EN

Technical Data Sheet

Elan-tech®

EC 255 TIX LY/W 152 XLR

100:24

2K unfilled epoxy adhesive

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Product description

- Easy to spread semi flowable adhesive
- Translucent
- Medium-slow curing time
- Good resistance to yellowing

Areas of application

Bonding of heterogeneous materials like decorative elements on honey comb panels, marble and stones, ceramic elements.

Processing methods

Easy application by hand, with spatula or by dispensing machines. To be applied on dry and clean substrate. Curing at room or moderate temperature (45 °C). Pretreatment of the surface might improve the adhesion results. The additive Y 23 might be useful for materials which are difficult to dry.

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

Filled epoxy resin and its amine based hardener can be stored respectively for one year and two years in the original sealed containers stored in a cool, dry place. The hardener is moisture sensitive therefore it is good practice to close the container immediately after each use.

Handling precautions

Refer to the safety data sheet and comply with regulations relating to industrial health and waste disposal.

Sales specifications

EC 255 TIX LY

Properties	Conditions	Test Method	Value	M/U
Viscosity	25 °C	IO-10-95 (ISO 3219)	300000 ÷ 500000	mPa·s

W 152 XLR

Properties	Conditions	Test Method	Value	M/U
FT- IR (Correlation)	25 °C	IO-10-75	0,990 ÷ 1,000	

Typical product properties

EC 255 TIX LY

Properties	Conditions	Test Method	Value	M/U
Colour		--	Opalescent	
Viscosity	25 °C	IO-10-95 (ISO 3219)	300000 ÷ 500000	mPa·s
Density	25 °C	IO-10-51 (ASTM D 1475)	1,11 ÷ 1,15	g/ml

W 152 XLR

Properties	Conditions	Test Method	Value	M/U
Colour		--	Various colours	
Viscosity	25 °C	IO-10-50 (ISO 3219)	10 ÷ 30	mPa·s
Density	25 °C	IO-10-51 (ASTM D 1475)	0,90 ÷ 0,95	g/ml
FT- IR (Correlation)	25 °C	IO-10-75	0,990 ÷ 1,000	

Typical system properties

Properties	Conditions	Test Method	Value	M/U
Mix Ratio by weight		--	100:24	g
Mix Ratio by volume		--	100:29	ml
Initial mixture viscosity	25 °C	IO-10-50 (ISO 3219)	40000 ÷ 60000	mPa·s
Exothermic peak	25 °C - 80 mm - 200 ml	IO-10-53 (*)	120 ÷ 130	°C
Pot life	25 °C - 80 mm - 200 ml	IO-10-53 (*)	120 ÷ 150	min
Gel time	25 °C - 1 mm	IO-10-88 (ASTM D 5895-03)	12 ÷ 16	hrs
	25 °C - 2 mm		11 ÷ 15	hrs
Suggested curing cycle		(**)	24 h RT + 15 h 60 °C	

Typical cured system properties

Properties	Conditions	Test Method	Value	M/U
Specimens curing cycle		--	24 h RT + 15 h 60 °C	
Colour		--	Various colours	
Density (solid)	25 °C	IO-10-54 (ASTM D 792)	1,08 ÷ 1,12	g/ml
Hardness	25 °C	IO-10-58 (ASTM D 2240)	80 ÷ 84	Shore D/15
Glass Transition (Tg)		IO-10-69 (ASTM D 3418)	60 ÷ 68	°C
Maximum Tg		IO-10-69 (ASTM D 3418)	60 ÷ 68	°C
Water absorption (24 h RT)		IO-10-70 (ASTM D 570)	0,15 ÷ 0,20	%
Water absorption (2 h 100 °C)		IO-10-70 (ASTM D 570)	0,45 ÷ 0,55	%
Linear thermal exp. (Tg -10 °C)		IO-10-71 (ASTM E 831)	74 ÷ 84	ppm/°C
Linear thermal exp. (Tg +10 °C)		IO-10-71 (ASTM E 831)	215 ÷ 245	ppm/°C

Typical mechanical properties in cured condition

Properties	Conditions	Test Method	Value	M/U
Specimens curing cycle		--	24 h RT + 15 h 60 °C	
Flexural strength	25 °C	IO-10-66 (ASTM D 790)	80 ÷ 100	MN/m²
Strain at maximum stress	25 °C	IO-10-66 (ASTM D 790)	4,0 ÷ 6,0	%
Strain at break	25 °C	IO-10-66 (ASTM D 790)	6,0 ÷ 10	%
Flexural elastic modulus	25 °C	IO-10-66 (ASTM D 790)	2400 ÷ 2900	MN/m²
Tensile strength	25 °C	IO-10-63 (ASTM D 638)	62 ÷ 72	MN/m²
Tensile elastic modulus	25 °C	IO-10-63 (ASTM D 638)	2400 ÷ 2800	MN/m²
Elongation at break	25 °C	IO-10-63 (ASTM D 638)	8,0 ÷ 12	%
Compressive strength	25 °C	IO-10-72 (ASTM D 695)	na	MN/m²
Lap Shear Strength (LSS)	INOX Steel AISI 316 - 24 h RT + 15 h + 60 °C	IO-10-80 (ASTM D 1002)	19 ÷ 27	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 besed 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.