

PRC 1708

(SH 120 121)

REFERENCES

Polyol : PRC 1708 P - SH 120000
Isocyanate : PRC 1700/PRC 1708 I - SH 000121

DEFINITION

Clear transparent polyurethane resin for vacuum casting. RoHS suitable
Suitable for optical pieces prototyping.
Excellent UV resistance.
Easy to polish.

PHYSICAL DATA OF THE COMPONENTS

	PRC 1708 P (SH 120 000)	PRC 1700/PRC 1708 I (SH 000 121)	Mix (SH 120 121)
Aspect – Color	Liquid transparent Colorless	Liquid transparent Colorless	Liquid transparent Colorless
BROOKFIELD Viscosity LVT in mPa.s According to MO-051	450	550	500
Density at 25°C According to MO-032	1.08	1.10	1.10

PROCESS DATA

	PRC 1708 P (SH 120 000)	PRC 1700/PRC 1708 I (SH 000 121)	Mix (SH 120 121)
Mixing ratio in weight	60	100	
Mixing time at 25°C (sec.)			90
Pot-life on 160g at 25°C (min.) Test method MO-062			8
Demoulding time at 70°C (min.) Test method MO-116			45

MECHANICAL AND THERMIC PROPERTIES OF THE POLYMER

PROPERTY	Test method	Value
Hardness / Shore D1	ISO 868	87
Glass transition temperature (1)	DSC Perkin Elmer	110 °C
Heat Deflection Temperature (1)	ISO 75 Ae : 2001	105 °C
Flexural modulus of elasticity (1)	ISO 178 : 2001	2200 MPa
Maximal flexural strength (1)	ISO 178 : 2001	80 MPa
Tensile modulus of elasticity (1)	ISO 527 : 1993	2350 MPa
Elongation at maximal tensile strength (1)	ISO 527 : 1993	6,5 %
Maximal tensile strength (1)	ISO 527 : 1993	70 MPa
Elongation at break in tension (1)	ISO 527 : 1993	16 %
Tensile strength at break (1)	ISO 527 : 1993	62 MPa
Charpy Impact Strength (1)	ISO 179 : 1994	90 kJ.m²
Coloration Hazen on 50 mm		< 30

(1) Average values measured on specimens after post cooking 2 h at 70° C + 16 h at 100° C

This document can not be, in any case, used as specification data sheet . The values mentioned on this document are based on tests and researches carried on in our laboratories in precise conditions.

It's the responsibility of the user to check the convenience of the product in his own conditions defined and tried by himself. The Synthene Company disclaims all responsibility for any consequence occurred by the use of this product.



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Safety for using :

Better wearing safety clothes and accessories (gloves and glasses).
For information, read the medical and safety data sheet of the product.

PROCESSING CONDITIONS

Process with vacuum casting machine :

Pre-heat polyaddition silicone moulds at 70°C

Weigh part B in the upper cup (remember to allow for residual product)

Weigh part A in the mixing cup

Degasing for 10 min, pour part B in part A and mix until totally clearness of the mixing. (at least 1 min 30 for a process at 25°C)

Pour in the mould

Place in oven at 70°C for approximately 45 min according to thickness

Process with manual casting :

Pre-heat polyaddition silicone moulds at 70°C

Weigh parts A and B in a mixing cup

Mix manually until totally clearness of the mixing. (at least 1 min 30 for a process at 25°C)

Pour the mixing in a second clean cup without scraping the cliffs and bottom of the first cup (this prevent non-mixing area), mix again with clean spatula.

Degas in a vacuum chamber.

Pour in the mould in 1 step

Place in oven at 70°C for approximately 45 min according to thickness

PACKAGING :

Parcel of : 6 x (0,6 + 1,0) kg
 2 x (3.0 + 5.0) kg

If any other packaging needed, please contact

STORAGE : 6 months in original unopened containers and stored between 15 and 25 °C.

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