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## Product Information

Elan-tech®

PC 8590/G 8590

100:50

**Elastomeric system for casting**

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Resin  
**PC 8590**

Hardener  
**G 8590**

Mixing ratio by weight  
**100:50**

- Application:** Tools elastomer with high hardness abrasion resistant. Production of flexible molds for stamped concrete.
- Processing:** Manual mixing or mechanical mixing. Avoid air trapping. Cast on moulds well dried and moisture insulated. Room temperature curing.  
**Warning: read carefully the paragraph "Instructions."**
- Description:** Two components polyurethane elastomer system with high hardness and excellent extension.

**SYSTEM SPECIFICATIONS**

**Resin**

Viscosity at:	25°C	IO-10-50 (ISO3219)	mPas	800	1.500
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**Hardener**

Viscosity at:	25°C	IO-10-50 (ISO3219)	mPas	90	190
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**TYPICAL SYSTEM CHARACTERISTICS**

**Processing Data**

Resin Colour				Milky
Hardener Colour				Pale/yellow
Mixing ratio by weight		for 100 g resin	g	100:50
Mixing ratio by volume		for 100 ml resin	ml	100:43
Density	25°C Resin	IO-10-51 (ASTM D 1475)	g/ml	1,02 1,06
Density	25°C Hardener	IO-10-51 (ASTM D 1475)	g/ml	1,18 1,22
Pot life		IO-10-53 (*)	min	6 13
Exothermic peak	25°C (40mm;100ml)	IO-10-53 (*)	°C	80 90
Initial mixture viscosity at:	25°C	IO-10-50 (ISO3219)	mPas	600 800
Gelation time	25°C (15ml;6mm)	IO-10-73 (*)	min	30 35
Demoulding time	25°C (15ml;6mm)	(*)	h	1,5 2,5
Maximum recommended thickness			mm	5-10
Suggested curing cycles		(**)		7 days RT

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**TYPICAL CURED SYSTEM PROPERTIES**

**Properties determined on specimens cured: 7days RT**

Density 25°C	IO-10-54 (ASTM D 792)	g/ml	1,12	1,16
Hardness 25°C	IO-10-58 (ASTM D 2240)	Shore A/15	85	90
Glass transition (Tg)	IO-10-69 (ASTM D 3418)	°C	< -30	
Linear shrinkage 5 mm after 1 month RT	IO-10-74 a	%	3,5	4,0
Tensile strength	IO-10-62 (DIN 53455)	MN/m <sup>2</sup>	4	6
Elongation at break	IO-10-62 (DIN 53455)	%	45	65
Abrasion resistance (Taber Index)	IO-10-85 (ASTM D 4060)	cm <sup>3</sup>	0,016	0,018

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 8590/G 8590****Instructions:**

Homogenize resin before use. Add the appropriate quantity of hardener to the resin, mix carefully. Manually or mechanically thoroughly mix, avoiding to englobe air, up to the obtainment of a uniform color and deprived of striations. Cast on shapes well insulated from moisture and dried. To get the best results the liquid rubber and the models must be conditioned to the same temperature. It is important to foresee a uniform thickness of casting not superior to 15 - 20 mm or less thickness castings in more layer, fresh in gelled, to have the smaller dimensional shrinkage and absence of undertows. Slowly cast in the lowest point of the figure within the anticipated time, having care that the mass doesn't heat him in the container over the 35 - 40°C.

**Treatment of surfaces of models**

*Porous materials such as wood, stone, plaster, cement:*

- 1) dry for at least 48h in dryer to 50°C or relative damp not superior to 15%.
- 2) Isolate the surface brushing a specific insulator for moist surfaces or diluted shellac applying a very thin layer to favor the evaporation of the present solvent.
- 3) After 3 hours, apply two hands of release agent Z15LC to an interval of 15 minutes one from the other.
- 4) After 15 minutes pass the surface with a dry brush to eliminate possible residues of release agent and to polish the surface.
- 5 )Apply a thin layer of spray release agent Z25LE, to attend 5 - 10 minutes and to repeat the operation with dry brush as from point 4.
- 6) Cast.

*Resin and non porous materials:*

- 1) apply only release agent according to the formalities described in the points 3,4 and 5 of the treatment of the plaster.

**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. 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.

**Resin and hardener may crystallize at low temperatures.**

To restore the original conditions, heat the materials at 50-60°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.