TECHNICAL DATA SHEET

SPECTROPLAST® TRUE SILICONE A60
3D PRINTED SILICONES

PRODUCT DESCRIPTION

True Silicone products are high-performance 3D printed (3DP) silicone rubber products produced by Spectroplast's proprietary Silicone Additive Manufacturing technology. These silicone elastomers are made of 100% pure silicone and fulfill market standards in terms of performance and surface quality. True Silicone products come in various shore durometers and colors including transparent products. All 3D printed products of the True Silicone series are postprocessed after 3D printing to obtain final performance.

CUSTOMER BENEFITS

Silicone Additive Manufacturing with True Silicone enables customers to benefit from:
- Direct fabrication
- No molds required
- Design freedom
- Excellent mechanical performance
- Time and cost savings
- Outstanding surface quality
- Biocompatibility

RECOMMENDED FOR

True Silicone products are intended for use in:
- Healthcare applications, e.g. prosthetics, audiology products, wearables, etc.
- Industrial and technical applications, e.g. sealing elements, dampers, gaskets, etc.
- Micro parts

GENERAL PROPERTIES OF 3DP TRUE SILICONE SILICONES

True Silicone products are high performance elastomers. Products made of True Silicone can be used within a temperature range of - 30 °C to + 180 °C. True Silicone products show a high resistance to harsh environmental influences and are water repellent. They are resistant to various acids and bases. Nonpolar solvents, including petrol and gasoline, cause extensive swelling. They are insulators and show high gas permeability.

APPEARANCE

3D printed True Silicone products provide a smooth surface with an average surface roughness of N12. Surfaces in contact with the building platform have exhibit a surface roughness of < N11. Surfaces in contact with support material (if used) exceed a surface roughness of N12.
True Silicone products are available in matte and glossy surface finish.
For further details, please refer to Spectroplast® design guidelines.

SAFETY NOTES

Comprehensive safety instructions are given in the corresponding Material Safety Data Sheet. They are available on request from Spectroplast®. Please visit www.spectroplast.com or contact info@spectroplast.com.

TECHNICAL DATA SHEET

SPECTROPLAST® TRUE SILICONE A60

3D PRINTED SILICONES

Product data

Typical characteristics	Inspection Method	Value
Hardness Shore A	ISO 7619-1	60
Tensile strength	ISO 37 Type 4	9.1 N/mm^2
Elongation at break	ISO 37 Type 4	270 %
Tear strength	ASTM D624 Type C	13.5 N/mm
Rebound resilience	ISO 4662	> 50 %
Compression set	DIN ISO 815-1 Type B	< 20 %
Density	ISO 1183-1 A	1.13 g/cm^3

Certification	Inspection Method	Result
Biological evaluation of medical devices		
Tests for in vitro cytotoxicity	ISO DIN EN 10993-05	Passed
Tests for irritation and skin sensitization	ISO DIN EN 10993-10	Passed

DISCLAIMER

The information contained herein is in accordance with the contemporary state of our best knowledge but do not absolve the user from carefully checking all supplies on receipt. We reserve the right to alter product specifications within the scope of technical progress and developments. All values were generated from the mean average of samples built in the xy plane. Test specimens were die-cut from 3D printed and postprocessed test films. Persons receiving information are encouraged to make their own determination as to the information's suitability and completeness for their particular application. The provided information does not absolve the user from the obligation of investing the possibility of infringement of any third-party rights. Nothing herein shall be construed as a recommendation for uses, which infringe valid patents or as extending a license under valid patents. No information contained herein constitutes a product warranty of any kind, whether expressed or implied and all implied warranties of merchant ability and fitness for a particular purpose are hereby disclaimed by Spectroplast® AG.