

MM940 Condensation cure silicone moulding rubber 37 Shore A high tear

Introduction

This is a two-component room temperature condensation curing silicone compound. The cured product is an exceptionally flexible rubber with very high mechanical properties and good shelf life stability. It is suitable for mould making of intricate patterns with extremely good pick up of fine details. Softer grades are better suited for use where there are deep undercuts

Key Features

- High tear strength
- High dimensional stability
- Fine detail pick up
- Easily degassed

Use and Cure Information

The curing process starts as soon as the catalyst is added. Under normal conditions of temperature and humidity typical curing characteristics are described below. If the product is to be used in contact with aggressive chemicals, such as high styrene polyester resins or epoxies, it is recommended that the rubber be allowed to cure for 48 hours before use.

How to Use

Charge 100 parts by weight of Base Rubber and 5 parts by weight of catalyst into a suitable plastic or metal container. The volume of the mixing vessel should be sufficient to allow for rapid expansion which takes place during the initial degassing of the catalysed rubber. Mix thoroughly avoiding excessive air entrapment but using the colour contrast to achieve homogeneity. Stop the mixer and scrape the vessel walls a few times. To prevent imperfections due to bubbles in the cured rubber, it is advisable to de-aerate the liquid rubber by using intermittent evacuation for a few minutes. Normally after releasing the vacuum 2 or 3 times, the mass collapses naturally after which degassing should continue for only a few minutes.

Vertical Application

This Product can be used to make mouldings on vertical surfaces by employing Thixotroping Agent, MMTA2. A typical formulation for good thixotropy and approximately the same working life of the normal rubber is shown below:

- MM900 series 100 parts by weight
- Catalyst 5 parts by weight
- MMTA2 2 - 3 parts by weight

Mix the components in the above order. When using the fast cure catalyst, if degassing is required it must be done quickly after catalysation and before the addition of the Thixotroping Agent MMTA2. Pot life and rate of cure is slightly shorter in the presence of TA2.

Standard catalyst for use with the MM900 series of rubbers

Code	Ratio	Colour	Pot Life	De-Mould
MM CAT B5NT	20:1	Blue	>45 mins	<24 hrs
MM CAT R5NT	20:1	Red	15-45 mins	<3 hrs
MM CAT L6WNT	20:1	Clear	>45 mins	<24 hrs
MM CAT L8W	20:1	Clear	>120 mins	<24 hrs

MM CAT W Booster is available to speed up standard cure catalysts

Health and Safety

Safety Data Sheets available on request.

Packaging

ACC Moulding Rubbers are available in a variety packaging including bulk containers. Please contact our sales department for more information.

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Property

Uncured product

Property	Test Method	Value
Appearance		Viscous Liquid
Colour A Part		White
Cure Type		Condensation
De-Mould Time Hrs		6.5 hrs
Mix Ratio		20:1
Pot Life mins		70 mins
Viscosity A-Part mPas	Brookfield	37000 mPas
Viscosity B-Part mPas	Brookfield	200 mPas
Viscosity Mixed mPas	Brookfield	37000 mPas

Cured product

After 7 days cure at 23° +/-2° C and 50+/-5% humidity

CTE Linear ppm/°C		271 ppm/°C
CTE Volumetric ppm/°C		813 ppm/°C
Duro Shore A	ASTM D 2240-95	37
Elongation %	ISO 37	349 %
FDA	CFR (21) 177.2600	No
Linear Shrinkage %		0.4 %
Max Working Temp +°C	AFS_1540B	200 °C
Min Working Temp - °C		-50 °C
Modulus @ 100% Strain MPa		1.27 MPa
Modulus Youngs MPa		1.34 MPa
SG	BS ISO 2781	1.12
Tear kN/m	BS ISO 34-1	25 kN/m
Tensile MPa	ISO 37	4.86 MPa

Storage

Max storage temperature °C	40 °C
Shelf life	6 mths

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