


Precision Polymer Engineering Ltd				
Material Data Sheet	Code	V70Q	Issue 3, Revision 6	
	Designation	FKM / FPM	Nov 2010	

MATERIAL TYPE: Black, Fluoroelastomer Rubber, 66-75 °IRHD. Copolymer of vinylidene fluoride and hexafluoropropylene. ASTM designation = FKM. ISO designation = FPM.

Formulated using only those ingredients determined by the United States Food and Drug Administration (FDA) in accordance with Code of Federal Regulations Title 21 (CFR21) Part 177.2600.

WRC approved for cold water applications. **WRC Reference No: 0907521**

APPLICATION: FDA grade, formulated for use as product contact surfaces in dairy equipment.

TEMPERATURE RANGE: Maximum operating temperature +200°C (392°F).
Minimum operating temperature -20°C (-4°F).

SHELF LIFE CLASSIFICATIONS: Initial storage = 10 years, extended storage = 5 years.

TYPICAL PHYSICAL PROPERTIES:

Property	Unit	Test method	Value
Hardness (points)	°IRHD	ASTM D1415 (=ISO 48)	70
Tensile strength	Mpa	ASTM D412 (=ISO 37)	12.0
Elongation at break	%	ASTM D412 (=ISO 37)	200
Compression Set, Method B;			
22 hours at 175°C (347°F)	%	ASTM D395 (=ISO 815)	35
Heat Resistance;			
72 hours at 250°C (482°F)		ASTM 573 (=ISO 188)	
Hardness change (points)	°IRHD	ASTM D1415 (=ISO 48)	±10
Tensile strength change	%	ASTM D412 (=ISO 37)	-25
Elongation at break change	%	ASTM D412 (=ISO 37)	-25

Fluid Resistance;	Hardness change (points)	Weight change (%)	Volume change (%)
Milk Fat, 22 hours at 70°C.	±5 max.	±5 max.	±5 max.
Distilled Water, 22 hours at 70°C.	±5 max.	±5 max.	±5 max.
Nitric Acid, 22 hours at 82°C.	±5 max.	±5 max.	±5 max.
Alkaline Cleaner, 22 hours at 82°C.	±5 max.	±5 max.	±5 max.

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

FIRE HAZARD: Ignition temperature >315°C(599°F). Thermal decomposition will generate; hydrogen fluoride, fluorinated hydrocarbons, carbon monoxide and carbonyl fluoride. In the event of fire, fire fighters must wear self-contained breathing apparatus and a protective suit. Extinguish with water, foam, carbon dioxide or dry chemical. Neutralise any refuse from a fire involving fluoroelastomer with calcium hydroxide solution and wear Neoprene® gloves before handling.

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 to the date indicated. 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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