



# Elastomers



Red Valve Pinch Valve sleeves are constructed similar to a heavy-duty truck tire. This cutaway of a Red Valve hand-crafted quality Pinch Valve sleeve illustrates the design: an elastomer inner tube, the only part of the valve in contact with the process; high strength nylon, polyester, or Kevlar fabric; and an exterior Neoprene cover. These parts are vulcanized under pressure to form a pressure-containing sleeve that is the heart of a Pinch Valve. Pinch Valve sleeves are offered in the following elastomers:

| Elastomer  | Temperature   |
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| <p><b>Pure Gum Rubber</b><br/>This is Red Valve's standard sleeve material for Pinch Valves. It has excellent resiliency, tensile strength, and abrasion resistance. Pure Gum Rubber is generally good for most weak chemicals, wet or dry organic acids, alcohols, and ketones.</p> | -50 <sup>0</sup> F to +1 80 <sup>0</sup> F<br>continuous service. |
| <p><b>Neoprene</b><br/>This elastomer is generally resistant to moderate chemicals, ozone, fats, and many hydrocarbons.</p> <p><i>Also available in: White food grade Neoprene</i></p>   | -50 <sup>0</sup> F to +230 <sup>0</sup> F<br>continuous service.  |
| <p><b>Buna-N</b><br/>Buna-N is resistant to many hydrocarbons, fats, oils, grease, kerosene, and moderate chemicals.</p> <p><i>Also available in: White food grade Buna-N</i></p>  | -30 <sup>0</sup> F to +230 <sup>0</sup> F<br>continuous service.  |
| <p><b>Hypalon®</b><br/>Resistant to heat, ozone, weathering, and oxidizing chemicals. It has good resistance to strong acids at room temperatures.</p>   | -50 <sup>0</sup> F to +230 <sup>0</sup> F<br>continuous service.  |

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**Chlorobutyl**

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

*Also available in: White food grade Chlorobutyl*

-50<sup>0</sup>F to +250<sup>0</sup>F  
continuous service

+300<sup>0</sup>F  
intermittent service

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**Polyurethane**

Polyurethane has excellent abrasion resistance and low temperature flexibility, tear resistance, ozone and weathering resistance. Polyurethane has outstanding oil and fuel resistance, and is generally resistant to moderate chemicals, fats, diluted acids, and many hydrocarbons.

-50<sup>0</sup>F to +300<sup>0</sup>F  
continuous service.

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**EPDM**

Also known as Nordel, EPDM is recommended for good abrasion resistance at elevated temperatures. Good for steam, water, ketones, and diluted acids.

*Also available in: White food grade EPDM*

-50<sup>0</sup>F to +300<sup>0</sup>F  
continuous service

+325<sup>0</sup>F  
surge temperatures

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**Viton®**

Viton exhibits good resistance to most oils, chemicals, solvents, and halogenated hydrocarbons, and an excellent resistance to ozone, oxygen, and weathering.

*Also available in: White food grade Viton.*

-10<sup>0</sup>F to +400<sup>0</sup>F  
continuous service.

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