

Precision Polymer Engineering Limited			
Material Data Sheet	Material Code	S66E	
	Designation	PVMQ	May 2008

MATERIAL TYPE: Red iron oxide filled, Phenyl/Methyl Silicone Rubber, 65-75 °IRHD. Silicone rubber having methyl, vinyl and phenyl substituent groups on the polymer chain. Meets UK Ministry of Defence aerospace specification DTD818 Class M4 (now obsolescent and inactive for new design).

ASTM & ISO designation = PVMQ.

APPLICATION: Excellent heat resistance plus ultra-low temperature flexibility. Used primarily for dry heat static seals. Low physical strength and poor abrasion resistance prevents dynamic sealing. Although silicone will swell in petroleum lubricants, this is not necessarily detrimental in static sealing applications

TEMPERATURE RANGE: Maximum temperature: +250°C (+482°F).
Minimum temperature: -100°C (-184°F).

STORAGE RECOMMENDATION: Initial storage = 10 years, extended storage = 5 years.

TYPICAL PHYSICAL PROPERTIES:				
Property	Unit	Test Method		Value
Hardness (points)	°IRHD	ASTM D 1415	(=ISO 48)	68
Tensile strength	MPa	ASTM D 412	(=ISO 37)	8.5
Elongation at break	%	ASTM D 412	(=ISO 37)	450
Compression Set, Method B;				
70 hours at 100°C (212°F)	%	ASTM D 395	(=ISO 815)	21
Heat ageing; 70 hrs @ 200°C (392°F);				
Hardness change (points)	°IRHD	ASTM D 1415	(=ISO 48)	+6
Tensile strength change	%	ASTM D 412	(=ISO 37)	-18
Elongation at break change	%	ASTM D 412	(=ISO 37)	-30
Low temperature resistance;				
Non-brittle after 3 minutes at	°C			-90

HEALTH & SAFETY DATA: No known hazard exists if used in accordance with the temperature range as quoted.

FIRE HAZARD: Ignition temperature >300°C (572°F).

Thermal decomposition will generate silica, carbon dioxide and traces of incompletely burned carbon products. In the event of fire, fire fighters must wear self-contained breathing apparatus and a protective suit.

Extinguish with foam, carbon dioxide, dry chemical or fine water spray.

DISPOSAL: Must conform to national, state and/or local regulations. Landfill is recommended. Burning is not recommended, unless conducted by an approved/licensed incineration agency.

SPECIAL NOTE: This information is to the best of our knowledge accurate and reliable. However, PPE make no warranty, expressed or implied, that parts manufactured from this material will perform satisfactorily in the customer's application. It is the customer's responsibility to evaluate parts prior to use, especially in applications where their failure may result in injury and/or damage. It should also be noted that all elastomeric parts have a finite life, therefore a regular program of inspection and replacement is strongly recommended.

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