

**Polydemethyl Siloxane (VMQ)** also called SILICON is a relatively expensive rubber, which includes several types as identified by the substituent group on the siloxane polymer chain. These polymers have relatively low tensile, tear, elongation & abrasion properties, but these properties are retained after aging under a variety of service conditions. Silicon compounds are resistant to heat and high-aniline point oils, atmospheric conditions, ozone and compression set. Electrical properties are excellent. It is also flexible at very low temperatures. Silicone does possess extraordinary resistance to oxidation and ozone degradation due to the absence of unsaturated double bonds in the polymer backbone. Since it is fully saturated only peroxides can be used for hot vulcanization processes. It is frequently specified in food and beverage applications, as it does not impart any taste or odor.

**Limitations:** Poor resistance to gas permeation. Not recommended for use with chlorinated solvents, aliphatic & aromatic hydrocarbons, phosphate hydraulic fluids, ketones and petroleum oils or in an environment which will subject the component to excessive mechanical stress.

**Temperature Resistance:** -65°C to 235°C (-85° to 450°F)

**Typical Uses:** Medical Parts, Food & Beverage Seals, Refrigerator Spares,

**Physical Properties:**

	Excellent	Good	Fair	Poor
Tensile strength				•
Elongation	•			
Low temperature flexibility	•			
Compression Set		•		
Tear resistance				•
Abrasion resistance				•
Flame resistance		•		
Gas permeability				•

**Chemical Resistance:**

	Excellent	Good	Fair	Poor
Ozone	•			
Weather	•			
Dilute alkalis	•			
Vegetable oils	•			
Dilute acids		•		
Water			•	
Steam			•	
Petroleum oils				•
Ketones				•