

ELASTOSIL[®] R 512/70 OH



High Consistency Silicone Rubber (HCR)

ELASTOSIL[®] R 512/70 OH is a peroxide curing HCR silicone for the manufacture of silicone-insulated safety cables that maintain circuit integrity in case of fire.

Properties

In case of fire ELASTOSIL[®] R 512/70 OH forms a ceramic-like layer with high insulation resistance, good mechanical stability and low smoke formation.

The color of the rubber base is beige. Colors will not match the RAL color codes of the masterbatches used in paste or pellet form in the compound (pastel colors).

ELASTOSIL[®] R 512/70 OH is also available as 2-component-system (ELASTOSIL[®] R 512/70-1 & -2). The advantage is that the properties of the compound can be adjusted easily by modifying the mixing ratio of component -1 & -2 for the particular application.

This product can be used within a temperature range of - 55 °C to + 210 °C.

Specific features

- Ceramifying
- Electrically insulating
- Flame retardant
- Good mechanics

Technical data

Properties Cured

Cure conditions EL R 512/70 OH :

1.8 % ELASTOSIL® AUX Crosslinker E (50% paste of bis-(2,4-dichlorobenzoyl)-peroxide in silicone fluid); 10 min / 135°C in press

Property	Condition	Curing Agent E	Method
Appearance	-	beige	-
Density	-	1.37 g/cm ³	DIN EN ISO 1183-1 A
Hardness Shore A	-	70	ISO 7619-1
Tensile strength	-	6.5 N/mm ²	ISO 37 type 1
Elongation at break	-	300 %	ISO 37 type 1
Volume resistivity	-	10 ¹⁴ Ohmcm	IEC 62631-3-1
Relative Permittivity	50 Hz	3.0	IEC 62631-2-1
Electric strength	-	21 kV/mm	IEC 60243-1
Tear strength	-	18 N/mm	ASTM D 624 B

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

Properties cured – mixing ratio

Cure conditions EL R 512/70-1 / EL R 512/70-2:

1.8 % ELASTOSIL® AUX Crosslinker E (50% paste of bis-(2,4-dichlorobenzoyl)-peroxide in silicone fluid); 10 min / 135°C in press

Property	Mix ratio 2:8	Mix ratio 3:7	Mix ratio 4:6	Method
Appearance	opaque	opaque	opaque	-
Density	1.26 g/cm ³	1.32 g/cm ³	1.37 g/cm ³	DIN EN ISO 1183-1 A
Hardness Shore A	68	69	70	ISO 7619-1
Tensile strength	8.0 N/mm ²	7.5 N/mm ²	6.5 N/mm ²	ISO 37 type 1
Elongation at break	320 %	310 %	300 %	ISO 37 type 1
Volume resistivity	10 ¹⁴ Ohmcm	10 ¹⁴ Ohmcm	10 ¹⁴ Ohmcm	IEC 62631-3-1
Relative Permittivity (50 Hz)	2.8	3	3	IEC 62631-2-1
Electric strength	19 kV/mm	20 kV/mm	21 kV/mm	IEC 60243-1
Tear strength	20 N/mm	20 N/mm	19 N/mm	ASTM D 624 B

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All the information provided is in accordance with the present state of our knowledge. Nonetheless, we disclaim any warranty or liability whatsoever and reserve the right, at any time, to effect technical alterations. The information provided, as well as the product's fitness for an intended application, should be checked by the buyer in preliminary trials. Contractual terms and conditions always take precedence. This disclaimer of warranty and liability also applies particularly in foreign countries with respect to third parties' rights.

Applications

- Wires & Cables
- Safety Cables

Application details

For flame resistant cable constructions (safety cables). Cables made of ELASTOSIL® R 512/70 OH have successfully passed standards, like NFC 32070 CR1, DIN 4102 part 12, UL 2196, EN 50200, IEC 60331-11, etc.

Processing

The raw rubber requires the addition of peroxides for vulcanization at elevated temperatures. A homogeneous incorporation is a must, but please avoid temperatures >30°C along the incorporation process in order to maintain best processing behavior. Pot life is depending on the used peroxide and storage condition.

ELASTOSIL® R 512/70 OH is also available as a 2-component-system (ELASTOSIL® R 512/70 OH-1 & ELASTOSIL® R 512/70 OH-2). The advantage is that the properties of the compound can be adjusted easily by modifying the mixing ratio of component -1 & -2 for the particular application.

For detailed information please refer to the latest edition of our brochure "SOLID AND LIQUID SILICONE RUBBER - MATERIAL AND PROCESSING GUIDELINES".

Packaging and storage

Packaging

This product is available in 20 kg and 540 kg cardboard packaging.

Special delivery forms are possible but depend on several technical and commercial aspects. Please contact your local sales manager in such cases.

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>.

QR Code ELASTOSIL® R 512/70 OH



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

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