

## TECHNICAL DATASHEET:

### kSil™ V-0 Super Soft Flame Resistant Silicone Sponge

**PRODUCT DESCRIPTION**

Lightweight, closed cell silicone sponge.

**TYPICAL APPLICATIONS**

- Automotive
- Aerospace
- Electronics
- Heating and Ventilation (HVAC)
- Lighting
- Marine
- Military
- Rail

**PRODUCT FEATURES & BENEFITS**

- Flame resistant to UL94V0
- Smooth Skin – Excellent sealing capability to IP67
- Meets International Flame and Smoke Standards – NFPA 130 (US) & EN45545-2 (European)
- Low Outgassing Material – Low Smoke index and Low toxicity
- Super low compression set
- Low water absorption
- Weight saving

TECHNICAL DATA	VALUE	TEST METHOD / STANDARD
THICKNESS	1/4", 3/8", 1/2", 5/8", 3/4", 1"	
COLOR	Gray (standard), Black	
CELL STRUCTURE	Closed Cell	
MATERIAL/SUBSTRATE	Silicone Sponge	
DENSITY	10.0 lbs/ft <sup>3</sup>	BSENISO 845, ASTM D3574
BRITTLE POINT	-80°C (-112°F)	ASTM D746
LIMITING OXYGEN INDEX	33.5%	ENO ISO 4589-2: OI
RADIATION RESISTANCE	>10 <sup>5</sup> Grays (10 <sup>7</sup> Rads) typical	
COMPRESSION STRESS 25% STRAIN	2.8 psi	ASTM D1056
COMPRESSION STRESS 40% STRAIN	6.1 psi	BSENISO 3386 part 1,2
TENSILE STRENGTH	24.7 psi	BSENISO 1798, ASTM D412
ELONGATION TO FAILURE	110%	BSENISO 1798, ASTM D412
COMPRESSION SET, 22 HOURS @ 158°F, 50%	<1%	BSENISO 1856
COMPRESSION SET, 22 HOURS @ 212°F, 50%	1%	ASTM D1056
THERMAL CONDUCTIVITY	0.064 w/m.K	DIN EN993-15
WATER ABSORPTION	<1%	ASTM D1056
LOW TEMPERATURE RESISTANCE	-76°F	
HIGH TEMPERATURE RESISTANCE	446°F	
INTERMITTENT TEMPERATURE RESISTANCE	482°F	
FAR 25 APPENDIX F SEC A 1 (i) & (ii) (MINIMUM)	1.5 mm	FAR 25 APP. F SEC A 1 (i)
SMOKE DENSITY (Ds MAX) 25 kWm <sup>2</sup>	3 mm = 20 25 mm = 34	EN ISO 5659-2
TOXICITY (CIT nlp) 600°C	3 mm = 0.04 50 mm = 0.06	NF X 70-100-1 & 2
AVERAGE FLAME PROPAGATION	1.6 inches	ASTM C1166

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<b>SURFACE FLAMMABILITY Is (FLAME SPREAD INDEX)</b>	3 mm = 15 30 mm = 25	ASTM E162
<b>SMOKE DENSITY (FLAMING MODE) Ds</b>	(1.5 mins) 3 mm = 8 30 mm = 11 (4.0 mins) 3 mm = 14 30 mm = 30	ASTM E662
<b>SMOKE DENSITY (NON-FLAMING MODE) Ds</b>	(1.5 mins) 3 mm = 5 30 mm = 10 (4.0 mins) 3 mm = 13 30 mm = 29	ASTM E662
<b>TOXIC GAS GENERATION</b>	3 mm = Pass 30 mm = Pass	BOMBARDIER SMP 800-C
<b>UL94 V0</b>	1.5 mm	
<b>EN45545-2 (HL3)</b>	Pass	
<b>NFPA 130</b>	Pass	
<b>BOMBARDIER – SMP 800c</b>	Pass	
<b>AIRBUS – ABD0031</b>	Pass	
<b>OZONE RESISTANT</b>	Yes	
<b>OXIDATION RESISTANT</b>	Yes	
<b>UV RESISTANT</b>	Yes	
<b>CORONA DISCHARGE RESISTANT</b>	Yes	
<b>COSMIC RADIATION RESISTANT</b>	Yes	
<b>IONISING RADIATION RESISTANT</b>	Yes	
<b>WEATHER RESISTANT</b>	Yes	
<b>ASTM D1056 2D1</b>	Pass	
<b>FMVSS 302</b>	Pass	
<b>JAR 25 APPENDIX F SEC A 1 (i) &amp; (ii)</b>	Pass	
<b>CS 25 APPENDIX F SEC A 1 (i) &amp; (ii)</b>	Pass	

### FLAME RESISTANT – EN45545-2 Classifications:

PROPERTY	DESCRIPTION	RATING
R10	Floors and cavity wall (3 mm - 50 mm thickness range)	HL3
R21	Seating & mattress materials (3 mm – 50 mm thickness range)	HL3
R22	Interior seals (& non-listed interior products <0.2m <sup>2</sup> ) (2 mm - 25 mm thickness range)	HL3 (3 mm – 50 mm)
R23	Exterior Seals (& non-listed exterior products <0.2m <sup>2</sup> ) (2 mm - 25 mm thickness range)	HL3 (3 mm – 50 mm)

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