SI800R51 Datasheet

Ultra High Temp Orange Silicone 80A

Overview

SI800R51 is an 80 shore A silicone offering best-in-class high temperature performance at a competitive price. It has excellent resistance to thermal degradation, compression set, & environmental conditions.

Features & Benefits

- Ultra-high temperature resistance
- Low compression set
- Exceptional environmental resistance (O_2, O_3, & UV)
- Fungal resistant

Service Temperature

- -55°C to 315°C (-67°F to 600F)

Specification

- ASTM D 2000 M5GE806 A19 B37 E016 E036 F19

Test Data

Table 1. Physical Properties		
Test	Requirements	Results
Color	Orange	Orange
Hardness, Shore A	80+/-5	77
Tensile Strength, psi (MPa)	865 min	1100 (7.6)
Elongation	100% min	165%
Specific Gravity, g/cm^3		1.18

Table 2. A19 - Heat Aging – 70 hrs at 225°C		
Test (Change)	Requirements	Results
Hardness, Shore A	+10 max	+4
Tensile Strength, %	-25 max	+0
Elongation, %	-30 max	-7

Table 3. B37 – Compression Set - 22 hrs at 175°C		
Test (Change)	Requirements	Results
Permanent Set, %	25 max	18

Table 4. E016 – ASTM Oil #1 Resistance – 70 hrs at 23°C		
Test (Change)	Requirements	Results
Hardness, Shore A	-15 to 0	-5
Tensile Strength, %	-20 max	-16
Elongation, %	-20 max	+2
Volume, %	0 to +10	+0

Table 5. E036 – IRM 903 Oil Resistance – 70 hrs at 200°C		
Test (Change)	Requirements	Results
Hardness, Shore A	-30 max	-21
Volume, %	+60 max	+13

Table 6. F19 – Low Temp Brittleness Test - 3 mins at -55°C		
Test (Change)	Requirements	Results
Brittleness	Non-Brittle	Non-Brittle

Rev G - Update: 10/20/2024
www.CanyonComponents.com
8 Industrial Way, Bldg D, Unit 4
Salem, New Hampshire 03079