

Precision Polymer Engineering Limited				
Material Data Sheet	Material Code	S70H	Issue 4 Revision 1	
	Designation	VMQ	August 2012	

MATERIAL TYPE: White Silicone Rubber, 68-78 °IRHD.

Silicone rubber having both methyl and vinyl substituent groups on the polymer chain.

Formulated using only those ingredients determined by the United States Federal Food and Drug Administration (FDA). Water and n-Hexane extraction tested in accordance with Code of Federal Regulations Title 21 (CFR21), Section 177.2600. Also complies with the requirements of USP 29, NF 24 2006: <87> Biological Reactivity Test 'in vitro' and USP 26, NF 21, 2003: <88> Biological Reactivity Tests 'in vivo' Class VI. ASTM & ISO designation = VMQ.

APPLICATION: Excellent heat resistance and low temperature flexibility. Used primarily for dry heat static seals. Low physical strength and poor abrasion resistance prevents dynamic sealing.

TEMPERATURE RANGE: Maximum temperature: +250°C (+482°F).
Minimum temperature: -60°C (-76°F).

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

TYPICAL PHYSICAL PROPERTIES:

Property	Unit	Test Method	Typical Value
Hardness (points)	°IRHD	ASTM D 1415 (=ISO 48)	70
Tensile strength	MPa	ASTM D 412 (=ISO 37)	7.0
Elongation at break	%	ASTM D 412 (=ISO 37)	280
Compression Set, Method B;			
24 hours at 70°C (158°F)	%	ASTM D 395 (=ISO 815)	20
Heat ageing; 168 hrs @ 70°C (158°F);			
Hardness change (points)	°IRHD	ASTM D 1415 (=ISO 48)	±5
Tensile strength change	%	ASTM D 412 (=ISO 37)	±20
Elongation at break change	%	ASTM D 412 (=ISO 37)	±30
FDA Regulation Extraction test		Authorised limits Mg/sq.inch	Materials extracted FC70MOWHA/1 (batch P3157)
Distilled water	First 7 hours	20	0.1, 0.7
	2 succeeding hours	1	<0.1,0.2
n-Hexane	First 7 hours	175	16.2, 16.8
	2 succeeding hours	4	0.6, 0.6
Low temperature resistance;			
Non-brittle after 3 minutes at	°C		-60

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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