# **PEEK Chemical Compatibility & Resistance Chart**

### **Explanation of Footnotes**

- 1. Satisfactory to 72°F (22°C)
- 2. Satisfactory to 120°F (48°C)

### **Ratings -- Chemical Effect**

- A = Excellent.
- **B = Good --** Minor Effect, slight corrosion or discoloration.
- C = Fair -- Moderate Effect, not recommended for continuous use. Softening, loss of strength, swelling may occur.
- **D = Severe Effect,** not recommended for ANY use.
- N/A = Information not available.

Chemical	Compatibility
Acetaldehyde	A-Excellent
Acetic Acid	A-Excellent
Acetic Acid 20%	A-Excellent
Acetic Acid 80%	A-Excellent
Acetic Acid, Glacial	A-Excellent
Acetone	A-Excellent
Alcohols: Butyl	A-Excellent
Alcohols: Ethyl	A-Excellent
Alcohols: Isopropyl	A-Excellent
Alcohols: Methyl	A-Excellent
Alcohols: Propyl	A-Excellent
Ammonia 10%	A-Excellent
Ammonium Hydroxide	A-Excellent
Aqua Regia (80% HCl, 20% HNO3)	C-Fair
Aromatic Hydrocarbons	A-Excellent
Benzene	A-Excellent
Benzoic Acid	A-Excellent
Boric Acid	A-Excellent
Bromine	C-Fair
Butanol (Butyl Alcohol)	A-Excellent
Calcium Hydroxide	A-Excellent
Chlorine, Anhydrous Liquid	C-Fair
Chloroacetic Acid	A-Excellent
Chloroform	A-Excellent
Cyclohexane	A-Excellent
Cyclohexanone	A-Excellent
Diethylamine	A-Excellent
Ethanol	A-Excellent
Ether	A-Excellent
Ethyl Acetate	A-Excellent
Ethylene Glycol	A-Excellent
Heptane	A-Excellent
Hexane	A-Excellent

