

Material Options for Different Fluids

In the world of fluid transfer systems, quick couplings play a pivotal role in ensuring efficient and leak-free connections. A critical component of these couplings is the seal ring, which ensures a tight seal and prevents leaks. Selecting the appropriate seal ring material is crucial for the performance and longevity of the quick couplings. Another factor that influence the performance and longevity of hydraulic quick couplings is the material they are made from. The table below lists most of the fluids we will encounter.

In the table, in order to be easy understanding, we use the

- ✓ - satisfactory
- ○ - fair
- ✘ - not recommended
- ? - insufficient data available

You can choose the materials marked satisfactory or fair, or contact us for more information.

| Media | Body Material Options | | | | Seal Ring Material Options | | | |
|---------------------------|-----------------------|-------|--------|-------|----------------------------|------|-----|----|
| | Brass | Steel | SS 316 | SS304 | NBR | EPDM | FKM | CR |
| 3M FC -75 | ? | ? | ? | ? | ✓ | ✓ | ○ | ✓ |
| Acetamide | ? | ? | ✓ | ○ | ✓ | ✓ | ✘ | ✓ |
| Acetic acid (5%) | ✘ | ✘ | ✓ | ✓ | ○ | ✓ | ✓ | ✓ |
| Acetone | ✓ | ○ | ✓ | ✓ | ✘ | ✓ | ✘ | ✘ |
| Acetophenone | ○ | ○ | ○ | ✓ | ✘ | ✓ | ✘ | ✘ |
| Acetyl acetone | ○ | ○ | ○ | ○ | ✘ | ✓ | ✘ | ✘ |
| Acetyl chloride | ? | ○ | ○ | ○ | ✘ | ✘ | ✓ | ✘ |
| Acetylene | ✘ | ○ | ✓ | ✓ | ✓ | ✓ | ✓ | ○ |
| Air (100 °C) | ✓ | ○ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Air (150 °C) | ✓ | ○ | ✓ | ✓ | ○ | ○ | ✓ | ○ |
| Air (200 °C) | ✓ | ○ | ✓ | ✓ | ✘ | ✘ | ✓ | ✘ |
| Aluminium acetate | ? | ? | ? | ? | ○ | ✓ | ✘ | ○ |
| Aluminium bromide | ? | ? | ? | ? | ✓ | ✓ | ✓ | ✓ |
| Aluminium chloride (10%) | ✘ | ✘ | ✘ | ✘ | ✓ | ✓ | ✓ | ✓ |
| Aluminium chloride (100%) | ✘ | ○ | ○ | ○ | ✓ | ✓ | ✓ | ✓ |
| Aluminium fluoride | ✘ | ✘ | ✘ | ✘ | ✓ | ✓ | ✓ | ✓ |
| Aluminium nitrate | ✘ | ✘ | ○ | ○ | ✓ | ✓ | ✓ | ✓ |
| Aluminium salts | ? | ? | ? | ? | ✓ | ✓ | ✓ | ✓ |
| Aluminium sulphate | ○ | ✘ | ○ | ✘ | ✓ | ✓ | ✓ | ✓ |
| Alums (NH3- Cr-K) | ? | ? | ? | ? | ✓ | ✓ | ✘ | ✓ |
| Ammonia (anhydrous) | ✘ | ○ | ✓ | ✓ | ○ | ✓ | ✘ | ✓ |

