TECHNICAL DATA SHEET

ALCHEMIX® PU 375 A/B

Fast Cast polyurethane system
Prefilled polyol 100:15 mixing ratio by weight

Two part system formulated for quick, accurate general castings with negligible shrinkage, no odour and easily machinable. Suitable for foundry patterns, vacuum forming and any other applications where low shrinkage and fast cure are important.

Main Features

Exceptionally low shrinkage ***Excellent heat resistance*** ***No sediment***

Easily machinable ***Rapid demould times*** ***No porosity***

Mixing Ratio by weight

PU 375A : PU 375B
100 : 15

Product Data

	PU 375A	PU 375B	MIXTURE
Material	Mineral filled polyol	Isocyanate	
Appearance	Blue-grey or white liquid	Straw liquid	Blue-grey or white liquid
Density @ 25ºC	1.77 g/ml	1.21 g/ml	1.65 g/ml
Viscosity @ 25ºC	7000 -10000 mPa.s	39 mPa.s	1500 mPa.s
Pot life (200 g) @ 22ºC			4-5 minutes
Demould time (1 kg) @ 22ºC			15-20 minutes
Exothermic peak (200 g) @ 22ºC			43.7ºC

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.

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 whilst the previous layer is still tacky and not fully cured, as better adhesion is achieved with no witness lines showing.

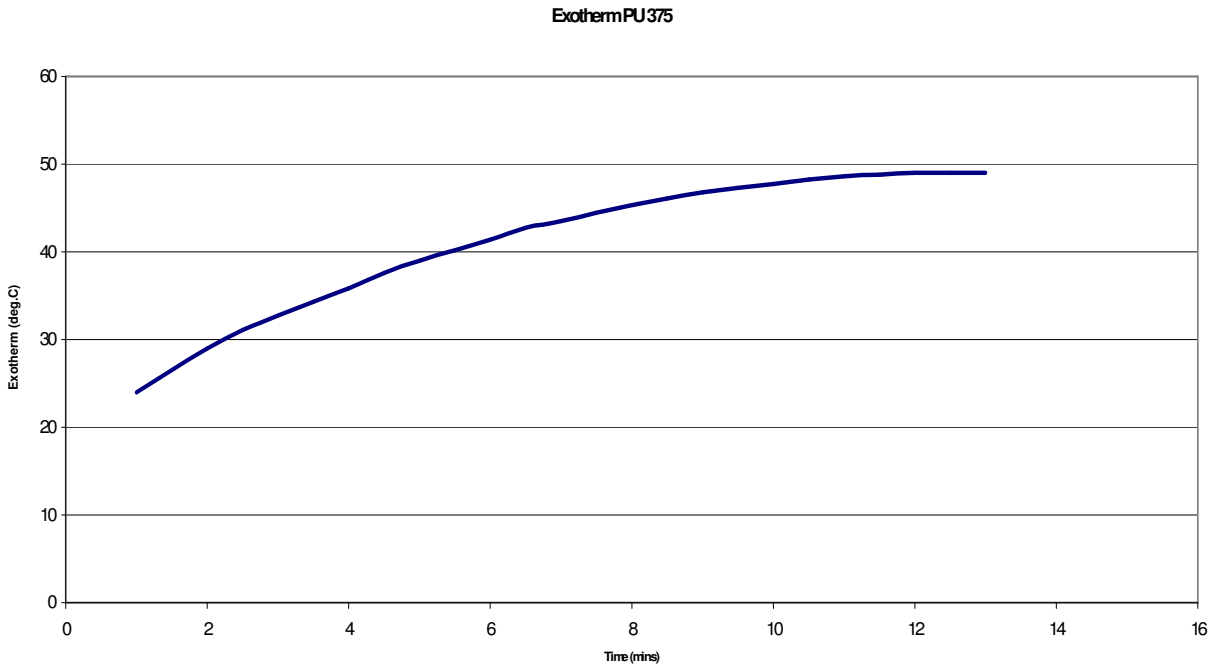
Curing

Allow to cure at room temperature for at least 15-20 minutes before demoulding. Demould times will vary with the thickness of casting, for example, thin sections may take 30-45 minutes before they can be demoulded.

Typical cured properties

Property	**Cured 7 days at room temperature**
Shore hardness (D)	80
Machinability	Excellent
Linear shrinkage 500 x 50 x 10 mm	0.086 %
Glass Transition Tg (DSC)	95°C

Cure Profile



Storage

Polyurethane system PU 375 can be stored for three months in the original well sealed packaging, in a cool, dry place. The Part B may crystalize 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.

Packaging

PU 375A	1 kg	9 kg	25 kg
PU 375B	150 g	5.4 kg	3.75 kg

Our technical advice, whether verbal, or in writing is given in good faith, but without warranty – this also applies where proprietary rights of third parties are involved. It does not release you from the

obligation to test the products supplied by us as to their suitability for the intended process and use.

Other Alchemix fast cast polyurethanes

PU 375S **As PU 375 but with an extended pot life to enable large castings and negligible shrinkage, eliminating the need to cast in layers.**

PU 376 **Prefilled with aluminum powder for a fast cast that will withstand temperatures up to 120°C without post curing.**

PU 376S **As above, but with an extended pot life so that very large castings may be performed.**

PU 377 **Prefilled with abrasive powders to facilitate a very abrasion resistant casting resin.**

PU 363 **Unfilled. Can be used with mineral fillers (sold separately) in variable ratios, or without fillers to produce thermoplastic-like parts.**

PU 365 **Unfilled. Low cost resin can be used filled or unfilled in various application areas.**

PU 3660 **Water clear casting resin, U.V. stable with a very low viscosity and is suitable for encapsulating, model-making or prototyping.**

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