

Fabric Reinforced Products

Durable, Flexible and Fire Resistant Materials



Why Fabric?

Today's Aerospace, Heavy Duty and Industrial markets are constantly pushing the boundaries of performance in their products. Composite Sealing Systems Division is working directly with manufacturers to provide industry leading tensile strength, pliability, and fire resistance. We are able to achieve these requirements by expanding our product offerings with fabric coated or infused rubber. Reinforcing an elastomer with fabric increases the durability and longevity of a part along with added flame and abrasion resistance. Parker Hannifin continues to expand our product offerings to help our customers meet the demands of a constantly evolving world.



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Product Features:

- Designed to withstand direct flame at 2000 °F for 15 Minutes.
- Work as great thermal insulators to help prevent structural damage.
- Product flexibility allows for easy installation with minimal mating hardware re-work.
- Compatible with Parker compounds
- AMS and Mil approved elastomers
- Increased abrasion resistance for product longevity
- Friction reduction for improve durability
- Increased tensile strength over homogeneous elastomer products
- Low strength degradation over time with extended UV exposure



ENGINEERING YOUR SUCCESS.

Fabric Comparison Chart

| Property | Polyester | Nylon | Nomex® | Glass |
|----------------------------------|-----------|--------|--------|----------|
| Electrical Insulation Properties | ◆◆◆ | ◆◆◆ | ◆◆◆ | ◆◆◆◆ |
| Elongation | Medium | Medium | Medium | Very Low |
| Tensile Strength | ◆◆ | ◆◆◆◆ | ◆◆◆◆ | ◆◆◆ |

| Resistance to: | | | | |
|------------------|------------------|-----------------|------------------|-----------------|
| Aging | ◆◆ | ◆◆ | ◆◆ | ◆◆◆◆ |
| Comparative Cost | Moderate | Moderate | High | Low |
| Flammability | ◆ | ◆ | ◆◆ | ◆◆◆◆ |
| Heat Degradation | ◆◆◆◆ | ◆◆◆ | ◆◆◆◆ | ◆◆◆◆ |
| Ignition Temp | 1040(F°) 560(C°) | 989(F°) 532(C°) | 1200(F°) 650(C°) | No Ignition |
| Melting Point | 480(F°) 249(C°) | 480(F°) 249(C°) | 700(F°) 372(C°) | 600(F°) 300(C°) |
| Moisture | ◆◆◆◆ | ◆◆◆ | ◆◆◆ | ◆◆◆◆ |
| Organic Solvents | ◆◆ | ◆◆ | ◆◆ | ◆◆◆◆ |
| Strong Acid | ◆◆ | N/R | N/R | N/R |
| Strong Alkali | ◆ | ◆◆ | ◆◆ | N/R |
| Weak Acid | ◆◆ | ◆ | ◆ | ◆ |
| Weak Alkali | ◆◆ | ◆◆◆◆ | ◆◆ | ◆ |

Typical Elastomers for Aerospace and Military Applications

- Silicone
- Fire Resistant Silicone
- Fluorosilicone
- Nitrile

Typical Elastomers for Industrial Applications

- Nitrile
- Fluorocarbon
- Neoprene
- Ethylene Propylene

N/R = Not Recommended

Fair = ◆

Good = ◆◆

Very Good = ◆◆◆

Excellent = ◆◆◆◆

Many of Parker's AMS and MIL approved elastomers can be used with wide range of industrial fabrics. Please give Parker CSS Division a call to help with your development project.