Hydrochloric Acid 20% C-Fair Hydrochloric Acid 100% C-Fair Hydrochloric Acid 20% A-Excellent Hydrogen Peroxide 100% A-Excellent Hydrogen Peroxide 100% A-Excellent Hydrogen Peroxide 50% A-Excellent Isooctane A-Excellent Methyloric Acid 100% A-Excellent Methyloric Acid (20%) A-Excellent Nitric Acid (20%) A-Excellent Nitric Acid (20%) A-Excellent Nitric Acid (Concentrated) C-Fair Pentane A-Excellent Perchloric Acid A-Excellent Phenol (10%) A-Excellent Phenol (Carbolic Acid) C-Fair Phosphoric Acid (<40%) A-Excellent Phosphoric Acid (<40%) A-Excellent Potassium Hydroxide (Caustic Potash) A-Excellent Sodium Hydroxide (20%) A-Excellent Sodium Hydroxide (50%) A-Excellent Sodium Hydroxide (80%) A-Excellent Sulfuric Acid (<10%) A-Excellent Sulfuric Acid (75-100%) C-Fair Tetrahydrofuran A-Excellent Trichloroacetic Acid A-Excellent Trichloroacetic Acid A-Excellent Trichloroethylene A-Excellent Trichloroethylene A-Excellent Water, Pistilled A-Excellent Xylene A-Excellent	Hydrobromic Acid 100%	C-Fair
Hydrochloric Acid 20%	Hydrobromic Acid 20%	C-Fair
Hydrofluoric Acid 100%	Hydrochloric Acid 100%	C-Fair
Hydrogen Peroxide 10% A-Excellent Hydrogen Peroxide 50% A-Excellent Isooctane A-Excellent Ketones A-Excellent Methanol (Methyl Alcohol) A-Excellent Methyl Ethyl Ketone A-Excellent Methylene Chloride Nitric Acid (20%) A-Excellent Nitric Acid (Concentrated) Perchloric Acid Perchloric Acid A-Excellent Phenol (10%) A-Excellent Phenol (Carbolic Acid) C-Fair Phosphoric Acid (<40%) A-Excellent Phosphoric Acid (<40%) A-Excellent Pyridine A-Excellent Sodium Hydroxide (Caustic Potash) Sodium Hydroxide (50%) A-Excellent Sodium Hydroxide (80%) A-Excellent Sulfuric Acid (75-100%) C-Fair Tetrahydrofuran A-Excellent Trichloroacetic Acid A-Excellent Trichloroacetic Acid A-Excellent Trichloroethylene A-Excellent Trichloroethylene A-Excellent Water, Distilled Water, Fresh A-Excellent Water, Fresh A-Excellent	Hydrochloric Acid 20%	A-Excellent
Hydrogen Peroxide 100% A-Excellent Hydrogen Peroxide 50% A-Excellent Isooctane A-Excellent Ketones A-Excellent Methanol (Methyl Alcohol) A-Excellent Methyl Ethyl Ketone A-Excellent Methylene Chloride A-Excellent Nitric Acid (20%) A-Excellent Nitric Acid (Concentrated) C-Fair Pentane A-Excellent Perchloric Acid A-Excellent Phenol (10%) A-Excellent Phenol (Carbolic Acid) C-Fair Phosphoric Acid (<40%) A-Excellent Phosphoric Acid (>40%) A-Excellent Pyridine A-Excellent Sodium Hydroxide (Caustic Potash) A-Excellent Sodium Hydroxide (50%) A-Excellent Sodium Hydroxide (80%) A-Excellent Sulfuric Acid (75-100%) C-Fair Tetrahydrofuran A-Excellent Trichloroacetic Acid A-Excellent Trichloroacetic Acid A-Excellent Trichloroethylene A-Excellent Trichloroethylene A-Excellent Trichloroethylene A-Excellent Water, Distilled A-Excellent Water, Fresh A-Excellent	Hydrofluoric Acid 100%	C-Fair
Hydrogen Peroxide 50%  Isooctane  A-Excellent Ketones  A-Excellent Methanol (Methyl Alcohol)  A-Excellent Methyl Ethyl Ketone  Methylene Chloride  A-Excellent Nitric Acid (20%)  A-Excellent Nitric Acid (Concentrated)  Pentane  A-Excellent Perchloric Acid A-Excellent Phenol (10%)  A-Excellent Phenol (Carbolic Acid)  C-Fair Phosphoric Acid (<40%)  A-Excellent Phosphoric Acid (>40%)  A-Excellent Potassium Hydroxide (Caustic Potash) A-Excellent Sodium Hydroxide (20%)  A-Excellent Sodium Hydroxide (50%)  A-Excellent Sulfuric Acid (<10%)  A-Excellent Sulfuric Acid (10-75%)  A-Excellent Sulfuric Acid (75-100%)  C-Fair Tetrahydrofuran  A-Excellent Trichloroacetic Acid A-Excellent Trichloroacetic Acid Trichloroethylene  A-Excellent Water, Distilled A-Excellent Water, Fresh A-Excellent	Hydrogen Peroxide 10%	A-Excellent
Sooctane   A-Excellent	Hydrogen Peroxide 100%	A-Excellent
