KOLOFOL
Industry solutions

Silicone rubber sheeting

General-purpose solid silicone rubber (GP 20–GP 80)

ABOUT THIS DATASHEET

Technical characteristics of general-purpose solid silicone rubber sheets at different hardness grades. Values are typical test results, and properties differ by hardness grade.

Hardness	Operating temperature	Intermittent	Standard width
20–80	**−60 / +230**	**+250 °C**	**1000/1200**
Shore A, ±5	°C, general	short-term exposure	mm; standard grade

Mechanical properties

TYPICAL TEST VALUES

Property / unit	GP 20	GP 30	GP 40	GP 50	GP 60	GP 70	GP 80
Hardness [Shore A ±5]	20	30	40	50	60	70	80
Tensile strength [MPa]	10,1	8,0	9,0	9,0	10,0	10,0	7,0
Elongation at break [%]	979	500	525	450	400	320	215
Tear strength [N/mm]	25,0	16,0	23	18	22	20	17
Compression set, 24 hours / 150 °C [%]	23	23	25	15	13	9	18
Compression set, 22 hours / 300 °F [%]	-	20	22	16	10	10	16

Test methods

Property	Test standard	Notes
Hardness	ASTM D2240; DIN ISO 7619-1	**Shore A, ±5**
Tensile strength and elongation	ISO 37 (type 1); ASTM D412 (C); DIN 53504 (S1)	**Varies by grade**
Tear strength	ASTM D624 (B)	**N/mm**
Compression set	BS 903 A6 B; DIN/ISO 815 B; ASTM D395 B/2	**24 h / 150 °C; 22 h / 300 °F**

Additional technical properties

Thermal and electrical properties, configurations and compliance

General physical and electrical properties

Property	Test standard	Value
Brittle point	ASTM D746	**−80 °C**
Limiting oxygen index	BS 2782, Part 1	**24,0 %**
Thermal conductivity	VDE 0304	**0,24 W/(m·K)**
Radiation resistance (typical)	—	**>10^5 Gy (10^7 rad)**
Dielectric strength	VDE 0303	**23 kV/mm**
Dielectric constant	VDE 0303	**2,9**
Dissipation factor	VDE 0303	**3 × 10^{-4}**
Volume resistivity	VDE 0303	**3 × 10^{15} Ω·cm**

Available forms and applications

SUPPLY AND PROCESSING OPTIONS

Continuous rolls; standard widths 1000 and 1200 mm; 1000 × 1000 mm sheets above 15 mm thickness; 1500 and 1800 mm widths on request. Up to 20 mm thick, depending on hardness. Self-adhesive backing, die-cut and waterjet-cut gaskets, narrow strips, a range of colours and colour matching are available.

TYPICAL APPLICATION AREAS

Automotive, construction, general engineering, domestic and commercial use, energy, insulation, catering, food and beverage, lighting, electronics, heating and ventilation (HVAC), and marine.

Compliance and environmental resistance

LISTED COMPLIANCE CLAIMS

FDA 21 CFR 177.2600, BfR XV, EU 1935/2004, REACH and RoHS; FAR 25/JAR 25/CS 25 Appendix F 1(a)(1)(iv) and (v) horizontal flammability test, and FMVSS 302. Compliance claims are reproduced from the source.

DRINKING WATER / WRAS AND ENVIRONMENTAL RESISTANCE

WRAS: GP 40–70 in translucent, blue, white, red and black, for potable water contact up to +85 °C. Good resistance to ozone, oxidation, UV radiation, corona discharge, cosmic and ionising radiation, and weathering.

Indicative values based on the supplied source datasheet (issued 2019-01-01). Suitability for the intended service conditions must be verified.