Fluid Compatibility Chart

PF Series (Plastic/Polypropylene Material)

Ratings Code:

G – Good to excellent. Little or no swelling, tensile or surface changes. Preferred choice.

L – Marginal or conditional. Noticeable effects but not necessarily indicating lack of serviceability. Further testing suggested for specific application.Very long-term effects such as stiffening or potential for crazing should be evaluated.

P – Poor or unsatisfactory. Not recommended without extensive and realistic testing.

— – Indicates that this was not tested.

– For Teflon. Indicates good chemical resistance but potential for excessive permeation.

MEDIA	Rating
Acetaldehyde	P
Acetates	L
Acetic Acid	G
Acetic Anhydride	L
Acetone	G
Acetyl Bromide	–
Acetyl Chloride	L
Air	G
Alcohols	L
Aluminum Salts	G
Ammonia	G
Amyl Acetate	L
Aniline	G
Animal Oils	G
Arsenic Salts	L
Aromatic Hydrocarbons	–
Barium Salts	G
Benzaldehyde	L
Benzene (Benzol)	L
Benzyl Alcohol	G
Bleaching Liquors	–
Boric Acid Solution	G
Bromine	P
Butane	L
Butanol	–
Butyl Acetate	P
Calcium Salts	G
Carbon Dioxide	G
Carbon Disulfide	L
Carbon Tetrachloride	P
Caustic Potash	G
Caustic Soda	G
Chloracetic Acid	L
Chlorine (Dry)	P
Chlorine (Wet)	P
Chlorobenzene	P
Chloroform	P
Chromic Acid	G
Copper Salts	G
Cresol	L
Cyclohexanone	L
Ethers	P
Ethyl Acetate	L
Ethyl Alcohol	G
Ethylamine	L
Ethyl Bromide	–
Ethyl Chloride	P
Fatty Acids	G
Ferric Salts	G
Formaldehyde	G
Formic Acid	G
Freon	L
Gasoline	L
Glucose	G

MEDIA	Rating
Glycerine	G
Hydriodic Acid	–
Hydrochloric Acid (Conc.)	G
Hydrochloric Acid (Med. Conc.)	G
Hydrofluoric Acid	G
Hydrogen Peroxide (Conc.)	L
Hydrogen Peroxide (Dil.)	L
Hydrogen Sulfide	G
Iodine	G
Kerosene	P
Ketones	G
Lacquer Solvent	L
Lactic Acid	G
Lead Acetate	G
Linseed Oil	G
Magnesium Salts	G
Naphtha	L
Natural Gas	L
Nickel Salts	G
Nitric Acid (Conc.)	P
Nitric Acid (Dil.)	L
Nitrobenzene	G
Nitrogen Oxides	–
Nitrous Acid	G
Oils (Animal and Mineral)	L
Oils (Vegetable)	L
Oxygen	L
Perchloric Acid	L
Phenol	G
Potassium Salts	G
Pyridine	G
Silver Nitrate	G
Soap Solutions	G
Sodium Salts	G
Stearic Acid	L
Sulfur Chloride	P
Sulfuric Acid (Conc.)	L
Sulfuric Acid (Dil.)	G
Sulfurous Acid	L
Tannic Acid	G
Tanning Extracts	L
Titanium Salts	–
Toluene (Toluol)	P
Trichloracetic Acid	G
Trichlorethylene	P
Turpentine	P
Urea	G
Uric Acid	–
Water	G
Xylene (Xylol)	P
Zinc Chloride	G

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WARNING

SAFETY GUIDE FOR SELECTING AND USING QUICK ACTION COUPLINGS AND RELATED ACCESSORIES

WARNING

DANGER: Failure or improper selection or improper use of quick action couplings or related accessories can cause death, personal injury and property damage. Possible consequences of failure or improper selection or improper use of quick action couplings or related accessories include but are not limited to:

- **Couplings or parts thrown off at high speed.**
- **High velocity fluid discharge.**
- **Explosion or burning of the conveyed fluid.**
- **Contact with suddenly moving or falling objects that are to be held in position or moved by the conveyed fluid.**
- **Dangerously whipping hose.**
- **Contact with conveyed fluids that may be hot, cold, toxic, or otherwise injurious.**
- **Sparking or explosion while paint or flammable liquid spraying.**

Before selecting or using any Parker quick action couplings or related accessories, it is important that you read and follow the following instructions.

