

# PRODUCT DATA

## AlphaSil

TECHNICAL BULLETIN

### SILICONE SPONGE SPECIFICATION

The silicone sponge sheet that AlphaSil offered are made of a fine cellular construction composed mainly of non-interconnecting cells.

#### Application

Flexible, compressible silicone closed cell sponge is designed for high performance gasketing, thermal shielding, vibration mounts and press pads.

#### Thermal Properties

The thermal stability of silicone rubber is probably its most important asset. Components made from these rubbers are affected only to a small extent by extremes of temperature, ranging from -60°C to +250°C. It can even operate for 10 hours continuously at temperatures as high as +300°C.

Silicone rubber is an excellent electrical insulating material, its resistance to arcing, corona, ultra-violet light and ozone is good.

#### Chemical Composition

This range of polydimethylsiloxane have been “ free - blown ” with a chemical blowing agent and crosslinked with an organic peroxide. The cellular structure is produced without the use of CFC, thus making less damaging to the environment.

#### Flammability Characteristics

SIL 16 has a limiting Oxygen Index (LOI) of 23.2 % and comply with the following specifications :-

- \* FAR 25.853 (a) (1) (iv) and (a) (1) (v) horizontal flammability tests.
- \* CAA specification and issue 2 (2.2) (c) and (d) horizontal flammability tests.

#### Moisture Absorption

The range has a very low degree of moisture absorption. Mechanical properties shows little change even after long periods of immersion.

#### Environmental Resistance

Silicone Rubber has excellent resistance to ozone, oxidation, ultra-violet light, corona discharge, cosmic radiation, ionising radiation and weathering in general. Typical radiation resistance is greater than 10 rads. It decomposes at 400°C to 500°C leaving an inert, non-flammable and electrically non-conductive residue.

PHYSICAL PROPERTIES	VALUE	TEST METHOD
Compression stress at 40% Kpa	90 ± 20	BS 4443 Part 1 Method 5B
Compression set (150°C for 70 hours, recovery period 48 hours, 25% compression )	6%	BS 4443 Part 1 Method 6A
Density ( kg per cubic metre )	Circa 400, closed cell	

Results for Resistance to Heat Ageing ( after 168 hours at 150°C )

PHYSICAL PROPERTIES	VALUE	TEST METHOD
Compression stress at 40% Kpa	90 ± 20	BS 4443 Part 1 Method 5B
Compression set (150°C for 70 hours, recovery period 48 hours, 25 % compression )	5%	BS 4443 Part 1 Method 6A

**Yureka**