HYTEK PLASTIC SALES CHEMKOR PIPING SYSTEMS

INDUSTRIAL THERMOPLASTICS AND ELASTOMERS

PVC (Polyvinyl Chloride) Type 1, Grade 1
PVC is the most frequently specified of all thermoplastic materials. It has been used successfully for over 30 years in such areas as chemical processing, industrial plating, chilled water distribution, deionized water lines, chemical drainage, and irrigation systems. PVC is characterized by high physical properties and resistance to corrosion and chemical attack by acids, alkalies, salt solutions and many other chemicals. It is attacked, however, by polar solvents such as ketones, some chlorinated hydrocarbons and aromatics. Of the various types and grades of PVC used in plastic piping systems, Type 1, Grade 1, PVC (Cell Classification 12454-B) conforming to ASTM D-1784 is superior with respect to the above properties. The maximum service temperature of PVC is 140°F. With a design stress of 2000 PSI, PVC has the highest long term hydrostatic strength as 73°F of any of the major thermoplastics being for piping systems. PVC is joined by solvent cementing, threading or flanging.

CPVC (Chlorinated Polyvinyl Chloride) Type 4, Grade 1
CPVC (Cell Classification 23477-B) conforming to ASTM D-1784 has physical properties at 73°F similar to those of PVC, and its chemical resistance is similar to or generally better than that of PVC. CPVC, with a design stress of 2000 PSI and maximum service temperature of 210°F has, over a period of about 15 years, proven to be an excellent material for hot corrosive liquids, hot and cold water distribution and similar applications above the temperature range of PVC, CPVC is joined by solvent cementing, threading or flanging.

POLYPROPYLENE (PP) Type 1
Polypropylene is a polyolefin which is lightweight and generally high in chemical resistance. Although Type 1 polypropylene conforming to ASTM D-2146 is slightly lower in physical properties compared to PVC, it is chemically resistant to organic solvents as well as acids and alkalies. Generally, polypropylene should not be used in contact with strong oxidizing acids, chlorinated hydrocarbons and aromatics. With a design stress of 1000 PSI at 73°F, polypropylene has gained wide acceptance in the petroleum industry where its resistance to sulfur-bearing compounds is particularly useful in salt water disposal lines, crude oil piping and low pressure gas gathering systems. Polypropylene has also proved to be an excellent material for laboratory and industrial drainage where mixtures of acids, bases and solvents are involved. Polypropylene is joined by the thermo-seal fusion process, threading or flanging.

PVDF (Polyvinylidene Fluoride)
PVDF is a strong, tough and abrasive resistant fluorocarbon material that resists distortion and retains most of its strength to 280°F. It is chemically resistant to most acids, bases, and organic solvents and is ideally suited for handling wet or dry chlorine, bromine and other halogens. No other solid thermoplastic piping components can approach the combination of strength, chemical resistance and working temperatures of PVDF. PVDF is joined by the thermo-seal fusion process, threading or flanging.

VITON (Fluorocarbon)
Viton is inherently compatible with a broad spectrum of chemicals. Because of this extensive chemical compatibility which spans considerable concentration and temperature ranges, Viton has gained wide acceptance as a material of construction for butterfly valve o-rings and seats. Viton can be used in most applications involving mineral acids, salt solutions, chlorinated hydrocarbons and petroleum oils.

EPDM (EPT)
EPDM is a terpolymer elastomer made from ethylene – propylene diene monomer. EPDM has good abrasion and tear resistance and offers excellent chemical resistance to a variety of acids and alkalines. It is susceptible to attack by oils and is not recommended for applications involving petroleum oils, strong acids, or strong alkalines.

2175A Teston Road • Maple (Toronto), Ontario • L6A 1T3
Telephone: (905) 832-7977 • Fax: (905) 832-7978
Toll Free Phone: (877) 832-7977 • Toll Free Fax: (888) 216-8926

www.hytekplastics.com