KetonesA-ExcellentMethanol (Methyl Alcohol)A-ExcellentMethyl Ethyl KetoneA-ExcellentMethylene ChlorideA-ExcellentNitric Acid (20%)A-ExcellentNitric Acid (Concentrated)C-FairPentaneA-ExcellentPerchloric AcidA-ExcellentPhenol (10%)A-ExcellentPhenol (Carbolic Acid)C-FairPhosphoric Acid (<40%)	Hydrogen Peroxide 50%	A-Excellent
Methanol (Methyl Alcohol)A-ExcellentMethyl Ethyl KetoneA-ExcellentMethylene ChlorideA-ExcellentNitric Acid (20%)A-ExcellentNitric Acid (Concentrated)C-FairPentaneA-ExcellentPerchloric AcidA-ExcellentPhenol (10%)A-ExcellentPhenol (Carbolic Acid)C-FairPhosphoric Acid (<40%)	Isooctane	A-Excellent
Methyl Ethyl KetoneA-ExcellentMethylene ChlorideA-ExcellentNitric Acid (20%)A-ExcellentNitric Acid (Concentrated)C-FairPentaneA-ExcellentPerchloric AcidA-ExcellentPhenol (10%)A-ExcellentPhenol (Carbolic Acid)C-FairPhosphoric Acid (<40%)	Ketones	A-Excellent
Methylene Chloride Nitric Acid (20%) A-Excellent Nitric Acid (Concentrated) C-Fair Pentane A-Excellent Perchloric Acid A-Excellent Phenol (10%) A-Excellent Phenol (Carbolic Acid) C-Fair Phosphoric Acid (<40%) A-Excellent Phosphoric Acid (>40%) A-Excellent Potassium Hydroxide (Caustic Potash) A-Excellent Pyridine A-Excellent Sodium Hydroxide (20%) A-Excellent Sodium Hydroxide (50%) A-Excellent Sodium Hydroxide (80%) A-Excellent Sulfuric Acid (<10%) A-Excellent Sulfuric Acid (75-100%) C-Fair Tetrahydrofuran A-Excellent Toluene (Toluol) A-Excellent Trichloroacetic Acid A-Excellent Trichloroethylene A-Excellent Water, Distilled A-Excellent Water, Fresh A-Excellent A-Excellent Water, Fresh A-Excellent	Methanol (Methyl Alcohol)	A-Excellent
Nitric Acid (20%)  Nitric Acid (Concentrated)  Pentane  A-Excellent  Perchloric Acid  A-Excellent  Phenol (10%)  A-Excellent  Phenol (Carbolic Acid)  Phosphoric Acid (<40%)  Phosphoric Acid (>40%)  A-Excellent  Potassium Hydroxide (Caustic Potash)  Pyridine  A-Excellent  Sodium Hydroxide (20%)  A-Excellent  Sodium Hydroxide (50%)  A-Excellent  Sodium Hydroxide (80%)  A-Excellent  Sulfuric Acid (<10%)  A-Excellent  Sulfuric Acid (75-100%)  Tetrahydrofuran  Toluene (Toluol)  Trichloroacetic Acid  Trichloroethylene  A-Excellent  Water, Fresh  A-Excellent  A-Excellent  Water, Fresh  A-Excellent  A-Excellent  A-Excellent  A-Excellent	Methyl Ethyl Ketone	A-Excellent
Nitric Acid (Concentrated)  Pentane  A-Excellent Perchloric Acid A-Excellent Phenol (10%) A-Excellent Phenol (Carbolic Acid) C-Fair Phosphoric Acid (<40%) A-Excellent Phosphoric Acid (>40%) A-Excellent Potassium Hydroxide (Caustic Potash) A-Excellent Pyridine A-Excellent Sodium Hydroxide (20%) A-Excellent Sodium Hydroxide (50%) A-Excellent Sodium Hydroxide (80%) A-Excellent Sulfuric Acid (<10%) A-Excellent Sulfuric Acid (75-100%) C-Fair Tetrahydrofuran A-Excellent Toluene (Toluol) A-Excellent Trichloroacetic Acid A-Excellent Trichloroethylene A-Excellent Water, Fresh A-Excellent Water, Fresh A-Excellent A-Excellent Water, Fresh A-Excellent	Methylene Chloride	A-Excellent
Pentane A-Excellent Perchloric Acid A-Excellent Phenol (10%) A-Excellent Phenol (Carbolic Acid) C-Fair Phosphoric Acid (<40%) A-Excellent Phosphoric Acid (>40%) A-Excellent Potassium Hydroxide (Caustic Potash) A-Excellent Pyridine A-Excellent Sodium Hydroxide (20%) A-Excellent Sodium Hydroxide (50%) A-Excellent Sodium Hydroxide (80%) A-Excellent Sulfuric Acid (<10%) A-Excellent Sulfuric Acid (10-75%) A-Excellent Sulfuric Acid (75-100%) C-Fair Tetrahydrofuran A-Excellent Toluene (Toluol) A-Excellent Trichloroacetic Acid A-Excellent Trichloroethylene A-Excellent Water, Distilled A-Excellent Water, Fresh A-Excellent	Nitric Acid (20%)	A-Excellent
