

SILPURAN[®] 8020/60



High Consistency Silicone Rubber (HCR)

SILPURAN[®] 8020/60 is an addition-cure, two-component high consistency silicone rubber for the manufacture of molded articles. The vulcanizates show an excellent transparency and good to very good mechanical properties.

SILPURAN[®] 8020/60 is designed for medical applications in compliance with the WACKER SILICONES HEALTH CARE POLICY including implantation for < 30 days.

Properties

SILPURAN[®] 8020/60 meets selected test requirements of ISO 10993 and United States Pharmacopoeia (USP) Class VI. It is designed for medical applications in compliance with the WACKER SILICONES HEALTH CARE POLICY including implantation for < 30 days and is particularly suitable for the economical production of molded articles by compression, transfer or injection molding.

Thanks to addition cure, the vulcanization reaction is significantly faster compared to peroxide curing materials. No peroxide decomposition products are formed during vulcanization.

At service temperatures above approx. 180 °C the addition of suitable heat stabilizers is recommended. Further information about an improvement of the heat stability by use of specific ELASTOSIL[®] AUX Heat Stabilizers can be obtained from the Technical Information Sheet "ELASTOSIL[®] AUX Stabilizers H" or the latest edition of our brochures.

Specific features

- Addition Curing
- Food-contact
- Two-component

Technical data

Properties Cured

Cure conditions: 1.5 % SILPURAN® curing agent M, 15 min / 165 °C in press, post-cured 4 h / 200 °C.

Property	Condition	Value	Method
Density	-	1.16 g/cm ³	DIN EN ISO 1183-1 A
Hardness Shore A	-	60	DIN ISO 48-4
Tensile strength	-	11.2 N/mm ²	ISO 37 type 1
Elongation at break	-	670 %	ISO 37 type 1
Compression Set ⁽¹⁾	22 h 175 °C	30 %	DIN ISO 815-1 type B method A
Appearance	-	transparent	-
Rebound resilience	-	57 %	ISO 4662
Tear strength	-	31 N/mm	ASTM D 624 B

¹post-cured 6 h / 200 °C

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

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

- Medical Equipment

Application details

The following studies were performed on vulcanizates of SILPURAN® 8020/60 according to ISO 10993:

- Cytotoxicity (ISO 10993-5)
- Sensitation LLNA (ISO 10993-10)
- Pyrogenicity (ISO 10993-11)

The following studies were performed on vulcanizates of SILPURAN® 8020/60 according to USP class VI:

- Acute systemic toxicity
- Intracutaneous toxicity
- Implantation test

No adverse effects have been detected at any of the studies performed.

Properly cured and post-cured vulcanizates of SILPURAN® 8020/60 can be used for food contact applications and are suitable for use under the Recommendation "XV. Silicones" of the BfR and FDA 21 CFR §177.2600 "Rubber Articles Intended for Repeated Use" considering any given limitations on extractable and volatile substances.

Processing

SILPURAN® 8020 series may not be cured with peroxides, but only with the catalyst batch SILPURAN® Curing Agent M. SILPURAN® 8020/60 and SILPURAN® Curing Agent M are mixed homogeneously on a roll mill in a ratio of 100 : 1.5. Care must be taken to keep the mill and compound as cool as possible during mixing. The temperature of the rubber should not exceed 35 °C, since otherwise there is a risk of premature curing seriously reducing the pot life. The crosslinking reaction starts when SILPURAN® Curing Agent M has been added. The rate and degree of crosslinking depend on the storage time and temperature. At 23 °C, the mixture has a pot life of approximately 24 h. This can be extended by storing the catalyzed mixture at a lower temperature.

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

SILPURAN® HCR is delivered in blocks (profile diameter = approx. 90 x 100 mm) that are wrapped in an antistatic film and heatsealed in a bag. The customer can thus be sure that the material is not contaminated before it enters the cleanroom.

SILPURAN® HCR is packaged in accordance with class 8 clean room standards (DIN EN ISO 14644).

SILPURAN® is neither produced nor packed under sterile conditions, so the final product has to be sterilized prior to use, if necessary.

Storage

Please store the cardboard boxes in a dry and cool place. Once opened, cardboard boxes should always be resealed after use to avoid any contamination and to prevent the platinum catalyst from being poisoned by amines, sulphur or phosphorus compounds. 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 SILPURAN® 8020/60



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

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