EN

Product Information

Elan-tech ®

PC 25/G 226

100:100 by weight

PC 25/G 226/EF 35P - ALOLT 1

100:100:300 by weight

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	Hardener	Filler	Mixing ratio by weight
PC 25	**G 226**	**EF 35P - ALOLT1**	**100:100:300**

Application: Matrices, foundry patterns, realizations of negatives. Demonstrative prototypes. Casted handworks. Pilot moulds for vacuum forming moulds.

Processing: Face and solid casting, using the filled product, also at high thickness. The casting size is limited only by the short pot-life of the system. Further casting can be made by successive application on the previous gelled layer (within 5 min). The greater the filler loading, the lower the shrinkage. Fast curing. This system can be mixed in various mixing ratio with the medium reactivity system PC 26/G 226 in order to obtain pot-life and demoulding times in between.
Attention: homogenize the resin before use (follow the instructions).

Description: Two component system filled odourless with the filler can be added in the suggested or in a different ratio depending on the application and on the required thickness. Very high quality of reproduction. Low exothermic peak. Low shrinkage. The use of EF 31 filler (mix ratio 100:100:150) allows production of components with lower specific weight.

SYSTEM SPECIFICATIONS

Resin

Viscosity at:	25°C	IO-10-50 (EN13702-2)	mPas	50	80
Gelation time	25°C (100ml)	IO-10-73 (*)	sec	135	195

Hardener

NCO groups		IO-10-55	% peso	18,50	20,00

TYPICAL SYSTEM CHARACTERISTICS

Resin

Resin Colour				White	
Density at: 25°C		IO-10-51 (ASTM D 1475)	g/ml	0,98	1,00

Hardener

Hardener Colour				Pale yellow	
Viscosity at: 25°C		IO-10-50 (EN13702-2)	mPas	55	95
Density at: 25°C		IO-10-51 (ASTM D 1475)	g/ml	1,10	1,12

Processing Data

				A+B	A+B+C
Mixing ratio by weight		for 100 g resin	g	100:100	100:100:300
Pot life	25°C (40mm;100ml)	IO-10-53 (*)	min	1'45" 2'45"	2' 45" 3' 45"
Exothermic peak	25°C (40mm;100ml)	IO-10-53 (*)	°C	88 98	50 60
Initial mixture viscosity at:	25°C	IO-10-50 (EN13702-2)	mPas	50 100	2.500 4.500
Gelation time	25°C (15ml;6mm)	IO-10-73 (*)	min	-	3,5 4,5
Demoulding time	25°C (15ml;6mm)	(*)	min	30 45	45 60
Post-curing	60°C	(**)	h	(2 - 4)	(2 - 4)
Maximum recommended thickness			mm	5	30 -70

PC 25/G 226/EF 35P - ALOLT 1

TYPICAL CURED SYSTEM PROPERTIES

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

				A+B		A+B+C	
Colour				White		White	
Machinability				Excellent		Excellent	
Density		IO-10-54 (ASTM D 792)	g/ml	1,05	1,08	1,60	1,65
Hardness		IO-10-68 (ASTM D 2240)	Shore D/15	75	79	82	86
Glass transition (Tg)		IO-10-69 (ASTM D 3418)	°C	78	84	78	84
Maximum Tg	(8h 90°C)	IO-10-69 (ASTM D 3418)	°C	98	104	98	104
Linear shrinkage	2 mm after 24 h TA	IO-10-74 a	‰	0,04	0,06		nd
	2 mm after 1 month TA			0,75	0,80		nd
	5 mm after 24 h TA			0,80	1,20		nd
	5 mm after 1 month TA			1,40	1,45		nd
Max recommended operating temperature		(***)	°C	80	85	80	85
Flexural strength		IO-10-66 (ASTM D 790)	MN/m²	34	40	48	56
Maximum strain		IO-10-66 (ASTM D 790)	%	6	8	1,0	1,5
Strain at break		IO-10-66 (ASTM D 790)	%	14	16	1,0	1,5
Flexural elastic modulus		IO-10-66 (ASTM D 790)	MN/m²	900	1.100	3.800	4.200
Tensile strength		IO-10-63 (ASTM D 638)	MN/m²	24	26	30	32
Elongation at break		IO-10-63 (ASTM D 638)	%	5	7	0,8	1,2
Compressive strength		IO-10-72 (ASTM D 695)	MN/m²	45	49	58	62

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.

PC 25/G 226/EF 35P - ALOLT 1

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. It is advisable to put more filler on the hardener side. 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. Cool it down slowly. 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.

emission date:	November	2000
revision n° 05	September	2008

PC 25/G 226/EF 35P - ALOLT 1

ELECTRICAL PROPERTIES OF CURED SYSTEM

Properties determinated on specimens cured: 24 h at RT + 15 h at 60°C

Test	Method	Unit	PC25/G226	PC25/G226/EF35P
Dielectric Constant	IO-10-59 (ASTM D 150)		2,9 - 3,2	3,7 - 4,1
Loss factor	IO-10-59 (ASTM D 150)	$\cdot 10^{-3}$	41 - 56	58 – 78
Volume resistivity	IO-10-60 (ASTM D 257)	Ohm · cm	1,5 - 3,5 $\cdot 10^{15}$ 1,5	- 3,5 $\cdot 10^{14}$
Dielectric Strength	IO-10-61 (ASTM D 149)	KV/mm	26 - 29	21 – 23