

## ALPA-SIL 37301 A SP 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

- 10:1 mix ratio
- Low viscosity
- High mechanical properties
- Suited for the production of jewellery molds

### Application

Jewellery moulding

### 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.

### 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

#### Health and 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.

Revision Date 29 Apr 2021  
Revision No 1  
Download Date 12 May 2021

| Property                                     | Test Method | Value                                  |
|--|-------------|--|
| <b>Uncured Product</b>                       |             |  |
| Appearance                                   |             | <b>Translucent</b>                     |
| Colour A Part                                |             | <b>Translucent</b>                     |
| Cure Type                                    |             | <b>Addition</b>                        |
| De-mould Time / Full Cure at 23°C/73°F       |             | <b>24 hrs</b>                          |
| Mix Ratio By Weight                          |             | <b>10:1</b>                            |
| Pot Life at 23°C/73°F                        |             | <b>120 mins</b>                        |
| Tack Free Time / Skin Formation at 23°C/73°F |             | <b>12 - 16 hr</b>                      |
| Viscosity A-Part mPas                        | Brookfield  | <b>23000 mPas</b>                      |
| Viscosity B-Part mPas                        | Brookfield  | <b>250 mPas</b>                        |
| Viscosity Mixed mPas                         | Brookfield  | <b>15000 mPas</b>                      |
| <b>Cured Product</b>                         |             |  |
| Colour                                       |             | <b>Translucent</b>                     |
| Elongation at Break (%)                      | ISO 37      | <b>440 %</b>                           |
| Hardness Shore A                             | DIN 53 505  | <b>37</b>                              |
| Linear Shrinkage (%)                         |             | <b>&lt; 0.1 %</b>                      |
| Tear Resistance (N/mm)                       | BS ISO 34-1 | <b>20 N/mm / 115 ppi</b>               |
| Tensile Strength (N/mm <sup>2</sup> )        | ISO 37      | <b>7.5 N/mm<sup>2</sup> / 1088 psi</b> |
| <b>Storage</b>                               |             |  |
| Max Storage Temperature                      |             | <b>30 °C / 86 °F</b>                   |
| Shelf Life (mths)                            |             | <b>12</b>                              |

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The CHT technical service department is available to offer further information and advice and should it be needed to look at modifying current products or custom formulate a new one to meet your specific requirements. Please contact the technical service department.

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