TECHNICAL DATA SHEET

SilSo Replicate 21012 (ALPA-SIL MF 3)
2-part silicone moulding rubber

Description

This 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.

Key Features

- Crosslinks at temperatures > 23 °C/77°F even under total exclusion of air and moisture
- Easy processing
- Very good mechanical properties, especially resistance to further tearing
- Crosslinks to a resistant, rubbery-elastic vulcanizate without reaction heat

Application

Application in model making and mould construction as well as for the jewellery industry and for pad printing.

Use and Cure Information

IMPORTANT:

The ‘A’ part of product

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.

Mixing

Both the ‘A’ and ‘B’ parts should be well stirred to ensure the material is uniform and any settlement of the fillers have been remixed. Place the required amount of ‘A’ and ‘B’ parts by weight at the mix ratio shown opposite, in a clean plastic or metal container of approximately 3 times their volume, and mix until the colour of the mixture is uniform. For best results, we recommend degassing. 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. In order to achieve optimum performance, the same "A" and "B" side lot number should be used.

Property	Test Method	Value
Uncured Product		
Appearance		**Translucent**
Color A		**Translucent**
Cure Type		**Addition**
De-mould Time / Full Cure at 23°C/73°F		**16 hrs**
Density A	BS ISO 2781	**1.1**
Density B	BS ISO 2781	**1.1**
Mix Ratio By Weight		**10:1**
Pot Life mins at 23°C/73°F		**60 mins**
Viscosity A	Brookfield	**22500 cP**
Viscosity B	Brookfield	**7000 cP**
Cured Product		
Color		**Translucent**
Density	BS ISO 2781	**1.1 g/cm3**
Elongation at Break	ISO 37	**600 %**
Hardness Shore A	DIN 53 505	**28**
Linear Shrinkage (%)		**< 0.1 %**
Tear Resistance (N/mm)	BS ISO 34-1	**20 N/mm / 114 ppi**
Tensile Strength	ISO 37	**7.5 N/mm2 / 1088 psi**
Storage		
Max Storage Temperature		**30 °C / 86 °F**
Shelf Life		**12 mths**

Inhibition of Cure

Great care must be taken when handling and mixing all addition cured silicone elastomer systems, ensuring 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.

Curing Conditions

The data offers a guide to the rate of cure at various temperatures, mixing of the components at temperatures 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 before mixing.

Health & Safety

Safety Data Sheets available on request.

Packaging

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

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