

## TECHNICAL DATA SHEET

# ALCHEMIX<sup>®</sup> PU 376 A/B

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*Fast Cast High Temperature polyurethane system*

*Prefilled polyol 100:15 mixing ratio by weight*

Two part system formulated for high temperature applications, such as small vacuum forming tools. Quick curing with minimal shrinkage, and highly polishable.

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### Main Features

**Exceptionally low shrinkage**

**Excellent heat resistance**

**No sediment**

**Easily polishable**

**Does NOT inhibit carbon fibre pre-preg**

### Mixing Ratio by weight

**PU 376A : PU 376B**

**100 : 15**

### Product Data

	<b>PU 376A</b>	<b>PU 376B</b>	<b>MIXTURE</b>
<b>Material</b>	Metal filled polyol	Isocyanate	
<b>Appearance</b>	Grey liquid	Brown liquid	Grey liquid
<b>Density @ 25°C</b>	1.78 g/ml	1.21 g/ml	1.65 g/ml
<b>Viscosity @ 25°C</b>	6000 -7500 mPa.s	100 mPa.s	1500 mPa.s
<b>Pot life (200 g) @ 22°C</b>			4-5 minutes
<b>Demould time (1 kg) @ 22°C</b>			30 minutes
<b>Exothermic peak (200 g) @ 22°C</b>			48°C

### Mixing Instructions

Mix the resin component (Part A) thoroughly in order to homogenise the light sediment. Mix carefully, avoiding air entrapment. Add the hardener (Part B) to the filled resin, mix thoroughly. The mould should be clean and dry, and have been treated with release agent **R7** or **R5** before casting. Polish if necessary, to obtain the desired surface finish.

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### **Casting**

Pour the mix slowly in one place into the mould. Complete within the stated pot life of the material. For larger castings, pouring in successive layers may be required. Cast the next layer when the previous layer is still tacky and not fully cured, as better adhesion is achieved with no witness lines showing. Alternatively, use **Alchemix PU 376S (Slow)**.

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### **Curing**

Allow to cure at room temperature for at least 30 minutes before demoulding. Demould times will vary with the thickness of casting, for example, thin sections may take 45-60 minutes before they can be demoulded.

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### **Typical cured properties**

Property	Cured 7 days at room temperature
Shore hardness (D)	82
Machinability	Average
Linear shrinkage 500 x 50 x 10 mm	0.19 %*
Glass Transition Tg (DSC)	116°C

\* Shrinkage increased to 0.59% after sustained periods of vacuum forming at high temperatures.

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### **Storage**

Polyurethane system PU 376 can be stored for three months in the original well sealed packaging, in a cool, dry place. The Part B may crystallise if not stored above 10-15°C. Long storage may cause settlement of the mineral fillers. The two components are moisture sensitive (like all PU's) **KEEP THE PACKAGING TIGHTLY SEALED WHEN NOT IN USE.** Moisture absorption may cause expansion during application.

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### **Packaging**

PU 376A      1 kg

PU 376B      150 g

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