



Elan-tech[®]

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'
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COLD TO HOT CURING

WET-LAYUP

EC 130LV Light violet	W 341 Pale Yellow	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.</i> W 342 è resistente agli UV. W 132, W 152 XLR, W 340 sono indicati per laminazione di medie e ampie superfici con sacco a vuoto.
	W 342 Transparent	100:30	22 - 27 min. (100 ml)	Room tem. / 70 °C	(120 °C)	118	
	W 340 Pale Yellow	100:30	50 - 70 min. (100 ml)	Room tem. / 70 °C	(120 °C)	135	
	W 152 XLR Transparent	100:30	180 - 200 min. (100 ml)	Room tem. / 70 °C	(80 °C)	103	
	W 132 Pale Yellow	100:38	240 - 280 min. (100 ml)	Room tem. / 70 °C	(80 °C)	100	
EC 152 Pale yellow	AW 90 Amber AW 91 Orange AW 92 Blue	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>
	W 152 HR Pale Yellow	100:30	12 - 17 min. (200 ml)	Room tem. / 70 °C	(70 °C)	80	
	W 152 MR Pale Yellow	100:30	35 - 45 min. (200 ml)	Room tem. / 70 °C	(70 °C)	107	
	W 152 LR Pale Yellow	100:30	90 - 110 min. (200 ml)	Room tem. / 70 °C	(70 °C)	104	
EC 255 Milky	W 152 HR Pale Yellow	100:24	14 - 20 min.	Room temperature	(70 °C)	67	Thixotropic resin, fast or extra long gelification, for bonding PVC foam core in sandwich laminating structures. <i>Resina tixotropica, rapido o extra lunga gelificazione per incollaggio anime in schiuma di PVC nelle strutture sandwich.</i>
	W 152XLR Transparent		125-160 min.			77	
EC 170 Pale yellow	K 24 Pale Yellow	100:14	15-20 min. (100 ml)	Room tem. + 50 °C	(60 °C)	87	Chemical resistant wet lay-up epoxy system, for chemical product tank laminating. <i>Sistema chimicoresistente per laminazione a umido di layer di serbatoi nell'industria chimica</i>

COLD TO HOT CURING

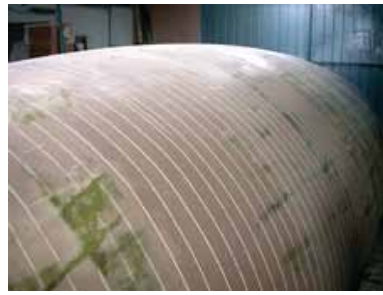
PRESS MOULDING - RTM

EC 396	W 153 Amber	100:32	6-8 min.	Room tem. 15 min / 80 °C	(80 °C)	98	Room temperature short or long pot-life system with high reactivity in hot press moulding (ex. helmets , fins, wakeboards, snowboards, etc.). <i>Sistema a rapido o lungo pot-life per stampaggio a pressa, con elevata reattività a caldo (es. per caschi, pinne, wakeboards, snowboards, ecc)</i>
EC 14 Pale Yellow	W 152 HR Pale Yellow	100:30	8 - 10 min.	Room tem. / 100 °C	(100-130 °C)	98	
	W 340 Pale Yellow	100:27	80 - 100 min. (8 min. 80°C)	- / 100 °C	(100-130 °C)	150	
EC 577 Pale Yellow	K 12 Pale Yellow	100:25	20 - 30 min. (100 ml)	50 - 70°C	(70 °C)	85	Systems with different reactivity for RTM process. <i>Sistemi a diversa reattività per stampaggio RTM.</i>
	W 342 Transparent	100:30	15 - 25 min. (100 ml)	60 °C	(120 °C)	120	
EC 131LV Light violet	W 341 Pale Yellow	100:25	15 - 20 min. (100 ml)	Room temperature /60°C	(80 °C)	90	
	W 340 Pale Yellow		65 - 75 min. (100 ml)		(80 °C)	94	
	W 342 Transparent		22 - 32 min. (100 ml)		(80 °C)	90	
EC 157 Pale yellow	W 557 Pale yellow	100:18	20 - 30 min. (100 ml)	Room temperature /100°C	(120 °C)	100	

COLD CURING + POST CURING

INFUSION

EC 157 Pale yellow	W 152 MR Pale yellow	100:30	40 - 50 min. (200 ml)	Room tem. / 50 °C	(70 °C)	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 Pale yellow		80 - 100 min. (200 ml)			90	
	W 152 XLR Pale yellow		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'
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COLD CURING

