

EN	Product Information
	Elan-tech®
	PC 21/G 8 100:50
	PC 21/G 8 100:30
	2-component unfilled fast curing polyurethane system

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Resin	Hardener	Mixing ratio by weight
PC 21	G 8	100:50
	G 8	100:30

Application: Realizations of negatives with short demoulding time surface finishing footwears and soles models. Filled with phyllite for low density casted wood-like components.

Processing: Mechanical or manual mixing. Cast inside the mould within the pot-life of the system. It can be used in the way it is or can be added in the suggested or in a different ratio depending on the application and on the required thickness. The greater the filler loading, the lower the shrinkage. Attention: homogenize the resin before use (follow the instructions).

Description: Two component system odourless. Very high quality of reproduction. We recommend the use of the product on dry surface or with reduced moisture content such as silicone or resin molds.

SYSTEM SPECIFICATIONS

Resin

Viscosity at:	25°C	IO-10-50 (EN13702-2)	mPas	70	110
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Hardener G 8

Viscosity at:	25°C	IO-10-50 (EN13702-2)	mPas	160	240
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TYPICAL SYSTEM CHARACTERISTICS

Resin

Resin Colour				Pale/yellow	
Density resin 25°C		IO-10-51 (ASTM D 1475)	g/ml	1,00	1,04

Hardeners

Hardener Colour				G 8	G 8
				Brown	Brown
Density 25°C		IO-10-51 (ASTM D 1475)	g/ml	1,20	1,24
				1,20	1,24

Processing Data

Mixing ratio by weight		for 100 g resin	g	100:50	100:30
Mixing ratio by volume		for 100 ml resin	ml	100:42	100:25
Pot life		IO-10-73 (*)	min	2	3
Initial mixture viscosity at:	25°C		mPas	120	190
Gelation time	25°C (15ml;6mm)	IO-10-73 (*)	min	3	4
Gelation time	25°C 75ml	IO-10-52a (UNI 8701)	sec	80	140
	25°C 62,5ml	IO-10-52a (UNI 8701)	sec	n.a	n.a
Demoulding time	25°C (15ml;6mm)	(*)	min	25	35
Maximum recommended thickness			mm	5	5

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TYPICAL CURED SYSTEM PROPERTIES

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

			G 8		G 8	
Machinability			Excellent		Excellent	
Density 25°C	IO-10-54 (ASTM D 792)	g/ml	1,06	1,10	1,06	1,10
Hardness 25°C	IO-10-58 (ASTM D 2240)	Shore D/15	82	86	70	74
Glass transition (Tg)	IO-10-69 (ASTM D 3418)	°C	107	113	42	48
Flexural strength	IO-10-66 (ASTM D 790)	MN/m ²	40	50	12	15
Maximum strain	IO-10-66 (ASTM D 790)	%	5	7	5	8
Strain at break	IO-10-66 (ASTM D 790)	%	6	8	>	15
Flexural elastic modulus	IO-10-66 (ASTM D 790)	MN/m ²	1.000	1.200	300	400

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.

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Instructions: In pre-filled products it is good practice to check and carefully rehomogenize the material if some settling is present. Dose the single components and add the filler to both of them in the appropriate ratio, then mix. Mix carefully, then apply quickly. For the surface preparation (mould or model) refer to the release agents data sheet.

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. Post cure the tool as stated in the table, increasing gradually 10°C/hour. The rate of heating and the indicated post-curing time are referred to standard specimen size. Users should evaluate the best conditions of curing or post-curing depending on the component size and shape. For big size components decrease the thermal gradient and increase the post-curing time. In the case of thin layer applications and composites, post cure on the jig.

Storage: Polyol resins and the isocyanate based hardeners can be stored for one year in the original sealed containers stored in a cool, dry place. The hardeners may present an increase in viscosity that does not change the cured system properties. Both components are moisture sensitive therefore it is good practice to close the vessels immediately after each use. Moisture absorption may cause the expansion of the product during application and/or the hardener may crystallize during storage. The isocyanates may crystallize at low temperatures. To restore the original conditions, heat the material at 70-80°C avoiding local overheating. Before use, the product must be rehomogenized and cooled down at room temperature.

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.