1.1 Scope: This safety guide provides instructions for selecting and using (including installing connecting, disconnecting, and maintaining) quick action couplings and related accessories (including caps, plugs, blow guns, and two way valves). This safety guide is a supplement to and is to be used with, the specific Parker publications for the specific quick action couplings and related accessories that are being considered for use.

1.2 Fail-Safe: Quick action couplings or the hose they are attached to can fail without warning for many reasons. Design all systems and equipment in a fail-safe mode, so that failure of the quick action coupling or hose will not endanger persons or property.

1.3 Distribution: Provide a copy of this safety guide to each person that is responsible for selecting or using quick action coupling products. Do not select or use quick action couplings without thoroughly reading and understanding this safety guide as well as the specific Parker publications for the products considered or selected.

1.4 User Responsibility: Due to the wide variety of operating conditions and uses for quick action couplings, Parker and its distributors do not represent or warrant that any particular quick action coupling is suitable for any specific end use system. This safety guide does not analyze all technical parameters that must be considered in selecting a product. The user, through its own analysis and testing, is solely responsible for:

- Making the final selection of the quick action couplings.
- Assuring that the user's requirements are met and that the use presents no health or safety hazards.
- Providing all appropriate health and safety warnings on the equipment on which the quick action couplings are used.

1.5 Additional Questions: Call the appropriate Parker customer service department if you have any questions or require any additional information. For the telephone numbers of the appropriate customer service department, see the Parker publication for the product being considered or used.

2.0 QUICK ACTION COUPLING SELECTION INSTRUCTIONS

2.1 Pressure: Quick action couplings selection must be made so that the published rated pressure of the coupling is equal to or greater than the maximum system pressure. Surge pressures in the system higher than the rated pressure of the coupling will shorten the quick action coupling's life. Do not confuse burst pressure or other pressure values with rated pressure and do not use burst pressure or other pressure values for this purpose.

2.2 Fluid Compatibility: Quick action couplings selection must assure compatibility of the body and seal materials with the fluid media used. See the fluid compatibility chart in the Parker publication for the product being considered or used.

2.3 Temperature: Be certain that fluid and ambient temperatures, both steady and transient, do not exceed the limitations of the quick action couplings. Use caution and hand protection when connecting or disconnecting quick action couplings that are heated or cooled by the media they are conducting or by their environment.

2.4 Size: Transmission of power by means of pressurized liquid varies with pressure and rate of flow. The size of the quick action couplings and other components of the system must be adequate to keep pressure losses to a minimum and avoid damage due to heat generation or excessive fluid velocity.

2.5 Pressurized Connect or Disconnect: If connecting or disconnecting under pressure is a requirement, use only quick action couplings designed for that purpose. The rated operating pressure of a quick action coupling may not be the pressure at which it may be safely connected or disconnected.

2.6 Environment: Care must be taken to ensure that quick action couplings are either compatible with or protected from the environment (that is, surrounding conditions) to which they are exposed. Environmental conditions including but not limited to ultraviolet radiation, ozone, moisture, water, salt water, chemicals, and air pollutants can cause degradation and premature failure.

2.7 Locking Means: Ball locking quick action couplings can unintentionally disconnect if they are dragged over obstructions on the end of a hose or if the sleeve is bumped or moved enough to cause disconnect. Sleeves designed with flanges to provide better gripping for oily or gloved hands are especially susceptible to accidental disconnect and should not be used where these conditions exist. Sleeve lock or union (threaded) sleeve designs should be considered where there is a potential for accidental uncoupling.

2.8 Mechanical Loads: External forces can significantly reduce quick action couplings' life or cause failure. Mechanical loads which must be considered include excessive tensile or side loads, and vibration. Unusual applications may require special testing prior to quick action couplings selection.

2.9 Specifications and Standards: When selecting quick action couplings, government, industry, and Parker specifications must be reviewed and followed as applicable.

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