MAINTENANCE AND CASTING

EC 147 Pale Yellow	W 147 Pale yellow or Red Colour	100:45	12 - 20 min. (100 ml)	Room temperature	(50 °C)	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 Pale Yellow Tix or Yellow Colour Tix		For putty add: - EF 18T or - EF 23 or - EF 232					75
EC 360 Pale Yellow	W 160 Pale Yellow	100:30	70- 85	Room temperature	(50 °C)	80	Medium or Long pot-life System developed in order to receive a higher amount of charges.
	W 222 Pale Yellow	100:45	180- 300 min.				63
EC 251 PRIME Transparent	W 242 NF Transparent	100:40	30 - 40 min (100 ml)	Room temperature + 50 °C	(60 °C)	87	U.V. protected low viscosity System, transparent, flexible. For glass slab coupling layer and agglomerated materials. <i>Sistema con protezione U.V., trasparente, flessibile, per strati di collegamento tra lastre di vetro e altri materiali agglomerati.</i>
EC 252 Transparent	W 242 NF Transparent	100:40	25 - 40 min (500 ml)	Room temperature + 50 °C	(60 °C)	87	U.V. protected low module transparent System, for solid casting, coupled with glass slab. <i>Sistema con protezione U.V., trasparente, a bassa modulo indicato per agglomerati accoppiati a lastre di vetro.</i>
EC 141 NF Neutral	W 242 NF Transparent	100:45	35 - 45 min.	Room temperature	(50 °C)	58	U.V. protected low viscosity System. Glass imitation, different hardeners, for transparent and agglomerated piece and coating.
	W 243 Transparent	100:40	40 - 60 min. (200 ml)	Room temperature	(50 °C)	70	<i>Sistema con protezione U.V., trasparente, a bassa viscosità, differenti indurenti per manufatti colati similvetro, agglomerati e finiture.</i>
	W 241 Transparent	100:45	75 - 95 min.	Room temperature	(50 °C)	65	
EC 254LB Light violet	W 254 N	100:50	15 - 25 min (100 ml)	Room temperature + 50 °C	(60 °C)	87	U.V. protected low viscosity System, for coating carbon look composites and other materials finishing. <i>Sistema per finitura trasparente di manufatti composti a vista di carbonio ed altri materiali.</i>
AS 15 Milky +Y 28	W 242 NF Transparent	100:0,5-1,5:45	5 - 15	Room temperature	(50 °C)	70	Thixotropic casting resin, foaming up to 2-5 times for small or large light elements.
	W 241 Transparent		15 - 30			70	<i>Sistema da colata tixotropico, espandente da 2 a 5 volte per piccoli o grandi elementi leggeri.</i>

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 estrapabile 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 Pale Yellow	100:9	25 - 35 min. (200 ml)	Room temperature	100-130 °C	133	Aluminium filled thermal conductive system for gelcoat and casting mould.
	W 340 Pale Yellow	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 Pale Yellow	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 Pale Yellow	W 340 Pale Yellow	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>
EC 57 Pale Yellow	W 61 Pale Yellow	100:16	68 - 82 min. (100 ml)	Room temperature + 50 °C	120 °C	140	Long pot-life System for thermoresistant tools with infusion process. <i>Sistema a lungo pot-life per stampi termoresistenti realizzati per infusione.</i>
EC 14 Pale Yellow	W 61 Pale Yellow	100:16	85 - 105 min. (100 ml)	Room temperature + 50 °C	120 °C	175	Long pot-life System for wet lay up in vacuum bagging thermoresistant tools. <i>Sistema a lungo pot-life per stampi termoresistenti realizzati per laminazione manuale con sacco a vuoto.</i>
EPIBLOCK EB 690	Green	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>



RESIN RESINA	HARDENER INDURENTE	ACCELERATOR CATALIZZATORE	MIXING RATIO (% weight) RAPPORTO MIX (% in peso)	POT LIFE at 25 °C TEMPO D'UTILIZ. 25 °C	HOT CURING INDURIMENTO A CALDO	Tg °C MAX	APPLICATIONS/PROPERTIES APPLICAZIONI/PROPRIETA'
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HOT CURING				PULTRUSION/FILAMENT WINDING (*)			
EC 14 Pale Yellow	W 132 Pale Yellow	n.a.	100:37	400-460 min	90 °C	110	Long pot-life System curing at moderate temperature. Filament Winding for small-medium size composite parts. <i>Sistema a lungo pot-life con indurimento a moderata temperatura. Avvolgimento filamentare di manufatti piccole e medie dimensioni.</i>
EC 01 Pale Yellow	WH 850 Pale Yellow	W 45 Pale Yellow	100:90:1,5÷3	6-24 h	100-160 °C	130	Long pot-life System. High temperature curing only, with faster or longer process depending on % of accelerator. Filament winding or pultrusion process item.
EC 361 Pale Yellow	WH 850 Pale Yellow	W 45 Pale Yellow	100:90:1,5÷3	6-24 h	100-160 °C	130	<i>Sistemi a lungo pot-life con indurimento solo a caldo, con indurimento più rapido o più lento a seconda della % di catalizzatore. Per manufatti compositi realizzati con tecnica filament winding o pultrusione.</i>
EC 01 Pale Yellow	WH 102 Pale Yellow	W 847 Pale Yellow	100:90:0,25÷2	6-24 h	100-160 °C	150	
MC 103 Light Filled matt colour	WH 113 Pale Yellow	-	100:77	6-8 h	5-15 min 160 °C-190 °C + post-curing	120	Long pot life system. High temperature curing only. Containing wax releasing additive for high speed pultrusione with glass or carbon fibre profiles, round and tubes. <i>Sistema a lungo pot-life con Indurimento solo ad alta T, contenente cera distaccante per pultrusione ad alta velocità di profili, tondi e tubi, in fibra di vetro o carbonio.</i>
EC 327 Pale Yellow	WH 102 Pale Yellow	W 45 Pale Yellow	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 Pale Yellow	WH 102 Pale Yellow	W 45 Pale Yellow	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
RITOCCHO DI FINITURE TRASPARENTI

