

# expansil™

## Silicone Sponge Extrusions

FR530

Silicone  
Engineering Ltd

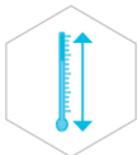
The expansil™FR range is a flame retardant, closed cell silicone sponge, ideal for extrusions.

Formulated for use in extreme temperature applications where additional flame resistance is required.

expansil™FR range is commonly used for joined gaskets, gap fillers and flexible sealing solutions.



### BENEFITS



#### Temperature range

-60°C to 230°C  
(-76°F to 446°F)



#### Environmental resistance

Ozone, UV and weather resistant



#### Flame retardant

UL94V1  
FAR 25/JAR 25



#### Long life service

vs  
other elastomers

### AVAILABILITY

Tubes, Cords, Profiles, Strips & Sections

Pressure Sensitive Adhesive (PSA)

Joined Rings & Gaskets

Standard Colours: Black, White, Grey and Natural

### ACCREDITATIONS

UL94V1

UL94 V1 Flammability Test (Not Listed)

FMVSS 302

Federal Motor Vehicle Safety Standard

FAR 25  
(Vertical)

Flame Test for Aerospace Applications

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FR530



## MECHANICAL PROPERTIES

| Property   | Units                                   | Typical Value | Test Method |
|--|---|---------------|-------------|
| Density (*Measured on 25mm cord sample)            | kg/m <sup>3</sup> (lb/ft <sup>3</sup> ) | 530 (33)      | ISO 845     |
| Hardness   | Shore OO (Sh A)                         | 80 (34)       | ASTM D2240  |
| Compression Force Deflection 40%                   | KPa (psi)                               | 456.6 (31)    | ISO 3386    |
| Tensile Strength                                   | MPa (psi)                               | 1.52 (220)    | ISO 1798    |
| Elongation to Failure                              | %                                       | 148           | ISO 1798    |
| Compression Set 50%, 24hrs recovery, 22hrs @ 70°C  | %                                       | 2.11          | ISO 1856    |
| Compression Set 50%, 24hrs recovery, 22hrs @ 100°C | %                                       | 5.0           | ASTM D1056  |
| Water Absorption                                   | %                                       | < 5           | 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  | 6.4x10 <sup>-2</sup> 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   |                |

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