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Product Information

Elan-tech®

MC 350 LV/W 153 100:16

MC 350 LV/W 153 100:20

2-components epoxy filled system

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PRELIMINARY PRODUCT INFORMATION

ELANTAS

Resin	Hardeners	Mixing ratio by weight
MC 350 LV	**W 153**	**100:16**
	W 153	**100:20**

Application: Sealing of heterogenous materials.

Processing: Manual and/or automatic casting. Mechanical application with automatic mixing/dispensing machines. Room temperature curing.

Description: Two components filled epoxy system. Solvent free. High thermal resistance. High reactivity. When it is necessary to reduce the exothermic peak and shrinkage use the system in the ratio 100:16. 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			Grey
Viscosity resin 25°C	IO-10-50 (ISO3219)	mPas	35.000 70.000
Density resin 25°C	IO-10-51 (ASTM D 1475)	g/ml	1,41 1,45

Hardeners

			W 153 (16%)	W 153 (20%)
Hardener Colour			Amber	Amber
Viscosity at: 25°C	IO-10-50 (ISO3219)	mPas	100 350	100 350
Density 25°C	IO-10-51 (ASTM D 1475)	g/ml	0,98 1,02	0,98 1,02

Processing Data

Mixing ratio by weight	for 100 g resin	g	100:16	100:20
Mixing ratio by volume	for 100 ml resin	ml	100:22	100:28
Pot life 25°C (40mm;100ml)	IO-10-53 (*)	min	12 18	12 18
Exothermic peak 25°C (40mm;100ml)	IO-10-53 (*)	°C	150 170	160 180
Initial mixture viscosity at: 25°C	IO-10-50 (ISO3219)	mPas	16.000 24.000	12.000 18.000
Gelation time 25°C (1mm)	IO-10-73 (*)	min	120 160	90 130
Suggested curing cycles	(**)		3h a TA + 2h 100°C	

MC 350 LV

TYPICAL CURED SYSTEM PROPERTIES

Properties determined on specimens cured: 24 h TA + 15 h 60°C

				W 153 (16%)		W 153 (20%)	
Colour				Grey		Grey	
Machinability				Good		Good	
Density 25°C		IO-10-54 (ASTM D 792)	g/ml	1,38	1,42	1,37	1,41
Hardness		IO-10-58 (ASTM D 2240)	Shore D/15	83	87	84	88
Glass transition (Tg)		IO-10-69 (ASTM D 3418)	°C	82	88	85	90
Maximum Tg	2h 100°C	IO-10-69 (ASTM D 3418)	°C	95	100	98	103
Flexural strength		IO-10-66 (ASTM D 790)	MN/m²	75	85	78	88
Strain at break		IO-10-66 (ASTM D 790)	%	1,0	2,0	1,0	2,0
Flexural elastic modulus		IO-10-66 (ASTM D 790)	MN/m²	5.000	5.500	5.300	5.800
Tensile strength		IO-10-63 (ASTM D 638)	MN/m²	40	45	43	48
Elongation at break		IO-10-63 (ASTM D 638)	%	1,2	2,2	1,0	2,0

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/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 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.

MC 350 LV

Instructions: In pre-filled products it is good practice to check and carefully rehomogenize the material if some settling is present. Add the appropriate quantity of hardener to the resin, mix carefully. Avoid air trapping. For some applications it can be useful to pre-heat the components and/or carry out a de-aeration step under vacuum of the mixture before casting.

Curing/Post-curing: For a room temperature curing system the post-curing allows fast stabilization of the material and attainment of the best electrical and mechanical properties. During the post-curing process it is advisable to avoid thermal variations higher than 10°C/hour.

Storage: Filled epoxy resins and relative hardeners can be stored for one year and two years respectively, in the original sealed containers, stored in a cool, dry place. After that period or if the material has been stored in anomalous conditions, pre-filled resins can be settled down and their use is possible, only if they are accurately re-homogenized with the help, if necessary, of a mechanical mixer. The hardeners are 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.

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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.