Technical Data Sheet

ALCHEMIX® RTV 240

Addition Cure Silicone Rubber
High Tear Strength, 40 Shore A Hardness

ALCHEMIX RTV 240 is a two component addition cure silicone rubber with the facility to alter the Shore A hardness by the use of different catalysts. Used for the moulding of complicated parts with precise dimensions, repetitive casting applications, ceramics, vacuum casting moulds and general mould making.

Special Features

- Translucent
- High tear strength
- Styrene and PU resistant
- Very low shrinkage
- Ability to alter hardness

Mix Ratio

	RTV 240 :	**C250 / C251**
By Weight	100 :	10

Product Data

Property	**Units**	**RTV 240**	**C250, C251**	**Mix**
Material	-	Silicone rubber	Catalyst	Silicone Rubber
Appearance	-	Translucent viscous liquid	Clear liquid	Translucent viscous liquid
Viscosity	mPa.s	40,000 – 80,000	400 – 700	30,000 – 70,000
Pot life (200g, 25°C)	Minutes	-	-	80 – 140
Demould Time (25°C)	Hours	-	-	24
Demould Time (60°C)	Hours	-	-	2
Demould Time (70°C)	Hours	-	-	1
Demould Time (80°C)	Minutes	-	-	30

Cured Properties

Properties	Standard	Units	C250 (Full Cure)	C251 (Full Cure)
Linear Shrinkage	500 x 50 x 10mm	%	0.1	0.1
Hardness	JIS K6253	Shore A	35 – 45	25
Tear Strength	JIS6252; B (Crescent)	kN/m	> 10.0	> 10.0
Tensile Strength	JIS K6251	MPa	> 3.4	> 3.4
Elongation at break	JIS K6251	%	> 250	> 250
Young's Modulus	JIS K6251	MPa	1.67	-
Poisson's Ratio	-	-	0.49	-
Coefficient of Thermal Expansion	-	$x10^{-5}$ $°C^{-1}$	30	-
Service Temperature	-	°C	-60 to 250	-60 to 250

Mould Preparation

Ensure the master mould is clean, dust and dirt free. If the master is made of glass or ceramic, it is possible that the silicone rubber may stick to it, so a release agent is advisable. We recommend Release Agent R5.

Mixing and Pouring Instructions

Use clean containers, which have a capacity for the rubber to expand to at least five times its volume during degassing e.g. if 1 kg is being mixed, use a 5 litre container. Both components should be at a temperature of 15 to 25°C. Add the catalyst to the RTV at the correct ratio, accurate weighing is essential. Mix the catalyst into the RTV immediately. The product should be mixed thoroughly until homogenous, paying particular attention to the sides and bottom of the mix vessel. Care should be taken to avoid entrapping too much air during mixing. Degas by intermittent evacuation, the larger volume of the mixing vessel helps prevent overflow during this operation. In case of automatic dispensing with static mixing head, the two components should be degassed before processing. Recommended vacuum conditions are 30 – 50 mbar intermittently over 5 – 10 minutes. Cast the mixture either by gravity or pressure injection. For intricate moulds degas again ensuring there is sufficient room in the mould box for expansion of the rubber.

Curing

If curing at room temperature leave the mould for 24 hours before demoulding. If curing at elevated temperatures the mould should be allowed to stand for 10 minutes before being placed in the oven at the appropriate temperature. Shrinkage of the silicone will increase when cured at elevated temperatures

Inhibition

Addition curing silicone RTVs are susceptible to inhibition by various products. Generally speaking, products with high moisture content or high sulphur content are potentially the most damaging. For further details, please contact Alchemie's Technical Department or read Alchemie's Technical Bulletin "Inhibition of Addition Cure Silicone".

Storage

ALCHEMIX RTV 240, CATALYSTS C250 and CATALYST C251 should be stored in original, unopened containers between 15 and 25°C. KEEP THE PACKING TIGHTLY SEALED WHEN NOT IN USE.

If stored under the above conditions, ALCHEMIX RTV 240 / C250 / C251 will have a shelf life of 12 months, from the date of production.

Packaging

ALCHEMIX RTV 240 is supplied in 1kg, 5kg and 20kg containers.
CATALYST C250 is supplied in 100g, 500g and 1kg containers.
CATALYST C251 is supplied in 100g, 500g and 1kg containers.

(Please contact Alchemie Ltd for bulk supply)

Further Information

Please contact our Technical Department for any further advice on the use of this product.

All data listed relates to typical values. This data should not be considered a product specification. 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 this product users should familiarize themselves with the relevant MSDS provided by Alchemie Ltd.

Alchemie Limited

Alchemie Ltd develop, formulate and distribute Epoxy Resins, Polyurethane Resins, Silicones, Model Boards and Sheet Wax for use in the following applications:

- Electrical encapsulation
- Rapid Prototyping
- Prototypes
- Casting
- Gel Coating
- Laminating
- Model Making
- Master Models
- Flexible and rigid mould making

We offer fast service, technical support, development expertise, innovative products, diverse knowledge and experience.

We are a well-established company, with a high level of investment and experience. We implement BS EN ISO 9001.