

## MM230 2 Part addition cure moulding rubber

### Introduction

**MM230** is a pourable 2-part addition cure silicone elastomer system. After mixing parts 'A' and 'B' in the correct proportions, the system will cure at ambient temperatures within 24 hours, but the rate of cure can be accelerated by heat. The cured rubber exhibits excellent physical and electrical properties. It is ideally suited for the manufacture of Tampo Printing Pads.

**MM230 is available in the following colours:**

**MM230R- Red      MM230N- Natural**

### Key Features

- **FDA compliant**
- **Very low shrinkage**
- **Easily degassed**
- **High dimensional stability**

### Food Approvals

**MM230 Yes**

### Use and Cure Information

#### How to Use

#### Tampo Print Pads

**For directions on use in the manufacture of silicone print pads please refer to the ACC Silicones print pad guide which will detail dilution rates to achieve pads of a specific hardness.**

**IMPORTANT: MM230A** contains the platinum catalyst, great care should be taken when using automatic dispensing equipment. Please ensure that it is not contaminated by residual hydride containing rubber in the dispensing equipment, as curing will result. If in doubt, it's advised to thoroughly purge the equipment with a suitable hydrocarbon solvent or silicone fluid. Mix both the A and B parts gently to ensure homogeneity. Place the required amount of A and B parts by weight at the ration of **10:1** (A to B) in a clean plastic or metal container of approximately 3 times their volume, and mix until the colour of the mixture is uniform. Degas by intermittent evacuation, the larger volume of the mixing vessel helps prevent overflow during this operation. In case of automatic dispensing with static mixing head, the two components should be degassed before processing. Recommended vacuum conditions are 30-50 mbar intermittently over 5-10 minutes. Cast the mixture either by gravity or pressure injection.

### Curing Conditions

The following table offers a guide to the rate of cure of **MM230** at various temperatures, mixing of the components between 15 and 25°C is recommended to ensure adequate pot life for degassing and handling. The pot life can be extended to several hours by chilling the components.

Temperature, °C	Max Cure Time	De-mould Time
25	24 hrs	7
100	1 hrs	

### Inhibition of Cure

Great care must be taken when handling and mixing all addition cured silicone elastomer systems, that all the mixing tools (vessels and spatulas) are clean and constructed in materials which do not

interfere with the curing mechanism. The cure of the rubber can be inhibited by the presence of compounds of nitrogen, sulphur, phosphorus and arsenic; organotin catalysts and PVC stabilizers; epoxy resin catalysts and even contact with materials containing certain of these substances e.g. moulding clays, sulphur vulcanised rubbers, condensation cure silicone rubbers, onion and garlic.

Property	Test Method	Value
----------	-------------	-------

#### Uncured Product

Colour A Part:		Various
Colour Mixed		Various
Appearance:		<b>Viscous liquid</b>
Viscosity:	Brookfield	<b>40000 mPa.s</b>
Catalysed viscosity	Brookfield	<b>20000mPa.s</b>
Pot Life:		<b>75 minutes *</b>
De-mould time		<b>7 hours *</b>

\* measured at 23+/-2°C and 65% relative humidity using standard catalyst.

Approved for use with food

**Yes**

#### Cured Elastomer

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

Tensile Strength:	BS903 Part A2	<b>4.00 MPa</b>
Elongation at Break:	BS903 Part A2	<b>650 %</b>
Youngs Modulus:		<b>1.05MPa</b>
Modulus at 100% Strain:	BS903 Part A2	<b>0.90MPa</b>
Tear Strength:	BS903 Part A3	<b>25 kN/m</b>
Hardness:	ASTM D 2240-95	<b>30° Shore A</b>
Specific Gravity:	BS 903 Part A1	<b>1.3</b>
Linear Shrinkage:		<b>0.08 %</b>
Coefficient of Thermal Expansion:		
Volumetric		<b>510 ppm / °C</b>
Linear		<b>170 ppm / °C</b>
Min. Service Temperature:		<b>-60°C</b>
Max. Service Temperature:	AFS 1540B	<b>200 °C</b>

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

### FDA compliance

If approved for food use all components present in the fully cured product are listed in CFR 21, 177.2600, "Rubber articles intended for repeated use". The fully cured rubber satisfies the requirements of CFR21, 177.2600, sub paragraphs (e) for applications involving aqueous foods

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

**Packages – MM230** is supplied in 1.1kg, 5.5 kg and 22 kg bulk containers.

MM TA3 is supplied in 200 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 30°C.

Revision Date: 19/02/2007

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.