



## **WILLIAM JOHNSTON & COMPANY LIMITED**

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### **Silicone Rubber FDA IEC WJSIL14300**

Material passes IEC 60079-0: 2011 and EC 60079-31: 2008 for Thermal conditioning and IP Testing  
Material passes IEC 60079-0: 2011 Clause 26.10 and ExTAG DS 2012/011 for Resistance to Light (UV) Tests

#### **Thermal Properties**

The range is suitable for continuous use at temperatures up to 200°C, and up to +232°C for up to 10 hours. Alternatively it will happily operate at -70°C and does not reach its brittle point to -80°C (ASTM D746).

#### **Environmental Resistance**

This material has an excellent resistance to ozone, oxidation, ultraviolet light, corona discharge, cosmic radiation, ionising radiation and weathering in general. Since silicone is inorganic it does not have the carbon backbone in its polymer structure that makes the organic polymers prone to being attacked. Most applications where UV, oxidation and ozone are of concern are outdoor installations such as; Base stations, NEMA enclosures, fiber optic enclosures, LED and solid state light housings, where life expectancy is paramount. Critical, long term gasket design must take UV, oxidation and ozone into consideration (as well as compression set and stress relaxation).

#### **Mechanical Properties**

Hardness Shore A	JISK 6253	ISO 7619-1	60° +/- 5°
Low Temperature Brittleness	JISK 6261	ISO 812 1991	-80°C
Limited Oxygen Index	JISK 6269	BS2782 Pt	23.8%
Resistivity	JISK 6271	ISO1853 1998	0.3x10 <sup>15</sup> Ω.CM
Elongation at break	JISK 6251	ISO 37	min 250%
Compression Set 24 hours @ 150°C	JISK 6262	ISO 815-1 : 2008	13 Typical
Compression Set 22 Hours @ 300°C	JISK 6262	ISO 815-1 : 2008	10 Typical
Tensile Strength (PSI)	JISK 6251	ISO 37 : 1994	min 7 Mpa
Specific Gravity	JISK 6268	ISO 2781	1.16
Tear Strength	JISK 6252	ISO34-1 : 2004	19 N/mm

#### **Description**

A Silicone rubber compound designed to exhibit good resistance to oil at high temperature whilst offering good heat stability and weathering resistance.

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Food Quality status to FDA regulation 21 CFR 177.2600

This material is completely free from Phthalate and meets the requirements of EU1935/2004 and EU directive 2002/95/EC RoHS, REACH.

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