

MM918

Characterization

MM918 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
- Good dimensional stability
- Easily degassed
- Chemically resistant

Technical Data

	MM918 Component A	MM CAT Component B		
Colour	Beige	-		
Viscosity	22,500	200	mPa·s	Brookfield HBTD
	Mixture			
Cure Type	Condensation			
FDA	No			CFR (21) 177.2600
Mixing ratio	20 : 1		according to weight	
Mixed Viscosity	16,500		mPa·s	Brookfield HBTD
Pot Life	>45		Min	
De-Mould Time	8		h	
Cured product	After 7 days at 23°C +/-2°C and 50% +/-5% humidity			
CTE Linear	237		ppm/°C	
CTE Volumetric	713		ppm/°C	
Duro Shore A	18			ASTM D 2240-95
Working Temp.	-50 to 200		°C	AFS-1540B
Tensile	3.11		MPa	ISO 37
Elongation	539		%	ISO 37
Modulus Youngs	1.18		MPa	
Modulus @ 100% Strain	0.67		MPa	
Tear	23.49		kN/m	ISO 34-1
Linear Shrinkage	0.39		%	
SG	1.27			BS ISO 2781

Storability / Storage

When proper storage approx. 12 months if stored properly max. at 40°C and protected from frost and dry in closed original containers.

The above given values are product describing data. Please consult the 'delivery specification' for binding product specifications. Further data about product properties, toxicological, ecological data as well as data relevant to safety can be found in the safety data sheet.

Application Technique

Processing

The curing process starts as soon as the catalyst is added. Under normal conditions of temperature and humidity typical curing characteristics are as described in the table above. 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 take place during the initial degasses 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 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 naturally collapses so that degassing should continue for only a few minutes.

Vertical Application

This product can be used to make mouldings on vertical surfaces by employing the Thixotroping Agent, MMTA2. A typical formulation for good thixotropy and approximately the same working life on 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 degasses is required it must be done quickly after catalysation and before the addition of the Thixotoping Agent MMTA2. Pot life and rate of cure is slightly shorter in the presence to MMTA2.

Standard catalyst for use with the MM900 series of rubber

Code	Ratio	Colour	Pot life [min.]	De-Mould [h]
MM CAT B5NT	20:1	Blue	>45	<24
MM CAT R5NT	20:1	Red	15 – 45	<3
MM CAT L6WNT	20:1	Clear	>45	<24
MM CAT L8W	20:1	Clear	>120	<24

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

It is absolutely important to check the compatibility in preliminary tests if unknown substrates are used.

Safety

Please observe our EC safety data sheets and the safety remarks on our container labels when handling our products. The dangerous goods regulations and the accident prevention regulations of the professional associations must be particularly observed. Keep the EC safety data sheet of the applied product at hand since it provides you with useful instructions for the safe use and disposal of the product as well as for actions to be taken in case of accidents.

We reserve the right to modify the product and technical leaflet.

Our department for applied technique is always at your service for further information and advice.

Our technical advice and recommendations given verbally, in writing or by trials are believed to be correct. They are neither binding with regard to possible rights of third parties nor do they exempt you from your task of examining the suitability of our products for the intended use. We cannot accept any responsibility for application and processing methods which are beyond our control.

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MM Cat L6W NT 2-Part Moulding Rubber Catalysts

Introduction

The MM catalysts are specially formulated for use with the MM900 series and MM800 series moulding rubbers. They offer the end user a greater flexibility to meet the requirements of the application and give some unique additional properties to products in the MM900 and MM800 series. MM NT catalysts offer the end user a less hazardous option and improved resistance to inhibition from moulding clays and polyurethane casting resins in comparison to catalysts based on dibutyltin dilaurate.

Key Features

- Long pot life catalyst
- Standard pot life catalysts
- Fast cure catalysts
- Colourless catalysts
- Application specific catalysts – leather
- Application specific catalysts – shoe sole moulding
- Booster additive for low temperature / humidity

Use and Cure Information

The curing process starts as soon as the catalyst is added to the MM900 series or MM800 series rubber base. 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 MM900 series or MM800 series and the relevant parts by weight of catalyst, (see table 2), 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 (where applicable) 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.

Storage and Shelf Life – Expected to be 12 months in original, unopened containers below 40°C.

Revision Date: 27.032018

Table 1 General Properties

<u>MM Catalyst</u>	<u>Characteristic</u>
CAT B5 NT	Blue, standard cure, less hazardous
CAT R5 NT	Red, fast cure, less hazardous.
CAT L6W NT	Colourless, standard cure, less hazardous
CAT W	Booster to accelerate cure
CAT L5 NT	Colourless, long pot life, leather application
CAT VE NT	Various colours, standard cure, shoe sole moulds
CAT VEI NT	Green, fast cure, shoe sole moulds.

Table 2 Typical Curing Properties

(At 23 +/- 2°C and 45 to 55% relative humidity)

<u>MM Catalyst</u>	<u>Addition Level</u>	<u>Pot Life (minutes)</u>	<u>Demould Time (hours)</u>
B5 NT	5	>45	<24
R5 NT	5	15 to 45	<3
L6WNT	5	>45	<24
CAT W*	1	15 to 30	1 to 2
CAT L5 NT	5	>60	<24
CAT VE NT	5	>20	<3
CAT VEI NT	5	5 to 20	<1.5

* must be used in addition to standard cure speed MM catalyst.

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

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

Packages – 250 g and 1 kg non-returnable containers except MM Cat W which is only available in 1 kg non-returnable containers. Please contact your Regional Sales Manager to discuss other packaging options.

The information and recommendations in this publication are to the best of our knowledge reliable. However nothing herein is to be construed as a warranty or representation. Users should make their own tests to determine the applicability of such information or the suitability of any products for their own particular purposes. Statements concerning the use of the products described herein are not to be construed as recommending the infringement of any patent and no liability for infringement arising out of any such use is to be assumed.