

EN

## Product Information

Elan-tech®

AS 98/AW 98

100:100

### Cartridges kit ADH 98.98

2-components medium reactivity epoxy adhesive. Excellent peeling resistance

**ELANTAS EUROPE Sales offices:**

Strada Antolini n°1 loc. Lemignano  
43044 Collecchio (PR)  
Italy  
Tel +39 0521 304777  
Fax +39 0521 804410

Grossmannstr. 105  
20539 Hamburg  
Germany  
Tel +49 40 78946 0  
Fax +49 40 78946 349

info.elantas.europe@altana.com  
www.elantas.com

<b>Structural adhesive</b>	Resin <b>AS 98</b>	Hardener <b>AW 98</b>	Mixing ratio by weight <b>100:100</b>
<b>Cartridges kit</b>	<b>Cartridges kit ADH</b>		Mixing ratio by volume <b>100:100</b>

**Application:** Medium reactivity adhesive for assembly of composite materials, particularly suitable for SMC and GRP, automotive components, sport components and heterogenous materials.

**Processing:** Spatula application or with mixing/dispensing devices. Apply within a short time. Room temperature or moderate temperature curing. Good resistance are achieved with room temperature curing after 24 hours. The best performance is obtained with bonding at 40°C for 16 hours. The final part can be handled after 4 hours. Available also in cartridges.

**Description:** Two component filled epoxy system. Resilient and thixotropic. Sag resistance up to 10 mm in thickness. Good chemical and mechanical resistance. 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

Resin Colour				Neutral
Viscosity 25°C		IO-10-50 (ISO3219)	mPas	80.000 120.000
Density 25°C		IO-10-51 (ASTM D 1475)	g/ml	1,36 1,40

#### Hardener

Hardener Colour				White
Viscosity at: 25°C		IO-10-50 (ISO3219)	mPas	60.000 100.000
Density 25°C		IO-10-51 (ASTM D 1475)	g/ml	1,35 1,39

#### Processing Data

Mixing ratio by weight		for 100 g resin	g	100:100
Mixing ratio by volume		for 100 ml resin	ml	100:100
Pot life 25°C 100ml		IO-10-53 (*)	min	25 35
Initial mixture viscosity at: 25°C		IO-10-50 (ISO3219)		tix
Gelation time 25°C (1mm)		IO-10-88 (ASTM D5895-03)	min	80 100
Setting time 25°C 0,1mm		(*)	h	3,5 4,5

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### TYPICAL CURED SYSTEM PROPERTIES

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

Colour			Beige	
Density	25°C	IO-10-54 (ASTM D 792)	g/ml	1,38 1,42
Hardness	25°C	IO-10-58 (ASTM D 2240)	Shore D/15	80 84
Glass transition (Tg)	16 hrs 40°C	IO-10-69 (ASTM D 3418)	°C	60 65
	24 hrs RT + 15 hrs 60°C		°C	75 80
Shear strength by tension:				
- Aluminium cured	16hrs 40°C tested RT	IO-10-80 (ASTM D 1002)	MPa	20,0 25,0
- Inox steel AISI 316 cured	16hrs 40°C tested RT		MPa	26,0 30,0
- PMMA cured	16hrs 40°C tested RT		MPa	2,5 3,0
- ABS cured	16hrs 40°C tested RT		MPa	3,0 3,5
- PVC cured	16hrs 40°C tested RT		MPa	3,0 4,0
- PC cured	16hrs 40°C tested RT		MPa	4,0 5,0
Flexural strength		IO-10-66 (ASTM D 790)	MN/m <sup>2</sup>	52 58
Strain at break		IO-10-66 (ASTM D 790)	%	4,0 6,0
Flexural elastic modulus		IO-10-66 (ASTM D 790)	MN/m <sup>2</sup>	1.600 2.000
Tensile strength		IO-10-63 (ASTM D 638)	MN/m <sup>2</sup>	34 42
Elongation at break		IO-10-63 (ASTM D 638)	%	3 4
Peeling strength:				
- Aluminium cured	at 1h 80°C under press	ASTM D 1876	N/cm	65 75

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/m<sup>2</sup> = 10 kg/cm<sup>2</sup> = 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:** The surfaces must be clean and dry. Generally a mechanical abrasion or sanding followed by degreasing with solvent (ex. acetone) is sufficient. In pre-pregs assembling no specific preparation is required. Add the appropriate quantity of hardener to the resin, mix carefully. Use slow mixing mixer or mix by hand with a spatula. Once applied, the system is moisture and carbon dioxide sensible: quickly cover the junction or cure in the oven. The final cleaning of the equipment can be carried out with normal solvent such as acetone, nitro, etc.
- 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.
- Storage:** Epoxy resins and their hardeners can be stored for two years in the original sealed containers stored in a cool, dry place.
- 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.