

TECHNICAL DATA SHEET

ALCHEMIX[®] RTV 256 Silicone Rubber

Addition cure silicone rubber

High tear strength, 34 Shore A hardness

RTV 256 is a two component addition cure silicone rubber with a Shore A hardness of 34. Used for the moulding of complicated parts with precise dimensions. Specially designed for long mould life and good release. Repetitive casting applications, ceramics, vacuum casting moulds and general mould making.

Main Features

Long mould life

High tear strength

Styrene and PU resistant

Very low shrinkage

Excellent release properties

Mixing Ratio by weight

RTV 256 : C 250
100 : 10

Product Data

	RTV 256	C 250	MIXTURE
Material	Silicone rubber	Clear liquid	
Appearance	Translucent viscous liquid	Clear liquid	Translucent viscous liquid
Density @ 25°C	1.08 g/ml	1.07 g/ml	1.08 g/ml
Viscosity @ 25°C	75,000 mPa.s	200-300 mPa.s	50,000 mPa.s
Pot life (200g) @ 20°C			130 minutes
Demould time @ 20°C			24 Hours
Demould time @ 60°C			2 hours
Demould time @ 70°C			1 hour
Demould time @ 80°C			30 minutes

Set-up box Preparation

Make sure the set-up box and the part to be moulded are not made of any of the inhibiting materials listed and are thoroughly clean.

Mixing and pouring instructions

Mix thoroughly together both parts of the system ensuring the container used is at least five times the volume of the material being mixed e.g. For a 2 Kg mix use a 10 litre container. Due to the difference in viscosity of the two components extra care should be taken when mixing to ensure a homogeneous mix. When you think the mixture is homogeneous, mix again to ensure thorough mixing. When the material is thoroughly mixed place in a vacuum chamber. When vacuuming the material will expand to approximately five times its original volume and collapse, it is at this point that the material has been successfully vacuumed. Pour carefully in one place in to the set-up box to avoid air inclusion. Place the set-up box back in to the vacuum chamber and degas again.

Curing

If curing at room temperature leave the mould for 24 hours. 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.

Calculation of thermal expansion of cured mould with temperature

L_0 = Original length

L = Length at temperature

T = Temperature of silicone mould

Coefficient of expansion = 2.6×10^{-4} (mm/mm)/°C

$T_{\text{room}} = 20^\circ\text{C}$

$$(L - L_0) = \text{Coef} \times (T - T_{\text{room}}) \times L_0$$

e.g. Increase in length of a 500 mm mould at 60°C

$$(L - L_0) = 2.6 \times 10^{-4} \times (60 - 20) \times 500$$

$$(L - L_0) = 5.2 \text{ mm}$$

Cured Properties

	Cured 24 hrs at room temperature with C 250
Shore hardness (A)	34
Linear Shrinkage (500 x 20 x 5 mm)	0.1%
Tensile Strength ISO 527-2:1993	5.5 MPa
Elongation @ break ISO 527-2:1993	380 %
Tear strength ISO 34	14.0 N/mm
Service temperature	-60°C – 250°C

Inhibition of polyaddition cure RTV's

Polyaddition curing silicone RTV's are susceptible to inhibition by various products. Generally speaking, products with high moisture content or a high sulphur content are potentially the most damaging.

INHIBITING SUBSTANCES

Wood-mastic epoxy resin

Natural rubber

Silicone sealants

Flexible compact PUR

Polyester resin

Coac1~work polyester mastic*

Transparent PVC tubing*

Plasticised PVC film*

foam Latex and latex gloves*

Neoprene adhesive

Vinyl adhesive

Transparent wood glue

Cyanoacrylate adhesive* (super glue)

Adhesive tape

Shellac

Condensation cure RTV

CAF (all types)

* PARTICULARLY ACTIVE

The above information is intended as a guide only. Results are taken from tests carried out under laboratory conditions. In a production environment conditions and materials may differ. We therefore strongly recommend that spot tests be carried out with any polyaddition curing RTV on surfaces and materials to be used, prior to use in full production.

Storage

Store both components A and B at room temperature. KEEP THE PACKING TIGHTLY SEALED WHEN NOT IN USE.

Packaging

RTV 256	1 Kg	5 Kg	20 Kg
C 250	0.1 kg	0.5 Kg	2Kg

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.

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Other Alchemix RTV silicone rubbers

RTV 250	A two component addition cure silicone rubber with the facility to alter the Shore A hardness. Extremely high tear strength and elongation. Suitable moulds requiring precise dimensions such as vacuum casting moulds. Highly styrene and PU resistant.
RTV 260	A two component addition cure silicone rubber of 60 Shore A. Extremely high tear strength and elongation. For general mould making where a hard and rigid structure is required.
RTV 132, 136, 139	Condensation cure silicone rubbers. Excellent tear strengths with hardness ranging from 15-29 Shore A. Can be made thixotropic for skin mouldings with RTV 104 additive.
RTV 104	Thixotropic additive for both addition and condensation RTV.
CAT CRS	Accelerator for use with condensation cure RTV, halves potlife and demould of RTV.