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|--|-----------------------|-------|--------|-------|----------------------------|------|-----|----|
| | Brass | Steel | SS 316 | SS304 | NBR | EPDM | FKM | CR |
| Ammonia (cold, gas) | ✘ | ○ | ? | ✓ | ✓ | ✓ | ✘ | ✓ |
| Ammonia (hot, gas) | ✘ | ○ | ? | ✓ | ✘ | ○ | ✘ | ○ |
| Ammonium carbonate | ✘ | ○ | ✘ | ✘ | ✘ | ✓ | ✓ | ✓ |
| Ammonium chloride | ✘ | ✘ | ○ | ✘ | ✓ | ✓ | ✓ | ✓ |
| Ammonium hydroxide | ✘ | ✘ | ✓ | ○ | ✘ | ✓ | ✘ | ✓ |
| Ammonium nitrate | ✘ | ✘ | ✓ | ✓ | ✓ | ✓ | ? | ✓ |
| Ammonium persulfate solution | ✘ | ✘ | ✓ | ○ | ✘ | ✓ | ? | ? |
| Ammonium phosphate (Mono-, Di-, Tri-basic) | ✘ | ✘ | ✘ | ○ | ✓ | ✓ | ? | ✓ |
| Ammonium salts | ? | ? | ? | ? | ✓ | ✓ | ✘ | ✓ |
| Ammonium sulphate | ✘ | ✘ | ○ | ✘ | ✓ | ✓ | ✘ | ✓ |
| Amyl borate | ? | ? | ? | ? | ✓ | ✘ | ✓ | ✓ |
| Amyl chloride | ? | ○ | ✓ | ✓ | ? | ✘ | ✓ | ✘ |
| Amyl chloronaphtalene | ? | ? | ? | ? | ✘ | ✘ | ✓ | ✘ |
| Amyl naphthalene | ? | ? | ? | ? | ✘ | ✘ | ✓ | ✘ |
| Animal oil (lard oil) | ○ | ○ | ○ | ○ | ✓ | ○ | ✓ | ○ |
| Aroclor 1248 | ○ | ✘ | ✘ | ✘ | ✘ | ○ | ✓ | ✘ |
| Aroclor 1254 | ○ | ✘ | ✘ | ✘ | ✘ | ○ | ✓ | ✘ |
| Aroclor 1260 | ○ | ✘ | ✘ | ✘ | ✓ | ? | ✓ | ✓ |
| Aromatic fuel -50% | ? | ? | ? | ? | ○ | ✘ | ✓ | ✘ |
| Arsenic acid | ✘ | ✘ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Asphalt | ✘ | ✘ | ✓ | ✓ | ○ | ✘ | ✓ | ○ |
| ASTM oil, n° 1 | ✓ | ✓ | ✓ | ✓ | ✓ | ✘ | ✓ | ✓ |
| ASTM oil, n° 2 | ✓ | ✓ | ✓ | ✓ | ✓ | ✘ | ✓ | ○ |
| ASTM oil, n° 3 | ✓ | ✓ | ✓ | ✓ | ✓ | ✘ | ✓ | ✘ |
| ASTM oil, n° 4 | ✓ | ✓ | ✓ | ✓ | ○ | ✘ | ✓ | ✘ |
| ASTM reference fuel A | ✘ | ○ | ✓ | ✓ | ✓ | ✘ | ✓ | ○ |
| ASTM reference fuel B | ✘ | ○ | ✓ | ✓ | ✓ | ✘ | ✓ | ✘ |
| ASTM reference fuel C | ✘ | ○ | ✓ | ✓ | ○ | ✘ | ✓ | ✘ |
| Automotive brake fluid | ? | ? | ? | ? | ✘ | ✓ | ✘ | ○ |

