

Description

ALCHEMIX VC 3348 is a two component, semi-flexible, UV stable, vacuum casting system designed specifically for use in gravity vacuum casting machines.

Features

- UV stable
- Easily pigmented

Mix Ratio

	VC 3348A	VC 3348B
By Weight	100	52

Component Data

	Conditions	VC 3348A	VC 3348B
Description	-	Polyol	Isocyanate
Appearance	-	White liquid	Colourless liquid
Viscosity	25°C	800 – 1300 mPa.s	50 – 100 mPa.s
Density	25°C	1.00 – 1.05 gcm ⁻³	1.06 – 1.11 gcm ⁻³

Cure Data

	Conditions	Typical Value
Appearance	-	White
Mixed Viscosity	25°C	450 – 550 mPa.s
Mixed Density	25°C	1.01 – 1.06 gcm ⁻³
Pot Life	200g, 25°C	5 – 6 mins
Demould Time ¹	70°C	60 mins
Maximum Casting Thickness	-	5 mm

¹ See "Curing" section below.

Cured Properties

	Standard	Typical Value
Hardness (2 hours after vacuum cast)	ISO 868	50 D
Hardness (7 day)	ISO 868	60 – 64 D
Linear Shrinkage ²	500 x 50 x 10mm	<0.7%
Tensile Strength	ISO 527	12 – 17 MPa
Elongation at Break	ISO 527	54 – 74%
Tensile Modulus	ISO 527	320 – 420 MPa

² See "Shrinkage" section below.

Processing Data

	Recommended Value
Part A Temperature	25°C
Part B Temperature	25°C
Mould Temperature	70°C
Cure Temperature	70°C
Vacuum Time	8 minutes
Mixing Time ³	60 seconds
Cure Time ⁴	60 minutes

³ See "Processing Instructions" section below.

⁴ See "Curing" section below.

Mould Preparation

For best results, use ALCHEMIX RTV 240 silicone rubber. Before use, ensure that the mould is clean. Heat the mould in an oven to 70°C; this may take several hours if the mould is very large. Splitting the tool will speed up the warming process. Using a release agent can prolong the life of the mould, but may affect the surface finish of the cured product. We do not recommend the use of condensation cured silicone rubber with this product.

Resin Preparation

Inspect both components for any signs of crystallization. Crystallization can cause the liquid to become cloudy or

viscous, and in extreme cases, the product could become solid. If either component has crystallized, heat to 40°C using sufficient extraction to remove any fumes. Please read the Safety Data Sheet (SDS). Shake the containers periodically until the product becomes a clear liquid. Both components should be heated to 25°C before use. If using pigments, add the pigment to the part A. We suggest using a maximum of 3% pigment.

Processing Instructions

ALCHEMIX VC 3348 should be processed in a gravity vacuum casting machine. Weigh the part A into the larger mixing cup and the part B into the smaller cup. Allow an additional amount of part B to account for the cup loss. Degas for 8 minutes, whilst slowly mixing the part A. After degassing, pour the part B into the part A whilst mixing. Mix the two components for a minimum of 60 seconds. When mixing is complete pour the mixed material into the mould. When material can be seen exiting from the risers break the vacuum.

Curing

Immediately after casting, place the mould in an oven at 70°C for 60 minutes. Curing time, especially in thin sections, will depend on mould temperature. The warmer the mould, the quicker the cure. Larger castings may require a shorter curing time, smaller castings may require a longer curing time. Demould immediately, do not leave in the mould for prolonged periods of time (more than 90 minutes).

Shrinkage

The shrinkage value above is quoted as a guide only. Shrinkage will vary with each mould design, as factors such as mould size and geometry can affect the degree of shrinkage. Generally speaking, large, thick castings will have a greater degree of shrinkage than small, thin castings. Other factors, such as mould temperature and resin temperature can also have an effect. Please contact Alchemie Ltd for more information.

Storage

ALCHEMIX VC 3348A and B should be stored in original, unopened containers between 20 and 25°C. ALCHEMIX VC 3348B may crystallise partially or completely if not stored at above 20°C. Like all polyurethanes, both components are

moisture sensitive. Moisture absorption will cause excessive aeration in cast parts. KEEP THE PACKING TIGHTLY SEALED WHEN NOT IN USE. If stored under the above conditions, ALCHEMIX VC 3348A and B will have a shelf life of 6 months, from the date of production.

Packaging

ALCHEMIX VC 3348A is supplied in 1Kg kits.
ALCHEMIX VC 3348B is supplied in 520g kits.
Please contact Alchemie Ltd for bulk supply.

Further Information

This data is not to be used for specifications. Values listed are for typical properties and should not be considered minimum or maximum.

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.

Before using any of our products, users should familiarise themselves with the relevant Technical Data Sheet (TDS) and Safety Data Sheets (SDS) provided by Alchemie Ltd.

Alchemie® and Alchemix® are registered trademarks of Alchemie Ltd.