

# 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**

| <b>Typical general characteristics</b> | <b>Inspection Method</b>         | <b>Value</b>                  |
|--|----------------------------------|-------------------------------|
| Hardness Shore A                       | DIN 53505 A                      | 39                            |
| Appearance                             |                                  | opaque                        |
| Density at 23 °C                       | ISO 1183-1 A                     | approx. 1,1 g/cm <sup>3</sup> |
| Tensile strength                       | DIN 53504 S 1                    | 6,90 N/mm <sup>2</sup>        |
|  |                                  |                               |
| 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<br>(22 h / 175 °C) | 7 %                           |

**Original values for oil storage**

|                     |                        |
|---------------------|------------------------|
| Hardness Shore A    | 41                     |
| Tensile strength    | 7,20 N/mm <sup>2</sup> |
| 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/mm <sup>2</sup> |
|                           |                        |
| 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/mm <sup>2</sup> |
|                           |                        |
| 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/mm <sup>2</sup> |
|                           |                        |
| 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)-<br>2,5-dimethyl hexane in silicone rubber | Dosage: 1.2 % |
| EL AUX Crosslinker E  | 50 % paste of bis-(2,4-dichlorbenzoyl)-<br>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.

The data presented in this medium are in accordance with the present state of our knowledge but do not absolve the user from carefully checking all supplies immediately on receipt. We reserve the right to alter product constants within the scope of technical progress or new developments. The recommendations made in this medium should be checked by preliminary trials because of conditions during processing over which we have no control, especially where other companies' raw materials are also being used. The information provided by us does not absolve the user from the obligation of investigating the possibility of infringement of third parties' rights and, if necessary, clarifying the position. Recommendations for use do not constitute a warranty, either express or implied, of the fitness or suitability of the product for a particular purpose.

The management system has been certified according to DIN EN ISO 9001 and DIN EN ISO 14001

WACKER® is a trademark of Wacker Chemie AG. ELASTOSIL® is a trademark of Wacker Chemie AG.

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

Wacker Chemie AG  
Hanns-Seidel-Platz 4  
81737 München, Germany  
[info.silicones@wacker.com](mailto:info.silicones@wacker.com)  
[www.wacker.com](http://www.wacker.com)