

EN

## Product Information

Elan-tech®

PC 17/G 127

100:100

**2-component fast curing polyurethane for casting applications**

**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

Resin  
**PC 17**

Hardener  
**G 127**

Mixing ratio by weight  
**100:100**

**Application:** Reproduction of scale models and prototypes. Matrices, foundry patterns, negatives and pilot moulds if it is filled.

**Processing:** Manual mixing. Mechanical mixing. Cast inside the mould within the pot-life of the system. It can be used in the way it is or the mixture with the filler 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, fluid, resilient with separated filler to be added when required to reduce withdrawal and exothermic. High reactivity. Very high quality of reproduction.

### SYSTEM SPECIFICATIONS

#### Resin

Viscosity at:	25°C	IO-10-50 (EN13702-2)	mPas	100	140
Gelation time	25°C	IO-10-73 (*)	sec	120	150

#### Hardener

NCO groups		IO-10-55	% peso	19,50	21,00
------------	--	----------	--------	-------	-------

### TYPICAL SYSTEM CHARACTERISTICS

#### Processing Data

Resin Colour				Pale/yellow	
Hardener Colour				Brown	
Mixing ratio by weight		for 100 g resin	g	100:100	
Mixing ratio by volume		for 100 ml resin	ml	100:100	
Viscosity at: 25°C	Hardener	IO-10-50 (EN13702-2)	mPas	20	40
Density	25°C Resin	IO-10-51 (ASTM D 1475)	g/ml	0,93	0,97
Density	25°C Hardener	IO-10-51 (ASTM D 1475)	g/ml	1,09	1,11
Initial mixture viscosity at:	25°C	IO-10-50 (EN13702-2)	mPas	40	70
Gelation time	25°C (15ml;6mm)	IO-10-73 (*)	min	3	5
Demoulding time	20°C (2mm)	(*)	min	25	35
Maximum recommended thickness			mm	5	

**PC 17/G 127**

**TYPICAL CURED SYSTEM PROPERTIES**

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

Colour			Beige	
Machinability			Excellent	
Density 25°C	IO-10-54 (ASTM D 792)	g/ml	1,06	1,10
Hardness 25°C	IO-10-58 (ASTM D 2240)	Shore D/15	73	77
Glass transition (Tg)	IO-10-69 (ASTM D 3418)	°C	75	85
Maximum Tg	IO-10-69 (ASTM D 3418)	°C	99	105
Flexural strength	IO-10-66 (ASTM D 790)	MN/m <sup>2</sup>	40	50
Maximum strain	IO-10-66 (ASTM D 790)	%	5,0	7,5
Strain at break	IO-10-66 (ASTM D 790)	%	>	15
Flexural elastic modulus	IO-10-66 (ASTM D 790)	MN/m <sup>2</sup>	1.100	1.300
Tensile strength	IO-10-63 (ASTM D 638)	MN/m <sup>2</sup>	22	27
Elongation at break	IO-10-63 (ASTM D 638)	%	5,0	7,5

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.

**PC 17/G 127**

- Instructions:** Verify and when necessary, homogenize the components before use. Add the appropriate quantity of hardener to the resin, mix carefully. Avoid air trapping. Apply. For the surface preparation (mould or model) refer to the release agents data sheet.
- Curing / Post-curing:** Normally the post-curing is not necessary.
- 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. 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. 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.

emission date:	October	2010
revision n° 01	August	2012

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.