

**Material: Silicone Rubber (VMQ)****Form:** Extrusions, Sheets, Gaskets, Cords, Custom Moulded Parts**1. General Description:**

Silicone Rubber (VMQ) is a high-performance elastomer based on **polysiloxane polymers**. It is known for its **outstanding heat and cold resistance**, excellent flexibility, **UV and ozone stability**, and **non-toxic** nature. It is widely used in **food, medical, electrical, and industrial** applications.

2. Standard Physical Properties

Property	Typical Value
Color	Red / Transparent / Custom
Specific Gravity	1.10 – 1.50 g/cm ³
Hardness	30 – 80 Shore A
Tensile Strength	6 – 11 MPa
Elongation at Break	250% – 750%
Tear Strength	15 – 30 kN/m
Compression Set (22h @ 175°C)	≤ 25%
Resilience (Rebound)	20 – 40%
Brittleness Temperature	Below –60°C
Flammability	V-0 (for flame retardant grades)

3. Temperature Resistance

Category	Value
Continuous Use	–60°C to +200°C
Intermittent Use	Up to +230°C
Low Temperature	Down to –70°C (special grades)
Thermal Aging	Excellent

4. Electrical Properties (Insulation Grade)

Property	Typical Value
Dielectric Strength	≥ 20 kV/mm
Dielectric Constant (1 MHz)	2.7 – 3.3
Volume Resistivity	≥ 1×10 ¹⁴ Ohm·cm
Dissipation Factor	≤ 0.001
Tracking Resistance	Excellent

5. Chemical Resistance

Resistant To	Not Recommended For
Water, steam	Ketones (e.g. MEK)
UV radiation, ozone	Aromatic solvents (e.g. benzene)
Oxidizing agents	Concentrated acids or alkalis
Many polar solvents	Petroleum oils (unless fluorosilicone)
Alcohols, glycols, vegetable oils	Chlorinated hydrocarbons



6. Available Grades

Grade Type	Features
General Purpose	Standard industrial sealing
FDA / Food Grade	Non-toxic, white or translucent, compliant with 21 CFR 177.2600
Platinum Cured	Odorless, medical-grade, low extractables
Flame Retardant	UL94-V0 certified
Electrically Conductive	EMI shielding, static discharge
High Strength	High tear resistance for dynamic seals
Sponge Silicone	Closed cell, lightweight applications

Note: We only have third party certification for FDA Compliance.

7. Product Forms & Sizes

Form	Size Range (Typical)
Sheets	0.5 mm to 25 mm thickness
Extruded Profiles	U, D, P, E, T, and custom profiles
Cords & Tubes	Ø1 mm to Ø100 mm (solid or hollow)
Moulded Parts	Per drawing/specification
Extruded Parts	Per Drawing/specification
Color Options	Red, White, Blue, Grey, Transparent, Black

9. Typical Applications

- Food processing seals, baking oven gaskets
- Autoclave and sterilizer seals
- Electrical insulation and terminal covers
- Medical tubing and diagnostic seals
- Weatherproofing, outdoor gaskets
- LED & lighting gaskets
- High temperature static seals

10. Packaging & Shelf Life

Parameter	Description
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Shelf Life	Up to 10 years (cool, dark storage)
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Storage Condition	≤ 25°C, avoid direct
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11. Disclaimer: The above information is based on our current knowledge and experience and is offered in good faith. It does not constitute a legally binding warranty. Final suitability and performance of the product should be verified by the end user under actual service conditions.