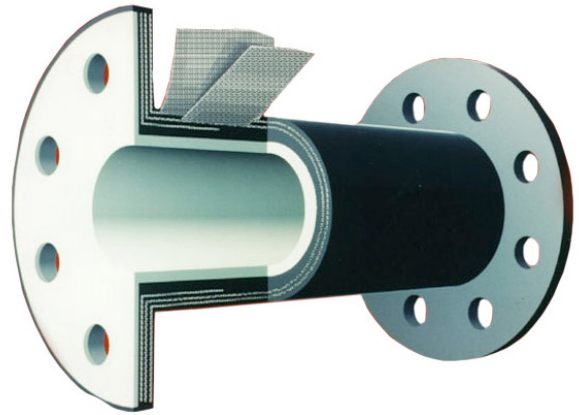


## Elastomer Characteristics

Red Valve's rubber products (Pinch Valve Sleeves, Redflex Expansion Joints and Fittings, Tideflex<sup>®</sup> Duckbill Check Valves and CheckMate<sup>®</sup> UltraFlex In-Line Check Valves) are constructed similarly to a heavy-duty truck tire. The cutaway image of the pinch valve sleeve illustrates the three major components of Red Valve's hand-fabricated products: an elastomer inner tube, high-strength fabric reinforcement and exterior elastomer cover. Each product is cured in an autoclave at a specific temperature and pressure, producing extremely durable products with long service lives. Most Red Valve products are available in the elastomers listed below. Please consult Sales Operations to confirm the elastomer compatibility by product and for the availability of food grade elastomers.



*Pinch Valve Sleeve cutaway image showing different elastomer layers.*

### **Natural Rubber (NR)**

NR has excellent resiliency, tensile strength and abrasion resistance. NR is generally good for most weak chemicals, wet or dry organic acids, alcohols and ketones.

Operating temperature range is -50° to 180°F (-45° to 82°C) continuous service.

### **Chloroprene (CR)**

CR is generally resistant to moderate chemicals, ozone, fats and many hydrocarbons.

Operating temperature range is -50° to 230°F (-45° to 110°C) continuous service.

### **Acrylonitrile Butadiene (NBR)**

NBR is resistant to many hydrocarbons, fats, oils, grease, kerosene and moderate chemicals.

Operating temperature range is -30° to 230°F (-34° to 110°C) continuous service.

### **Chloro-Isobutylene-Isoprene (CIIR)**

CIIR is generally resistant to animal and vegetable fats, oils, greases, ozone, heat and strong oxidizing chemicals. CIIR has the lowest permeability of all the synthetic rubbers.

Operating temperature range is -50° to 250°F (-45° to 121°C) continuous service.

### **Chlorosulfonated Polyethylene (CSM)**

CSM is resistant to heat, ozone, weathering and oxidizing chemicals. It has good resistance to strong acids at room temperatures.

Operating temperature range is -50° to 230°F (-45° to 110°C) continuous service.

### **Ethylene Propylene Diene Terpolymer (EPDM)**

EPDM is recommended for good abrasion resistance at elevated temperatures. Excellent for steam, water, ketones and diluted acids.

Operating temperature range is -50° to 250°F (-45° to 121°C) continuous service.\*

### **Fluoro Rubber (FKM)**

FKM exhibits good resistance to most oils, chemicals, solvents and halogenated hydrocarbons. It has excellent resistance to ozone, oxygen and weathering.

Operating temperature range is -10° to 250°F (-23° to 121°C) continuous service.\*

\*Red Valve currently offers finished hand-fabricated products rated to a maximum of 250°F (121°C) standard for continuous service. This temperature rating is extended to 300°F (148°C) for working pressures of 20 psi (138 kPa) or less.