

MM940 (RTV940) High Tear Condensation Cure 2-Part Moulding Rubber

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**
- **Dimensional Stability**
- **High definition pick up**
- **Easy degassing**

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 95-100 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

MM940 can be used to make mouldings on vertical surfaces by employing Thixotroping Agent TA2. A typical formulation for good thixotropy and approximately the same working life of the normal rubber is shown below:-

- MM940 95 - 100 parts by weight
- Catalyst 5 parts by weight
- TA2 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 TA2. Pot life and rate of cure is slightly shorter in the presence of TA2.

Property	Test Method	Value
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Uncured Product

Colour:		White
Appearance:		Viscous Liquid
Viscosity:	Brookfield	37000 mPa.s
Catalysed viscosity	Brookfield	37000mPa.s
Pot Life:		70 minutes *
De-mould time		6.5 hours *
* measured at 23+/-2°C and 65% relative humidity using standard catalyst.		

Cured Elastomer

(after 7 days cure at 23+/-2°C and 65% relative humidity)

Tensile Strength:	BS903 Part A2	4.86 MPa
Elongation at Break:	BS903 Part A2	349 %
Youngs Modulus:		1.34MPa
Modulus at 100% Strain:	BS903 Part A2	1.27MPa
Tear Strength:	BS903 Part A3	25.00 kN/m
Hardness:	ASTM D 2240-95	37° Shore A
Specific Gravity:	BS 903 Part A1	1.12
Linear Shrinkage:		0.40 %
Coefficient of Thermal Expansion:		
Volumetric Linear		813 ppm / °C
Linear		271 ppm / °C
Min. Service Temperature:		-50°C
Max. Service Temperature:	AFS 1540B	200 °C

All values are typical and should not be accepted as a specification.

Standard catalyst for use with the MM900 series of rubbers

Code	Ratio	Colour	Pot Life (Mins)	De-mould (Hrs)
MM CAT B5NT	20:1	Blue	45-120	<24
MM CAT R5NT	20:1	Red	15-45	<3
MM CAT L6WNT	20:1	Clear	45-120	<24
MM CAT L8W	20:1	Clear	120-180	<24

Health and Safety - Material Safety Data Sheets available on request.

Packages – MM940 is supplied in 5 kg and 20 kg bulk containers. Catalyst is supplied in 250 g and 1 kg containers. MM TA2 is supplied in 100 g, 500 g and 1 kg containers. Arrangements can be made to supply in other pack sizes.

Storage and Shelf Life – Expected to be 6 months in original, unopened containers below 40°C.

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