

## Cristal 5000

### References

**Polyol** : Cristal 5000 P - SH 125000  
**Isocyanate** : Cristal 5000 I - SH 000125

### Definition

Transparent polyurethane resin for big castings or inclusion parts.  
Very high UV stability.  
Easy to polish and to colour  
Suitable with European directive: 2011/65/EC (RoHS)

### Average physical properties of the components

	<b>Cristal 5000 P SH 125 000</b>	<b>Cristal 5000 I SH 000 125</b>	<b>Mix SH 125 125</b>
Aspect – Color	Liquid transparent Colorless	Liquid transparent Colorless	Liquid transparent Colorless
BROOKFIELD Viscosity LVT (mPa.s) According to MO-051	<b>450</b>	<b>200</b>	<b>300</b>
Density at 25°C According to MO-032	<b>1.08</b>	<b>1.08</b>	<b>1.08</b>

### Process data

*Depending of the storage, isocyanate part can be milky*

	<b>Cristal 5000 P SH 125 000</b>	<b>Cristal 5000 I SH 000 125</b>	<b>Mix SH 125 125</b>
Mixing ratio in weight	<b>80</b>	<b>100</b>	
Mixing time at 25°C (sec.)			<b>15</b>
Pot-life on 300g at 25°C (min.) Test method MO-062			<b>50</b>
Demoulding time at 70°C (min.) Test method MO-116			<b>According to the size and weight of casted part</b>

### Average properties of the polymer

	Test Method	
Hardness Shore D1 (1)	ISO 868-2003	<b>82</b>
Refraction index		<b>1,51</b>
Hazen coloration - 50 mm in thickness		<b>&lt; 15</b>
Transmission index - 50 mm in thickness		<b>T<sub>X</sub> : 100.6 T<sub>Y</sub> : 100.1 T<sub>Z</sub> : 98.5</b>

(1) Average values measured on specimens after post curing 16 h at 50° C + 2 h at 70° C + 24 h at room temperature

*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 wear safety clothes and accessories (gloves and glasses).  
For more information, read the medical and safety data sheet of the product.

### **Process with manual casting :**

In order to get the best result, it could be better to work with moulds in polyaddition silicone pre-heated, depending on the size of the parts. For simple shapes and/or big volumes, moulds can be made with thermoplastics like polypropylene, polyethylene or others helping a good release from the moulds of the polymerised parts

Weigh the two parts in a clean mixing cup

Mix manually, take care of the homogeneity of the system, until total clearness of the mixing.

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

In order to get a perfect transparency and to avoid left bubbles, it's better to degas in a vacuum chamber.

Pour in the mould in 1 step, better from a bottom point and along a cliff.

Demoulding time will be linked to the weight and the shape of the part.

For technical parts and in order to prevent from breaking, it should be better to make a post curing on the parts in an oven at 50°C.

### **Process with vacuum casting machine :**

Pre-heat polyaddition silicone moulds at 50°C

Weigh the isocyanate part in the upper cup (don't forget the residual product)

Weigh the polyol part in the mixing cup

After 10 min of vacuum, pour the isocyanate part in the mixing cup and mix until total clearness of the mixing.

Pour in the mould

Demoulding time will be linked to the weight and the shape of the part.

For technical parts and in order to prevent from breaking, it should be better to make a post curing on the parts in an oven at 50°C.

### **Packaging :**

Parcel of 2 kits (4,0 + 5,0) kg

Others: consult us.

**Storage :** 9 months in original unopened containers and stored between 15 and 25 °C.

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