Material Data Sheet Silicone S103 – blue (FDA, peroxide cross linked)

General

S103-BL85 is a blue Methyl Silicone Rubber, commonly referred to as Silicone. Silicone materials are often used in hot air and in applications where chemicals and foodstuff are in contact with the sealing material. Because of lower mechanical properties Silicone materials should not be used for dynamic applications.
Silicone S103 – blue is approved for the use of applications in contact with foodstuff.

Physical properties

Density:	DIN ISO 1183-1	g/cm³	1,54±0,03
Hardness at 23°C:	DIN ISO 7619-1	Shore A	85 ±5
100% Modulus:	DIN 53504	N/mm²	6,1 *
Tensile strength:	DIN 53504	N/mm²	7,5 *
Elongation at break:	DIN 53504	%	117,3 *
Tear strength:	DIN ISO 34-1	kN/m	24,8*
Rebound resiliance:	DIN 53512	%	39,0*
Compression set, 24h, 70°C, 25%:	DIN ISO 815-1	%	3,6 *
Compression set, 24h, 100°C, 25%:	DIN ISO 815-1	%	4,8 *
Compression set, 22h, 175°C, 25%:	DIN ISO 815-1	%	10,8*

* mentioned values are subject to a tolerance of +/- 25%

Temperature range: -55°C to 180°C

Chemical resistance

Resistant to: Water up to 90°C, Steam below 120°C, HFA, HFB, HFC Fluids, HFD-R, HFD-S Fluids, Vegetable Oils, Ozone, Oxygen, Air up to 200°C
Not Resistant to: Silicone Oils, Fuels

Main application

Static and dynamic seals (standard and special), wipers, O-rings, flange seals, rotary seals, rubber energizers (preload elements). Due to its low mechanical properties it should be used for static applications only. Chemical and food industry.

Available certificates

- Conform to (EC) No 1935/2004
- Conform to positive list of FDA 21 CFR 177.2600

Analysis and Evaluation

Values mentioned above are based on several tests performed during development and production of the material. Tests have been performed on standard test pieces specified within the relevant standard within the laboratory. Tests performed on any other pieces which are not related to the corresponding standard or made out of any (semi)finished part or any other part deviating in production process, dimension or age of the material from above may result in different values. The data represents our present empirical values and does not disengage the end user from their obligation to examine the usage of the material for each specific application.

We reserve the right to update this data sheet from time to time if new empirical values are available. Errors and omissions excepted.

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