Technical Data Sheet

MM918 (old RTV918)
2-Part Moulding Rubber

Introduction
MM918 is a two component room temperature condensation curing silicone compound.
The cured product is an excellent rubber with very high mechanical properties and good shelf-life stability, for mould making of intricate patterns, skin moulding and applications demanding a tougher rubber. The hardness of the cured rubber is at the mid-point in the RTV900 Series range. It offers an exceptional combination of outstanding physical properties and has been shown to be a very robust rubber which is suitable for many applications.

Key Features
- No inhibition
- Easy degassing
- Very high tear strength
- Good dimensional stability
- Good chemical resistance to resins (PE-PU-Epoxy)

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.
The normal catalyst for use with the MM900 series of rubbers is MM CAT B5. Relatively fast cure and demoulding is possible using MM CAT R5.

How to Use
Charge 95-100 parts by weight of MM918 and 5 parts by weight of MM CAT B5 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
MM918 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:-

- MM918 95 - 100 parts by weight
- MM CAT B5 5 parts by weight (or CAT R5)
- 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
Uncured Product		
Colour:		Pale blue
Appearance:		Viscous liquid
Viscosity:	Brookfield	22500 mPa.s
Catalysed viscosity		16500 mPa.s
Pot Life:		80 minutes *
De-mould time		<8 hours *
* measured at 23+/-2°C and 65% relative humidity.		
Cured Elastomer		
(after 7 days cure at 23+/-2°C and 65% relative humidity)		
Tensile Strength:	BS903 Part A2	2.70 MPa
Elongation at Break:	BS903 Part A2	450 %
Youngs Modulus:		1.18 MPa
Modulus at 100% Strain:	BS903 Part A2	0.67 MPa
Tear Strength:	BS903 Part A3	20 kN/m
Hardness:	ASTM D 2240-95	16° Shore A
Specific Gravity:	BS 903 Part A1	1.27
Linear Shrinkage:		0.39 %
Coefficient of Thermal Expansion:		
Volumetric		713 ppm / °C
Linear		237 ppm / °C
Min. Service Temperature:		-50 °C
Max. Service Temperature:	AFS 1540B	200 °C

Electrical Properties

Volume Resistivity:	ASTM D-257	$1x10^{13}$ Ω.cm

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

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

Packages – MM918 is supplied in 5 kg and 20 kg bulk containers.
MM CAT B5 is supplied in 250 g and 1 kg containers.
MM TA2 is supplied in 50g, 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 12 months in original, unopened containers below 40°C.

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