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|-----------------------------|-----------------------|-------|--------|-------|----------------------------|------|-----|----|
| | Brass | Steel | SS 316 | SS304 | NBR | EPDM | FKM | CR |
| Barium chloride | ✘ | ✘ | ○ | ✘ | ✓ | ✓ | ✓ | ✓ |
| Barium hydroxide | ✘ | ○ | ○ | ✘ | ✓ | ✓ | ✓ | ✓ |
| Barium salts | ? | ? | ? | ? | ✓ | ✓ | ✓ | ✓ |
| Barium sulphide | ✘ | ○ | ✘ | ✘ | ✓ | ✓ | ✓ | ✓ |
| Beer | ✘ | ✘ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Beet sugar liquors | ✘ | ✘ | ✓ | ✓ | ✓ | ✓ | ✓ | ○ |
| Benzaldehyde | ✘ | ✘ | ○ | ✘ | ✘ | ✓ | ✘ | ✘ |
| Benzene | ✘ | ○ | ✘ | ✘ | ✘ | ✘ | ✓ | ✘ |
| Benzenesulfonic acid (10%) | ✘ | ✘ | ✘ | ✘ | ✘ | ✘ | ✓ | ○ |
| Benzine | ? | ? | ? | ? | ✓ | ✘ | ✓ | ○ |
| Benzoic acid | ✘ | ✘ | ✘ | ✘ | ✘ | ✘ | ✓ | ✘ |
| Benzyl alcohol | ? | ✘ | ✓ | ○ | ✘ | ○ | ✓ | ○ |
| Benzyl chloride | ✘ | ✘ | ○ | ✘ | ✘ | ✘ | ✓ | ✘ |
| Bleach liquor | ? | ? | ? | ? | ✘ | ✓ | ✓ | ○ |
| Borax | ✘ | ○ | ✘ | ✘ | ○ | ✓ | ✓ | ✘ |
| Bordeaux mixture | ? | ? | ? | ? | ○ | ✓ | ✓ | ○ |
| Boric acid | ✘ | ✘ | ○ | ✘ | ✓ | ✓ | ✓ | ✓ |
| Brake fluid (non-petroleum) | ○ | ○ | ? | ? | ✘ | ✓ | ✘ | ○ |
| Brine (sodium chloride) | ✘ | ✘ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Bromine | ? | ? | ? | ? | ✘ | ✘ | ✓ | ✘ |
| Bromine water | ? | ? | ? | ? | ✘ | ○ | ✓ | ✘ |
| Bunker oil | ? | ? | ? | ? | ✓ | ✘ | ✓ | ✘ |
| Butadiene (monomer) | ✘ | ○ | ✓ | ○ | ✘ | ✘ | ✓ | ✘ |
| Butane | ✘ | ✓ | ✓ | ✓ | ✓ | ✘ | ✓ | ✓ |
| Butane (2.2 & 2.3-dimethyl) | ? | ? | ? | ? | ✓ | ✘ | ✓ | ○ |
| Butanol (butyl alcohol) | ○ | ✓ | ✓ | ✓ | ✓ | ○ | ✓ | ✓ |
| Butter (animal fat) | ○ | ✘ | ✓ | ○ | ✓ | ✓ | ✓ | ○ |
| Butyl butyrate | ? | ? | ? | ? | ✘ | ✓ | ✓ | ✘ |
| Butyl stearate | ? | ? | ? | ? | ○ | ✘ | ✓ | ✘ |
| Calcine liquors | ? | ? | ? | ? | ✓ | ✓ | ✓ | ? |

