aluminium, steel, FRP, glass, ceramic). High thermal and chemical resistance. <i>Incollaggio strutturale di parti in composito resistenti alla fatica (auto, bici, moto, articoli sportivi) e per materiali di natura diversa (alluminio, acciaio, FRP, ceramica). Elevata resistenza termica e chimica.</i>
	AS90/AW90 (ADH90.90)	Heavy thixotropic Lightly contrasting colours No sag till 10 mm	100:45 100:50	10-15	7 days at RT or 5h at 70 °C	75	25-30 Alum 26-31 Inox	Wind turbine blade, aircraft, boat hull, train part fatigue resistant structural bonding and different nature material bonding (aluminium/ FRP/ honeycomb/ steel/ ceramic/ glass). High chemical resistance. <i>Incollaggi strutturali resistenti alla fatica di pale eoliche, ultraleggeri, scafi, parti di treni e materiali di natura diversa (metalli/ FRP/ honeycomb/ ceramica /vetro). Elevata resistenza chimica.</i>
	AS90/AW91 (ADH90.91)			35-45		80		
	AS90/AW92			65-80		80		
	AS7/AW6	Filled Heavy thixo Beige	100:100	25-35(**)	3-7 days at RT	60	11-15 Alum 16-20 Inox	Natural stone structural bonding and different nature material bonding. Smoothing, sealing and fastening in civil engineering. <i>Incollaggio strutturale di materiali lapidei e di natura diversa. Rasature, sigillature e ancoraggi nell'ingegneria civile.</i>
	AS7/AW8			10-16(**)			7-9 Alum 16-18 Inox	
	AS15/AW15+ EF18T	Thixotropic Milky filled with EF 18T green	100:15:20	10-18	24h at RT or 2h at 70-75 °C	103	8-10 Alum	Thixotropic adhesive with separated filler for epoxy board bonding and putty <i>Adesivo tixotropico con carica a parte, per Incollaggio e stuccatura di tavole epossidiche</i>
AS50/AW50 (ADH50.50)	Filled Heavy thixo Dark grey Contrasting colours	100:50 100:50	15-25(**)	7 days at RT or 6h at 60±80 °C	105	14-18 Alum 18-22 Inox	Pultruded part, SMC, ferrite, metal, ceramic and glass structural bonding. Low thermal expansion coefficient, good thermal conductivity. High chemical and thermal resistance. AS60/AW60 can work up to 150°C.	
AS60/AW60	Filled Heavy thixo Dark grey Contrasting colours	100:50 100:50	25-35(**)	15h at RT or 3h at 130-150 °C	135	14-18 Alum 15-19 Inox	<i>Incollaggi strutturali di elementi pultrusi, SMC, ferriti, metalli, ceramica e vetro. Basso coefficiente di dilatazione, buona conducibilità termica, elevata resistenza termica e chimica. AS60/AW60 può operare fino a T. di 150°C.</i>	
P U	PC36L/G30	Filled PU Thixotropic Neutral milky	100:25 100:30	4-8	1-2 days at RT	45	7-9 Alum 4-5 PMMA	Thermoplastic, FRP and polyurethane machinable boards semirigid bonding. <i>Incollaggi semirigidi di materiali termoplastici e vetroresina, tavole lavorabili poliuretaniche compatte.</i>
	ADH PU 3005 flexible translucent	Unfilled PU very thixotropic	100:100	4-6	8h at RT	-10	6-8 PVC 6-8 PA	Three type of sealant adhesives PU, flexible Shore A85, low module Shore D60, rigid Shore D85 for fast repairing and bonding thermoplastic, FRP and many other materials (available in cartridge with static mixer and manual dispenser for 50 ml, 200 ml, 400 ml). <i>Tre tipi di adesivi sigillanti PU, flessibile Shore A85, basso modulo Shore D60, rigido Shore D85, adatti per riparazioni rapide e incollaggi strutturali di termoplastici, vetroresina e molti altri materiali (disponibili in cartucce da 50 ml., 200 ml., 400 ml. con mixer statico e erogatore manuale)</i>
	ADH PU 6005 low module translucent					50	10-12 Alum 7- 8 ABS 8-10 SMC	
	ADH PU 8505 rigid black					55	11-14 Alu 10-12 Inox 13-15 FRP	

(\*) Suggested curing cycle is recommended in order to achieve the best properties. For other curing cycles refer to data sheets, (\*\*) Pot-life 200ml, RT

### 1-COMPONENT SYSTEMS - HOT CURING

E P O X Y	ASM 030 (ADH030)	Thixotropic Milky No sag at high T	1-COMP	4 month 25 °C or 12 month 0 °C	2h at 120 °C	135	14-16 Alum 17-20 Inox	Metal, ceramic, ferrite and composite structural bonding high thermal resistant. <i>Incollaggi strutturali di metalli, materiali ceramici, ferriti e compositi resistenti ad alta temperature.</i>
	ASM 101	Filled Heavy thixo Blue	1-COMP	4 month 25 °C or 12 month 0 °C	2h at 120 °C	100	20-23 Inox	One-component lamellar abrasive disk manufacturing. <i>Monocomponente per realizzare dischi abrasivi lamellari.</i>



**ELANTAS Camattini S.p.A.**

Strada Antolini, 1  
Fraz. Lemignano  
43044 Collecchio (PR)  
Italy

Tel. +39 0521 304711  
Fax +39 0521 804410

[info.elantas.camattini@altana.com](mailto:info.elantas.camattini@altana.com)  
[www.elantas.com](http://www.elantas.com)

Selling organisation  
Application laboratories  
Production plant  
R&D centre of competence

