ELASTOSIL® R 701/40

HIGH CONSISTENCY SILICONE RUBBER

Product description

ELASTOSIL® R 701/40 is a non postcure HCR grade for compression molded products.

Special features

- heat- and reversion-stabilised
- Non-post-cure properties:
  The differences in the mechanical properties of post-cured and non-post-cured vulcanizates are only very slight. When Curing Agent E is used, blooming of the decomposition products will not occur.
- The compounds may be blended to produce any shore hardness value between 40 and 80. Blends with products from other series are also possible.
- good resistance to mineral oil
- high elasticity and very low compression set, even when Curing Agent E is used

Application

The compounds are recommended for all kinds of seals that come into contact with mineral oils. ELASTOSIL® R 701/40 is used especially when low compression set is crucial for achieving good seal properties. The compounds may also be used for making high quality silicone-rubber-covered rolls.

Processing

ELASTOSIL® R 701/40 is not recommended for the extrusion.
ELASTOSIL® R 701/40 may be vulcanized with the peroxides normally used for silicone rubber.

Storage

The 'Best use before end' date of each batch is shown on the product label.

Storage beyond the date specified on the label does not necessarily mean that the product is no longer usable. In this case however, the properties required for the intended use must be checked for quality assurance reasons.

Safety notes

Comprehensive instructions are given in the corresponding Material Safety Data Sheets. They are available on request from WACKER subsidiaries or may be printed via WACKER web site http://www.wacker.com.

Product data

Typical general characteristics	Inspection Method	Value
Hardness Shore A	DIN 53505 A	39
Appearance		opaque
Density at 23 °C	ISO 1183-1 A	approx. 1,1 g/cm³
Tensile strength	DIN 53504 S 1	6,90 N/mm²
Elongation at break	DIN 53504 S 1	457 %
Tear strength	ASTM D 624 B	14 N/mm
Rebound resilience	DIN 53512	67 %
Compression set	DIN ISO 815-B (22 h / 175 °C)	7 %

Original values for oil storage	
Hardness Shore A	41
Tensile strength	7,20 N/mm²
Elongation at break	401 %

Oil resistance 72 h/150 °C (IRM OIL 901)	
Hardness Shore A	38
Delta Hardness Shore A	- 3
Tensile strength	7,60 N/mm²
Delta Tensile strength	5,6 %
Elongation at break	476 %
Delta Elongation at break	19 %
Volume change	6,1 %

Oil resistance 72 h/150 °C (IRM Oil 903)	
Hardness Shore A	32
Delta Hardness Shore A	- 9
Tensile strength	4,00 N/mm²
Delta Tensile strength	- 44 %
Elongation at break	267 %
Delta Elongation at break	- 33 %
Volume change	55 %

Oil resistance 504 h / 150 °C (Lubrizol OS 206 304)	
Hardness Shore A	24
Delta Hardness Shore A	- 17
Tensile strength	4,20 N/mm²
Delta Tensile strength	- 42 %
Elongation at break	404 %
Delta Elongation at break	0,7 %
Volume change	25 %

Cure Conditions: 0.7 % C1 Crosslinker; 15 min / 165 °C in press; post curing for 4 h / 200 °C in ventilated air.

Curing agent information:

EL AUX Crosslinker C1	Dicumyl peroxide (98 %)	Dosage: 0.7 %
EL AUX Crosslinker C6	45 % paste of 2,5-bis-(t-butylperoxy)-2,5-dimethyl hexane in silicone rubber	Dosage: 1.2 %
EL AUX Crosslinker E	50 % paste of bis-(2,4-dichlorbenzoyl)-peroxide in silicone fluid	Dosage: 1.5 %

C6 yields similar values to those obtained with C1.

Oil resistance test: with S3a test specimen

These figures are only intended as a guide and should not be used in preparing specifications.

For technical, quality, or product safety questions, please contact:

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