



## All-Flo Pump Materials Compatibility Guide

### Wetted Pump Materials

Polypropylene (Natural)

PVDF

Nylon

Conductive Nylon

Aluminum

316 SS

Electro Polished and passivated 316SS

### Wetted Elastomers

Nitrile

EPDM

Viton®

Geolast®

Santoprene®

PTFE

Urethane

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### Wetted Pump Materials

#### Polypropylene (Natural)

Polypropylene is a good general purpose plastic material used in a wide variety of pumping applications. All-Flo does not use glass fillers in the polypropylene. (Glass fillers will attack hydrofluoric acid and similar chemicals) Temperature range 32 to 150F. Natural polypropylene needs to be protected from direct sunlight. Natural polypropylene will allow light to pass through to the pumped material. (not suitable for UV sensitive paints or inks).

#### PVDF

Polyvinylidene Fluoride or PVDF is a specialty plastic material in the fluoropolymer family and is used generally in applications requiring the highest purity, strength, resistance to solvents, acids, bases and low smoke generation during a fire event. Temperature range 10 to 200F. PVDF is an FDA accepted material.

#### Nylon

Nylon is a material used when pumping solvents, oils, paints and inks. Temperature range 10F to 150F.

## **Conductive Nylon**

Conductive Nylon is Nylon with stainless steel fillers to allow the pump to be groundable. Conductive nylon is used for pumping solvents that have the potential to cause an explosion from an electrical spark from static electricity. Temperature range 0F to 150F.

## **Aluminum**

Aluminum is a light weight metal used for many non-corrosive chemicals, oils and solvents. Do not use aluminum when pumping halogenated solvents. Temperature limit of 212F.

## **316 SS**

316 Stainless Steel (ANSI CF-8M) is used on moderately corrosive liquids and halogenated solvents and has excellent abrasion resistance. Temperature limit of 212F.

## **Electro Polished and passivated 316SS**

Electro polishing or electrochemical polishing is a process that removes material from a metallic surface. Passivation is the formation of a hard nonreactive surface film that inhibits further corrosion by dipping the stainless steel in a nitric acid solution. Electro Polished and passivated 316SS pumps are normally used on food applications where FDA approved materials are required. Temperature limit of 212F.

## **Wetted Elastomers**

### **Nitrile**

Nitrile is a general purpose elastomer used on water and most oils. Temperature range 10F to 180F.

### **EPDM**

EPDM is a general purpose elastomer with good resistance to many acids and bases. Temperature range -40F to 212F.

### **Viton®**

Viton® is an elastomer with good corrosion resistance to a wide variety of chemicals. Temperature range -20F to 212F.

### **Geolast®**

Geolast® is an injection molded thermoplastic material with characteristics similar to Nitrile. Has excellent abrasion resistance. Temperature range 10 to 180F.

### **Santoprene®**

Santoprene® is an injection molded thermoplastic material with characteristics similar to EPDM. Has excellent abrasion resistance. Temperature range -40 to 212F.

### **PTFE**

PTFE or polytetrafluoroethylene is a thermoplastic polymer that is inert to most chemicals. Temperature range 40 to 212F. PTFE is an FDA accepted material.

### **Urethane**

Urethane is a general purpose elastomer that has excellent abrasion resistance. Temperature range 10 to 150F.

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