<p>DYMAX SYSTEM 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. <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>
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Notes / Note

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	MINIMUM CURING// RECOMMENDED CURING CYCLE (*)	Tg °C MAX	SHEAR STRENGTH (N/mm ²)	APPLICATIONS/PROPERTIES
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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	30m. RT // 2h 25 °C or more	45	11-13 Alum 11-13 Inox	Aluminium, steel, plastic, composite fast repairing and bonding. <i>Riparazioni e incollaggi rapidi di alluminio, acciaio, compositi, plastici.</i>	
	AS44/AW09	Lightly thixo Amber	100:80 100:100	40-50	12 h RT // 7 days RT or 6 h 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	6 h RT // 2h at 80 °C or 5h 50 °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>	
	AS89.1/AW89.1 (ADH891.891)	Thixo Black Contrasting colours	100:45 100:50	20-30	6 h RT // 2h at 80 °C or 5h 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	100:45 100:50	10-15	6 h RT	7 days RT or 5h 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)	No sag till 10 mm		35-45	12 h RT		80		
	AS90/AW92	65-80		18 h RT	80				
	AS95/AW95 (ADH95.95)	Thixo Dark grey Contrasting colours	100:45 100:50	2,5-3,5	2 h RT // 24 h RT or 3 h 50 °C or more	96	11-13 Alum 11,5-18,5 Inox	Epoxy-acrylate for fast repairing and bonding aluminium, steel, plastic, composite and machinable board. <i>Epossi-acrilato per riparazioni e incollaggi rapidi di alluminio, acciaio, compositi, plastici e tavole lavorabili.</i>	
	AS96/AW96 (ADH96.96)	Filled Thixo Black Contrasting colours	100:100 100:100	5-7	3 h RT // 24 h RT or 3 h 50 °C or more	90	15,15-18,5 Alum 16-20 Inox	Epoxy-acrylate for fast repairing and bonding aluminium, steel, plastic, composite and machinable board. <i>Epossi-acrilato per riparazioni e incollaggi rapidi di alluminio, acciaio, compositi, plastici e tavole lavorabili.</i>	
	AS7/AW6	Filled Heavy thixo Beige	100:100	25-35(**)	6 h RT	3-7 days 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	100:100	10-16(**)	4 h RT	7-9 Alum 16-18 Inox				
	AS15/AW15+ EF18T	Thixotropic Milky filled with EF 18T green	100:15:20	10-18	8h RT/ 24h RT or 2h 70-75 °C	103	8-10 Alum	Thixotropic adhesive with separated filler for epoxy board bonding and putty <i>Adesivo tissotropico 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(**)	6h RT// 7 days RT or 6h 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 withstand up to 150°C. <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>	
	AS60/AW60	Filled Heavy thixo Dark grey Contrasting colours	100:50 100:50	25-35(**)	--// 15h RT or 3h 130-150 °C	135	14-18 Alum 15-19 Inox	Thermoplastic, FRP and polyurethane machinable boards structural bonding. <i>Incollaggi strutturali di materiali termoplastici, vetroresina, tavole lavorabili poliuretaniche compatte.</i>	
	PC35HV/G30	Filled PU Thixotropic Neutral milky	100:25 100:30	4-8	6h RT// 1-2 days RT	45	7-9 Alum 4-5 PMMA	Thermoplastic, FRP and polyurethane machinable boards structural bonding. <i>Incollaggi strutturali di materiali termoplastici, vetroresina, tavole lavorabili poliuretaniche compatte.</i>	
ADH PU 3005 flexible translucent	Unfilled PU very thixotropic	100:100	4-6	30 m. RT // 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).		
ADH PU 6005 low module translucent						10-12 Alum 7- 8 ABS 8-10 SMC	<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 8505 rigid black						11-14 Alu 10-12 Inox 13-15 FRP			

(*) The recommended curing cycle refers to the maximum adhesive properties. For different curing cycles refers 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 temperatura.</i>
	ASM 101	Filled Heavy thixo Blue	1-COMP	4 month 25 °C or 12 month 0 °C	--// 2h at 120 °C	50	16-20 Alum 20-24 Inox	One-component lamellar abrasive disk manufacturing. <i>Monocomponente per realizzare dischi abrasivi lamellari.</i>



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