

POLASTOSIL® M-2000

POLASTOSIL® M-60

Two-component silicone rubbers for electrotechnical purposes

PRODUCT DESCRIPTION

POLASTOSIL® M-2000 and POLASTOSIL® M-60 are condensation curing, two-component silicone elastomers, which after the addition of a catalyst (KATALIZATOR OL-1), cures at room temperature. These rubbers are used as

protection of electric and electronic systems like small engines and transistor systems against influence of external factors such as: humidity, dust, precipitation, etc.

CHARACTERISTICS OF THE NON CURED PRODUCT

| PARAMETERS | UNIT | POLASTOSIL® M-2000 | POLASTOSIL® M-60 |
|-----------------------|----------------------|--------------------|------------------|
| Consistence | | liquid | liquid paste |
| Colour | | transparent | light grey |
| Density at 25°C, min. | [g/cm ³] | ca. 0,97 | ca. 1,2 |
| Viscosity * | [cP] | 2000 ± 500 | 45 000 ± 15000 |
| pH | | 7±1 | min. 4,5 |
| OL-1 catalyst dosage | [% pbw] | 8 | 5 |

* It is possible to reduce the viscosity of Polastosil® M-60 by adding (up to 10% max.) Polastosil® M-500 or Polastosil® M-200 diluent, while Polastosil® M-2000 may be mixed with the above-mentioned diluents in any proportion.

CHARACTERISTICS OF THE CURED PRODUCT

| PARAMETERS | UNIT | POLASTOSIL® M-2000 | POLASTOSIL® M-60 |
|---|-----------|--------------------|------------------|
| Hardness | ShA | 30 | 65 |
| Volatile component content, not less than | [%] | 3 | 3 |
| Working life after adding 5-8 part by weight of OL-1 Catalyst (per 100 part by weight of Polastosil), min. | [minutes] | 30 | 30 |
| Gelation time after adding 5-8 part by weight of OL-1 Catalyst (per 100 part by weight of Polastosil), max. | [hours] | 48 | 24 |
| pH of water extract | | 7 ± 1 | min. 4,5 |

Testing cross-linked samples, seasoned at room temperature for at least 100 hours until hardened

| | | | |
|---|---------|----------------------|----------------------|
| Volume resistivity at temperature 20±5°C and air relative humidity 65±5%, min. | [om.cm] | 1 x 10 ¹² | 1 x 10 ¹³ |
| Surface resistivity at temperature 20±5°C and air relative humidity 65±5%, min. | [om] | 1 x 10 ¹³ | 1 x 10 ¹³ |
| Dielectric loss factor (tg δ) at the frequency 106 Hz, min. | | 0.005 | 0.015 |
| Permittivity at the frequency 106 Hz, not less than | | 3 | 3 |
| Dielectric resistance at temperature 20±5oC and air relative humidity 65±5%, min. | [kV/mm] | 10 | 15 |
| Thermal resistance | [°C] | from -50 to +200 | from -50 to +200 |
| The determination of the Comparative Tracking Index according to PN-EN 60112:2003 (CTI) | [V] | 600 | 600 |

PROCESSING

How to prepare pourable sealant.

1. Weigh out POLASTOSIL® M-2000 and POLASTOSIL® M-60 in clean and dry container with a capacity 5 times greater than the volume of the weighed rubber. There is no need to use containers that comply with specific requirements, for example plastic container may be used.

Remark! *It is not recommended to weigh out large portion of rubber at a time, as it may prolong particular operations, i.e. time of mixing the components (rubber with a catalyst), composition venting, filling the structure with prepared sealant, which may lead the composition to cure in the container in which it is prepared.*

2. Weigh out recommended dosage of OL-1 catalyst.

3. Mix the ingredients. The catalyst must be evenly dissolved in the whole mass as it influences protection quality.

4. It is recommended to leave such a composition in a vacuum chamber (30-60 mbar) in order to vent it. During this treatment, which should be short (less than 5 minutes), at the beginning the composition foams and increases its volume approx. 5 times and then it returns to the original volume - when this happens, switch off vacuum and remove the container with a ready-to-use composition from the chamber. Fill the system with the composition.

SYSTEM PROTECTION

Clean, degrease and dry the system before filling. In order to increase the adhesion of the composition to the surface, the structure should be covered with a silicone primer – PRIMER S-1 and dried in room temperature for about 1 hour. Such a structure should be placed in a casing or a mould and filled with the composition (a mixture of a suitable POLASTOSIL® and OL-1 Catalyst) and then leave the structure open to cross-link and season for about 100 hours in room temperature. Air circulation is very important

as during cross-linking ethanol is liberated, which must be released from hardened mass otherwise a reversion effect may occur. In the event of misrun casting, the fragments of rubber (pourable sealant) might be cut out and filled again. Also in the event of damaged electronic elements covered with rubber, it is possible to cut out surrounding sealant and replace the element and filled with a rubber composition of the same type.

Storage:

Store in original container, in dry storage rooms, at temperature below 30°C.

Warranty period:

12 months from the date of manufacture.

Containers:

1, 5, 30, 60 kg

Producer's notes

The information contained in this document is given in good faith based on our current knowledge. However, this shall not constitute a guarantee for any specific product features. Each user bears the full responsibility for making its own determination as to the suitability of product for its own particular purpose. Because actual use of product by the user is beyond our control, such use is within the exclusive responsibility of the user, and we cannot be held responsible for any loss incurred through incorrect or faulty use of the product. For more detailed information please contact us in writing or by phone.



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