

Description

Silicone compounds with very good resistance to mineral oils.
Good elasticity and low compression set

Characteristics

- Very good resistance to mineral oils.
- Good mechanical properties, especially compression set.
- Resistant to high temperatures. Operating temperature: -60 to 200 °C.
- Available in a wide range of colours (except transparent).
- It doesn't need postcuring to obtain good mechanical properties.
- Hardness: From 40 to 80 Sh A.

Technical Data

Material: High consistency silicone rubber (HCR) for high temperature vulcanization (HTV).

| PROPERTIES | METHOD | UNITS | | | | | |
|-----------------------|--------------------|----------------|------|------|------|------|------|
| Hardness | DIN 53505 | Sh A (+/-5) | 40 | 50 | 60 | 70 | 80 |
| Density | DIN EN ISO 1183-1A | g/cc (+/-0.03) | 1.10 | 1.16 | 1.25 | 1.32 | 1.40 |
| Tensile Strength | DIN 53504 S 1 | MPa | >6.5 | >7 | >7 | >7 | >7 |
| Elongation | DIN 53504 S 1 | % | >380 | >380 | >350 | >250 | >150 |
| C. Set (22 h, 175 °C) | ASTM 815 B | % | <10 | <10 | <10 | <15 | <20 |

Original values for ageing in oils

| PROPERTIES | 40 Sh A | 50Sh A | 60 Sh A | 70 Sh A | 80Sh A |
|-----------------|---------|--------|---------|---------|--------|
| Hardness (Sh A) | 41 | 51 | 58 | 68 | 81 |
| Density (MPa) | 7.20 | 9.20 | 7.90 | 8.40 | 7.60 |
| Elongation (%) | 401 | 476 | 362 | 274 | 162 |

Resistance to IRM OIL 901 (72h, 150 °C)

| PROPERTIES | 40 Sh A | 50Sh A | 60 Sh A | 70 Sh A | 80Sh A |
|-------------------|---------|--------|---------|---------|--------|
| Hardness (Sh A) | 38 | 48 | 54 | 64 | 80 |
| Δ Hardness (Sh A) | -3 | -3 | -4 | -4 | -1 |
| CR (MPa) | 7.60 | 9 | 8.10 | 7.70 | 7.00 |
| Δ CR (%) | 5.6 | -2.2 | 2.5 | -8.3 | -7.9 |
| Elongation (%) | 476 | 501 | 377 | 268 | 152 |
| Δ Elongation (%) | 19 | 5.3 | 4.1 | -2.2 | -6.2 |
| Δ Volume (%) | 6.1 | 6 | 5.3 | 5 | 4 |



SILAM
SILICONE SOLUTIONS LEADER

SILAM OIL

Technical Data Sheet

Resistance to IRM OIL 903 (72h, 150 °C)

| PROPERTIES | 40 Sh A | 50Sh A | 60 Sh A | 70 Sh A | 80Sh A |
|-------------------|---------|--------|---------|---------|--------|
| Hardness (Sh A) | 32 | 37 | 44 | 51 | 66 |
| Δ Hardness (Sh A) | -9 | -14 | -14 | -17 | -15 |
| CR (MPa) | 4.00 | 5.50 | 6.60 | 7.40 | 7.00 |
| Δ CR (%) | -44 | -40 | -17 | -12 | -7.9 |
| Elongation (%) | 267 | 292 | 296 | 236 | 140 |
| Δ Elongation (%) | -33 | -39 | -18 | -14 | -14 |
| Δ Volume (%) | 55 | 52 | 46 | 41 | 31 |

Resistance to LUBRIZOL OS 206 304 oil (504hr, 150 °C)

| PROPERTIES | 40 Sh A | 50Sh A | 60 Sh A | 70 Sh A | 80Sh A |
|-------------------|---------|--------|---------|---------|--------|
| Hardness (Sh A) | 24 | 32 | 38 | 51 | 70 |
| Δ Hardness (Sh A) | -17 | -19 | -20 | -17 | -11 |
| CR (MPa) | 4.20 | 5.00 | 5.80 | 6.30 | 6.40 |
| Δ CR (%) | -42 | -46 | -27 | -25 | -16 |
| Elongation (%) | 404 | 398 | 407 | 251 | 148 |
| Δ Elongation (%) | 0.7 | -16 | -12 | -8.4 | -8.6 |
| Δ Volume (%) | 25 | 24 | 22 | 20 | 15 |

*All data are obtained after press curing with crosslinker C1 15min 165 °C , 4hr 200 °C. / This information serves only as a guide and should not be used to create specifications.

PROCESSING-VULCANIZATION

Compression and/or injection moulding
Extrusion
Calendering
Autoclave

APPLICATIONS

Brackets, hoses, seals, dampers, all type of technical parts
Sheets
Profiles
Tubes
Rollers. Excellent qualities for manufacturing high-quality rollers (easy grinding)

SECTORS

Transportation (automotive, rail, aviation, naval)
Household appliances
Construction
Industrial machinery

PACKAGING/DOSAGE

SILAM OIL is supplied in 20, 270 or 540 kg. cardboard boxes. It can be supplied preformed in:

- Sheets available in different thicknesses.
- Endless strips (several strip dimensions).
- Blocks.

STORAGE / SERVICE LIFE

The compounds should be stored in a closed area and at a temperature below 30°C.

The expiry date is indicated on the label. Product may exhibit altered characteristics if used after expiration date.

Warning to users

The information contained in this document is given in good faith based on our current knowledge. It is only an indication and is in no way binding, particularly as regards infringement of or prejudice to third party rights through the use of our products.

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This information must on no account be used as a substitute for necessary prior tests which alone can ensure that a product is suitable for a given use. Users are responsible for ensuring compliance with local legislation and for obtaining the necessary certifications and authorisations. Users are requested to check that they are in possession of the latest version of this document and SILICONAS SILAM is at their disposal to supply any additional information.