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Product Information

Elan-tech®
PC 58 LV/G 158 100:90

2-components fast curing polyurethane system, high thermal resistance

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Resin	Hardener	Mixing ratio by weight
PC 58 LV	**G 158**	**100:90**

Application: Manufacturing of flap wheels.

Processing: Mechanical application with automatic mixing/dispensing machines.

Description: Two components unfilled system. Thixotropic. High reactivity. High thermal resistance. The system is RoHS compliant (European directive 2002/95/EC) and the new RoHS Directive 2011/65/EU (RoHS 2) entered into force on 21 July 2011 and requires Member States to transpose the provisions into their respective national laws by 2 January 2013.

TYPICAL SYSTEM CHARACTERISTICS

Resin				
Resin Colour			White	
Viscosity 25°C	IO-10-50 (ISO3219)	mPas	8.000	16.000
Density 25°C	IO-10-51 (ASTM D 1475)	g/ml	1,02	1,06
Hardener				
Hardener Colour			Brown	
Viscosity at: 25°C	IO-10-50 (EN13702-2)	mPas	160	240
Density 25°C	IO-10-51 (ASTM D 1475)	g/ml	1,20	1,24
Processing Data				
Mixing ratio by weight	for 100 g resin	g	100:90	
Mixing ratio by volume	for 100 ml resin	ml	100:80	
Pot life 25°C (76g)	IO-10-73 (*)	sec	50	65
Initial mixture viscosity at: 25°C	IO-10-50 (ISO3219)			tix
Gelation time 25°C (15ml;6mm)	IO-10-73 (*)	sec	65	75
Suggested curing cycles	(**)	4 h 120°C		

PC 58 LV/G 158

TYPICAL CURED SYSTEM PROPERTIES

Properties determined on specimens cured: 4 h 120°C

Colour				Beige	
Machinability				Excellent	
Density 25°C		IO-10-54 (ASTM D 792)	g/ml	1,10	1,14
Hardness 25°C		IO-10-58 (ASTM D 2240)	Shore D/15	80	84
Glass transition (Tg)	30 min 100°C	IO-10-69 (ASTM D 3418)	°C	110	116
	3h 120°C		°C	124	130
	4h 120°C		°C	145	150
Max recommended operating temperature		(***)	°C	120	
Flexural strength		IO-10-66 (ASTM D 790)	MN/m²	64	72
Strain at break		IO-10-66 (ASTM D 790)	%	3,0	5,0
Flexural elastic modulus		IO-10-66 (ASTM D 790)	MN/m²	1.700	2.100
Tensile strength		IO-10-63 (ASTM D 638)	MN/m²	40	50
Elongation at break		IO-10-63 (ASTM D 638)	%	3,0	4,5

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/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 58 LV/G 158

Instructions: Verify and when necessary homogenize the components before use. For its high reactivity, the product should be used with mixing/dispensing machines.

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.

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 necessary 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. Long storage may cause filler settling mix the components before use.

Handling precautions: Refer to the safety data sheet and comply with regulations relating to industrial health and waste disposal.

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