

EN

Preliminary Technical Data Sheet

Elan-tech®

AS 98/AW 98 NF

100:100

Cartridges kit ADH

Epoxy/Acrylate Adhesive

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Product description

- User friendly
- Easy application
- Very good ageing resistance
- Excellent peeling resistance
- Good temperature resistance

Areas of application

Carbon composite, hybrid joints with different materials like metal inserts and epoxy composite parts, in automotive, sport items, other. For plastic bonding we recommend to check the specific material properties.

Processing methods

Application by hand, cartridge or dispensing machine. Convenient mix ratio 1:1. To be applied on dry and clean substrate. Curing at room temperature or directly at 60-80 °C. Pretreatment of the surface might further improve the adhesion result.

Curing/Post-curing

Post-curing is always advisable for Room Temperature 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 and stability

Epoxy resin and its amine based hardener can be stored respectively for two years and one year 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.

Typical product properties

AS 98

Properties	Conditions	Test Method	Value	M/U
Colour		--	Neutral	
Viscosity	25 °C	IO-10-50 (ISO 3219)	80000 ÷ 120000	mPa·s
Density	25 °C	IO-10-51 (ASTM D 1475)	1,36 ÷ 1,40	g/ml

AW 98 NF

Properties	Conditions	Test Method	Value	M/U
Colour		--	White	
Viscosity	25 °C	IO-10-50 (ISO 3219)	95000 ÷ 150000	mPa·s
Density	25 °C	IO-10-51 (ASTM D 1475)	1,36 ÷ 1,40	g/ml

Typical system properties

Properties	Conditions	Test Method	Value	M/U
Mix Ratio by weight		--	100 : 100	g
Mix Ratio by volume		--	100 : 100	ml
Mixture viscosity	25 °C	IO-10-50 (ISO 3219)	na	mPa·s
Pot life	25 °C - 40 mm - 100 ml	IO-10-53 (*)	8 ÷ 18	min
Gel time	25 °C - 1 mm	IO-10-88 (ASTM D 5895-03)	80 ÷ 100	min
Setting time	25 °C - 0,1 mm	(*)	3,5 ÷ 4,5	hrs
Post-curing		(**)	15	hrs
Suggested curing cycle		(**)	16 h 40 °C	

Typical cured system properties

Properties	Conditions	Test Method	Value	M/U
Specimens curing cycle		--	16 h 40 °C	
Colour		--	Beige	
Density (solid)	25 °C	IO-10-54 (ASTM D 792)	1,37 ÷ 1,43	g/ml
Hardness	25 °C	IO-10-58 (ASTM D 2240)	80 ÷ 85	Shore D/15
Glass Transition (Tg)	24 h RT	IO-10-69 (ASTM D 3418)	43 ÷ 53	°C
	16 h 40 °C		55 ÷ 65	°C
Maximum Tg	24 h RT + 15 h 60 °C	IO-10-69 (ASTM D 3418)	63 ÷ 73	°C
Water absorption (24 h RT)		IO-10-70 (ASTM D 570)	0,1 ÷ 0,2	%
Water absorption (2 h 100 °C)		IO-10-70 (ASTM D 570)	0,5 ÷ 1,0	%
Linear thermal exp. (Tg -10 °C)		IO-10-71 (ASTM E 831)	nd	ppm/°C
Linear thermal exp. (Tg +10 °C)		IO-10-71 (ASTM E 831)	nd	ppm/°C

Typical mechanical properties in cured condition

Properties	Conditions	Test Method	Value	M/U
Specimens curing cycle		--	16 h 40 °C	
Flexural strength	25 °C	IO-10-66 (ASTM D 790)	65 ÷ 75	MN/m ²
Strain at break	25 °C	IO-10-66 (ASTM D 790)	2,5 ÷ 3,5	%
Flexural elastic modulus	25 °C	IO-10-66 (ASTM D 790)	2300 ÷ 3300	MN/m ²
Tensile strength	25 °C	IO-10-63 (ASTM D 638)	35 ÷ 45	MN/m ²
Nominal strain at break	25 °C	IO-10-63 (ASTM D 638)	1,5 ÷ 2,5	%
Peel Resistance (T-Peel Test)	Aluminium 30 min 80 °C	ASTM D 1876	66 ÷ 80	N/cm
Lap Shear Strength (LSS)	Aluminium - 16 h 40 °C	IO-10-80 (ASTM D 1002)	20 ÷ 28	MPa
	Inox AISI 316 - 16 h 40 °C		27 ÷ 35	MPa
	PVC - 16 h 40 °C		6,0 ÷ 8,0	MPa
	PC - 16 h 40 °C		3,5 ÷ 4,5	MPa
	ABS - 16 h 40 °C		5,5 ÷ 6,5	MPa

IO-00-00/200-000-000 = Elantas Europe internal 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 based on 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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