

EN

Product Information

Elan-tech®

PC 3041/G 1030 **100:50** **Shore A 30**

PC 3041/G 1041 **100:50** **Shore A 40**

2-component polyurethane rubber for flexible moulds

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Resin
PC 3041

Hardener
G 1030
G 1041

Mixing ratio by weight
100:50
100:50

Application: Manufacturing of plaster, concrete or Plastcrete water based acrylic system.

Processing: Manual mixing or mechanical mixing. Avoid air trapping. Cast on moulds well dried and moisture insulated. Room temperature or hot curing. The curing process can be accelerated by the use of moderate temperature.
Warning: read carefully the paragraph "Instructions."

Description: Two components, polyurethane elastomers with high elongation. The resin and the hardener have contrasting colours to make easy the control of the mixing.

SYSTEM SPECIFICATIONS

Resin

Viscosity at:	25°C	IO-10-50 (EN13702-2)	mPas	700	1.200
Gelation time	25°C	IO-10-52a (UNI 8701)	min	10	15

Hardener G 1030

Viscosity at:	25°C	IO-10-50 (EN13702-2)	mPas	100	200
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Hardener G 1041

Viscosity at:	25°C	Gir 21	IO-10-50 (EN13702-2)	mPas	100	200
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TYPICAL SYSTEM CHARACTERISTICS

Resin

Resin Colour	Yellow				
Density resin 25°C		IO-10-51 (ASTM D 1475)	g/ml	1,03	1,07

Hardeners

			G 1030		G 1041		
Hardener Colour			Red		Blu		
Density 25°C		IO-10-51 (ASTM D 1475)	g/ml	1,10	1,14	1,10	1,14

Processing Data

Mixing ratio by weight		for 100 g resin	g	100:50	100:50			
Mixing ratio by volume		for 100 ml resin	ml	100:47	100:47			
Pot life	25°C	(40mm;100ml)	IO-10-53 (*)	min	10	15	8	13
Exothermic peak	25°C	(40mm;100ml)	IO-10-53 (*)	°C	50	55	55	60
Initial mixture viscosity at:	25°C		IO-10-50 (EN13702-2)	mPas	800	1.400	800	1.400
Gelation time	25°C	(15ml;6mm)	IO-10-73 (*)	min	30	40	20	30
Demoulding time	25°C	10 mm	(*)	h	5	7	5	7

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TYPICAL CURED SYSTEM PROPERTIES

Properties determined on specimens cured: 7 days RT

			G 1030		G 1041	
			Orange		Green	
Colour						
Density	25°C	IO-10-54 (ASTM D 792)	g/ml	1,05 1,09	1,05 1,09	
Hardness	25°C 24 h	IO-10-58 (ASTM D 2240)	Shore A/15	22 26	33 37	
	25°C 48 h		Shore A/15	28 32	38 42	
	25°C 7 days		Shore A/15	30 34	39 43	
Glass transition (Tg)		IO-10-69 (ASTM D 3418)	°C	~ -40	~ -40	
Water absorption (24h RT)		IO-10-70 (ASTM D 570)	%	3 5	3 5	
Tensile strength		IO-10-63 (ASTM D 638)	MN/m ²	2,0 3,0	2,5 3,5	
Elongation at break		IO-10-63 (ASTM D 638)	%	280 340	240 300	

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:

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 25 - 30 mm, 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

Plaster:

- 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 plaster 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:

Polyols 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.

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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.