Perchloric Acid A-Excellent Phenol (10%) A-Excellent Phenol (Carbolic Acid) C-Fair Phosphoric Acid (<40%) A-Excellent Phosphoric Acid (>40%) A-Excellent Potassium Hydroxide (Caustic Potash) A-Excellent Pyridine A-Excellent Sodium Hydroxide (20%) A-Excellent Sodium Hydroxide (50%) A-Excellent Sodium Hydroxide (80%) A-Excellent Sulfuric Acid (<10%) A-Excellent Sulfuric Acid (10-75%) A-Excellent Sulfuric Acid (75-100%) C-Fair Tetrahydrofuran A-Excellent Toluene (Toluol) A-Excellent Trichloroacetic Acid A-Excellent Trichloroethylene A-Excellent Water, Distilled A-Excellent Water, Fresh A-Excellent	Nitric Acid (Concentrated)	C-Fair
Phenol (10%) Phenol (Carbolic Acid) Phosphoric Acid (<40%) Phosphoric Acid (>40%) A-Excellent Phosphoric Acid (>40%) A-Excellent Potassium Hydroxide (Caustic Potash) Pyridine A-Excellent Sodium Hydroxide (20%) A-Excellent Sodium Hydroxide (50%) A-Excellent Sodium Hydroxide (80%) A-Excellent Sulfuric Acid (<10%) A-Excellent Sulfuric Acid (10-75%) A-Excellent Sulfuric Acid (75-100%) C-Fair Tetrahydrofuran A-Excellent Toluene (Toluol) A-Excellent Trichloroacetic Acid A-Excellent Trichloroethylene A-Excellent Water, Distilled A-Excellent Water, Fresh A-Excellent	Pentane	A-Excellent
Phenol (Carbolic Acid) Phosphoric Acid (<40%) A-Excellent Phosphoric Acid (>40%) A-Excellent Potassium Hydroxide (Caustic Potash) A-Excellent Pyridine A-Excellent Sodium Hydroxide (20%) A-Excellent Sodium Hydroxide (50%) A-Excellent Sodium Hydroxide (80%) A-Excellent Sulfuric Acid (<10%) A-Excellent Sulfuric Acid (10-75%) A-Excellent Sulfuric Acid (75-100%) C-Fair Tetrahydrofuran A-Excellent Toluene (Toluol) A-Excellent Trichloroacetic Acid A-Excellent Trichloroethylene A-Excellent Water, Distilled A-Excellent Water, Fresh A-Excellent	Perchloric Acid	A-Excellent
Phosphoric Acid (<40%) Phosphoric Acid (>40%) A-Excellent Potassium Hydroxide (Caustic Potash) A-Excellent Pyridine A-Excellent Sodium Hydroxide (20%) A-Excellent Sodium Hydroxide (50%) A-Excellent Sodium Hydroxide (80%) A-Excellent Sulfuric Acid (<10%) A-Excellent Sulfuric Acid (10-75%) A-Excellent Sulfuric Acid (75-100%) C-Fair Tetrahydrofuran A-Excellent Toluene (Toluol) A-Excellent Trichloroacetic Acid A-Excellent Trichloroethylene A-Excellent Water, Distilled A-Excellent Water, Fresh A-Excellent	Phenol (10%)	A-Excellent
Phosphoric Acid (>40%)  Potassium Hydroxide (Caustic Potash) A-Excellent Pyridine  A-Excellent Sodium Hydroxide (20%)  A-Excellent Sodium Hydroxide (50%)  A-Excellent Sodium Hydroxide (80%)  A-Excellent Sulfuric Acid (<10%)  A-Excellent Sulfuric Acid (10-75%)  A-Excellent Sulfuric Acid (75-100%)  C-Fair Tetrahydrofuran  A-Excellent Toluene (Toluol)  A-Excellent Trichloroacetic Acid A-Excellent Trichloroethylene A-Excellent Water, Distilled A-Excellent Water, Fresh A-Excellent	Phenol (Carbolic Acid)	C-Fair
Potassium Hydroxide (Caustic Potash) A-Excellent Pyridine A-Excellent Sodium Hydroxide (20%) A-Excellent Sodium Hydroxide (50%) A-Excellent Sodium Hydroxide (80%) A-Excellent Sulfuric Acid (<10%) A-Excellent Sulfuric Acid (10-75%) A-Excellent Sulfuric Acid (75-100%) C-Fair Tetrahydrofuran A-Excellent Toluene (Toluol) A-Excellent Trichloroacetic Acid A-Excellent Trichloroethylene A-Excellent Water, Distilled A-Excellent Water, Fresh A-Excellent	Phosphoric Acid (<40%)	A-Excellent
Pyridine A-Excellent Sodium Hydroxide (20%) A-Excellent Sodium Hydroxide (50%) A-Excellent Sodium Hydroxide (80%) A-Excellent Sulfuric Acid (<10%) A-Excellent Sulfuric Acid (10-75%) A-Excellent Sulfuric Acid (75-100%) C-Fair Tetrahydrofuran A-Excellent Toluene (Toluol) A-Excellent Trichloroacetic Acid A-Excellent Trichloroethane A-Excellent Trichloroethylene A-Excellent Water, Distilled A-Excellent Water, Fresh A-Excellent	Phosphoric Acid (>40%)	A-Excellent
Sodium Hydroxide (20%)  Sodium Hydroxide (50%)  A-Excellent  Sodium Hydroxide (80%)  A-Excellent  Sulfuric Acid (<10%)  A-Excellent  Sulfuric Acid (10-75%)  A-Excellent  Sulfuric Acid (75-100%)  C-Fair  Tetrahydrofuran  A-Excellent  Toluene (Toluol)  A-Excellent  Trichloroacetic Acid  A-Excellent  Trichloroethylene  A-Excellent  Water, Distilled  A-Excellent  Water, Fresh  A-Excellent	Potassium Hydroxide (Caustic Potash)	A-Excellent
