

# expansil™

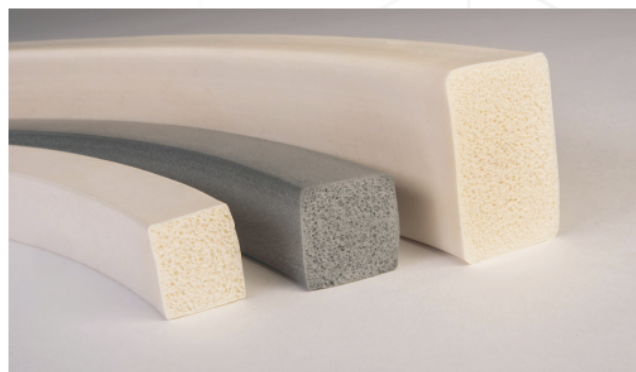
## Silicone Sponge Extrusions

XR Firm

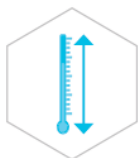
Silicone  
Engineering Ltd

The expansil™XR range is an ultra-low compression set silicone sponge, designed for use in the most demanding sealing applications.

Formulated for applications where extreme temperature resistance and length of service are required, such as LED lighting enclosures and any application where seal replacement is difficult or impractical.



### BENEFITS



#### Temperature range

-60°C to 230°C  
(-76°F to 446°F)



#### Environmental resistance

Ozone, UV and weather resistant



#### Flame retardant

UL94HB  
FAR 25/JAR 25



#### Long life service

vs  
other elastomers

### AVAILABILITY

Cords, Profiles, Strips & Sections  
Pressure Sensitive Adhesive (PSA)  
Joined Rings & Gaskets  
Standard Colours: Red-orange, Black, Grey

### ACCREDITATIONS

UL94HB

UL94 Horizontal Burn  
Flammability Test  
(Not Listed)

FMVSS 302

Federal Motor Vehicle  
Safety Standard

FAR 25/  
JAR 25

Horizontal Flame Test for  
Aerospace  
Applications

Capable of meeting: ASTM D1056 2D5

Silicone  
Engineering Ltd



## Silicone Sponge Extrusions

XR Firm



### MECHANICAL PROPERTIES

Property	Units	Typical Value	Test Method
Density (*Measured on 12.7mm sheet)	kg/m <sup>3</sup> (lb/ft <sup>3</sup> )	500 (26.2)	ASTM D1056
Hardness	Shore OO	55	ASTM D2240
Compression Force Deflection 25%	KPa (psi)	110 (15.0)	ASTM D1056
Tensile Strength	MPa (psi)	0.9 (130)	ASTM D412
Elongation to Failure	%	130	ASTM D412
Compression Set 50%, 24hrs recovery, 22hrs @100°C	%	0.5	ASTM D1056
Compression Set 50%, 24hrs recovery, 22hrs @200°C	%	12	ASTM D1056
Compression Set 50%, 24hrs recovery, 22hrs @225°C	%	17	ASTM D1056
Compression Set 50%, 24hrs recovery, 168h @175°C	%	12	ASTM D1056

### CAPABILITIES

Thickness mm (inches)	Width mm (inches)	Length m (ft)

### GENERAL CHARACTERISTICS

Test	Typical Value	Standard
Brittle Point	-80°C (112°F)	ASTM D746
Limiting Oxygen Index	24%	BS 2782 Part 1
Thermal Conductivity	0.11 W.m <sup>-1</sup> .K <sup>-1</sup>	BS 874 Part 2
Radiation Resistance	>10 <sup>5</sup> Grays (10 <sup>7</sup> Rads) typical	

This information and our technical advice, whether verbal, in writing or by way of trials, is given in good faith but without warranty. This also applies where proprietary right are involved. Our advice does not release you from the obligations to check its validity and to test our products as to their suitability for the intended use. The storage, application and use of our products are beyond our control and, therefore entirely your own responsibility. Our products are sold in accordance with our General Conditions of Sale. The information contained within this data sheet is subject to change without notice.