Sodium Hydroxide (50%)  Sodium Hydroxide (80%)  A-Excellent  Sulfuric Acid (<10%)  Sulfuric Acid (10-75%)  A-Excellent  Sulfuric Acid (75-100%)  C-Fair  Tetrahydrofuran  A-Excellent  Toluene (Toluol)  A-Excellent  Trichloroacetic Acid  A-Excellent  Trichloroethane  A-Excellent  Trichloroethylene  A-Excellent  Water, Distilled  A-Excellent  Water, Fresh  A-Excellent	Pyridine	A-Excellent
Sodium Hydroxide (80%)  Sulfuric Acid (<10%)  Sulfuric Acid (10-75%)  A-Excellent  Sulfuric Acid (10-75%)  C-Fair  Tetrahydrofuran  A-Excellent  Toluene (Toluol)  A-Excellent  Trichloroacetic Acid  A-Excellent  Trichloroethane  A-Excellent  Trichloroethylene  A-Excellent  Water, Distilled  A-Excellent  Water, Fresh  A-Excellent	Sodium Hydroxide (20%)	A-Excellent
Sulfuric Acid (<10%)  Sulfuric Acid (10-75%)  A-Excellent  Sulfuric Acid (10-75%)  C-Fair  Tetrahydrofuran  A-Excellent  Toluene (Toluol)  A-Excellent  Trichloroacetic Acid  A-Excellent  Trichloroethane  A-Excellent  Trichloroethylene  A-Excellent  Water, Distilled  A-Excellent  Water, Fresh  A-Excellent	Sodium Hydroxide (50%)	A-Excellent
Sulfuric Acid (10-75%)  Sulfuric Acid (75-100%)  C-Fair  Tetrahydrofuran  A-Excellent  Toluene (Toluol)  A-Excellent  Trichloroacetic Acid  A-Excellent  Trichloroethane  A-Excellent  Trichloroethylene  A-Excellent  Water, Distilled  A-Excellent  Water, Fresh  A-Excellent	Sodium Hydroxide (80%)	A-Excellent
Sulfuric Acid (75-100%)  C-Fair  Tetrahydrofuran  A-Excellent  Toluene (Toluol)  A-Excellent  Trichloroacetic Acid  A-Excellent  Trichloroethane  A-Excellent  Trichloroethylene  A-Excellent  Water, Distilled  Water, Fresh  A-Excellent	Sulfuric Acid (<10%)	A-Excellent
Tetrahydrofuran A-Excellent Toluene (Toluol) A-Excellent Trichloroacetic Acid A-Excellent Trichloroethane A-Excellent Trichloroethylene A-Excellent Water, Distilled A-Excellent Water, Fresh A-Excellent	Sulfuric Acid (10-75%)	A-Excellent
Toluene (Toluol) A-Excellent Trichloroacetic Acid A-Excellent Trichloroethane A-Excellent Trichloroethylene A-Excellent Water, Distilled A-Excellent Water, Fresh A-Excellent	Sulfuric Acid (75-100%)	C-Fair
Trichloroacetic Acid A-Excellent Trichloroethane A-Excellent Trichloroethylene A-Excellent Water, Distilled A-Excellent Water, Fresh A-Excellent	Tetrahydrofuran	A-Excellent
Trichloroethane A-Excellent Trichloroethylene A-Excellent Water, Distilled A-Excellent Water, Fresh A-Excellent	Toluene (Toluol)	A-Excellent
Trichloroethylene A-Excellent Water, Distilled A-Excellent Water, Fresh A-Excellent	Trichloroacetic Acid	A-Excellent
Water, Distilled A-Excellent Water, Fresh A-Excellent	Trichloroethane	A-Excellent
Water, Fresh A-Excellent	Trichloroethylene	A-Excellent
<del></del>	Water, Distilled	A-Excellent
Xylene A-Excellent	Water, Fresh	A-Excellent
	Xylene	A-Excellent

## **WARNING**

The information in this chart has been supplied by reputable sources and is to be used ONLY as a guide in selecting equipment for appropriate chemical compatibility. Before permanent installation, test the equipment with the chemicals and under the specific conditions of your application.

Ratings of chemical behavior listed in this chart apply at a 48-hr exposure period. There exists no specific knowledge of possible effects beyond this period. There exists no warranty (neither express nor implied) that the information in this chart is accurate or complete or that any material is suitable for any purpose.

# **DANGER**

Variations in chemical behavior during handling due to factors such as temperature, pressure, and concentrations can cause equipment to fail, even though it passed an initial test.

# SERIOUS INJURY MAY RESULT

Use suitable guards and/or personal protections when handling chemicals.

Last Modified December 11, 2015