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| | Brass | Steel | SS 316 | SS304 | NBR | EPDM | FKM | CR |
| Calcium acetate | ? | ? | ? | ? | ○ | ✓ | ✘ | ○ |
| Calcium bisulphite | ✘ | ✘ | ○ | ✘ | ○ | ✓ | ○ | ○ |
| Calcium carbonate | ✘ | ○ | ✘ | ○ | ✓ | ✓ | ✓ | ✓ |
| Calcium chloride | ✘ | ✘ | ○ | ✘ | ✓ | ✓ | ✓ | ✓ |
| Calcium hydroxide | ✘ | ✘ | ○ | ✘ | ✓ | ✓ | ✓ | ✓ |
| Calcium hypochlorite | ✘ | ✘ | ○ | ✘ | ○ | ✓ | ✓ | ○ |
| Calcium salts | ? | ? | ? | ? | ✓ | ✓ | ✓ | ✓ |
| Calcium sulphide | ✘ | ✘ | ○ | ○ | ✓ | ✓ | ✓ | ✓ |
| Caliche liquors | ? | ? | ? | ? | ✓ | ✓ | ✓ | ✓ |
| Cane sugar liquors | ? | ○ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Carbon bisulphide | ? | ? | ? | ? | ✘ | ✘ | ✓ | ✘ |
| Carbon dioxide | ✓ | ○ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Carbon disulfide | ○ | ○ | ○ | ○ | ✘ | ✘ | ✓ | ✘ |
| Carbon monoxide | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ○ |
| Carbon tetrachloride | ○ | ✘ | ✓ | ✘ | ○ | ✘ | ✓ | ✘ |
| Carbon acid | ✘ | ✘ | ✓ | ○ | ○ | ✓ | ✓ | ✓ |
| Castor oil | ✓ | ✓ | ✓ | ✓ | ✓ | ○ | ✓ | ✓ |
| Cellulube (now fyrquel) | ? | ? | ? | ? | ✘ | ✓ | ✓ | ✘ |
| China wood oil (Tung oil) | ○ | ○ | ✓ | ✓ | ✓ | ✘ | ✓ | ○ |
| Chlorinated salt brine | ? | ? | ? | ? | ✘ | ✘ | ✓ | ✘ |
| Chlorinated solvents | ? | ? | ? | ? | ✘ | ✘ | ✓ | ✘ |
| Chlorobenzene | ✘ | ✘ | ○ | ✘ | ✘ | ✘ | ✓ | ✘ |
| Chlorobutadiene | ? | ? | ? | ? | ✘ | ✘ | ✓ | ✘ |
| Chloroform | ✘ | ○ | ○ | ✓ | ✘ | ✘ | ✓ | ✘ |
| Chlorophenol | ? | ? | ? | ? | ✘ | ✘ | ✓ | ✘ |
| Coconut oil | ? | ? | ? | ? | ✓ | ✘ | ✓ | ✘ |
| Copper chloride | ? | ? | ? | ? | ✓ | ✓ | ✓ | ○ |
| Copper salts | ? | ? | ? | ? | ✓ | ✓ | ✓ | ✓ |
| Copper sulphate | ✘ | ✘ | ○ | ✘ | ✓ | ✓ | ✓ | ✓ |
| Corn oil | ○ | ✓ | ✓ | ✓ | ✓ | ✘ | ✓ | ✘ |

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| | Brass | Steel | SS 316 | SS304 | NBR | EPDM | FKM | CR |
| Cottonseed oil | ✘ | ○ | ✓ | ○ | ✓ | ✘ | ✓ | ✘ |
| Creosols | ✘ | ○ | ✓ | ○ | ✘ | ✘ | ✓ | ✘ |
| Creosote | ✘ | ✘ | ○ | ✓ | ✓ | ✘ | ✓ | ○ |
| Cresylic acid | ? | ○ | ✓ | ○ | ✘ | ✘ | ✓ | ✘ |
| Crude oil | ✘ | ○ | ✓ | ✓ | ○ | ✘ | ✓ | ✘ |
| Cutting oil | ? | ✓ | ✓ | ✓ | ✓ | ✘ | ✓ | ○ |
| Decane | ? | ? | ? | ? | ✓ | ✘ | ✓ | ✘ |
| Denatured alcohol | ? | ? | ? | ? | ✓ | ✓ | ✓ | ✓ |
| Detergent (water solution) | ✘ | ✘ | ✓ | ✓ | ✓ | ✓ | ✓ | ○ |
| Diesel fuel | ✓ | ✓ | ✓ | ✓ | ✓ | ✘ | ✓ | ✘ |
| Diethylene glycol | ✘ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Dimethyl formamide | ? | ? | ✓ | ✓ | ○ | ✓ | ✘ | ✘ |
| Dow chemical HD50-4 | ? | ? | ? | ? | ? | ✓ | ✘ | ○ |
| Dow corning 200, 510, 550 | ? | ? | ? | ? | ○ | ✓ | ✓ | ✓ |
| Dowtherm A, E | ✘ | ✓ | ○ | ○ | ✘ | ✘ | ✓ | ✘ |
| Ethanol | ✓ | ✘ | ✘ | ✘ | ✘ | ✓ | ✘ | ✓ |
| Ethyl chloride | ○ | ✘ | ✓ | ✘ | ✓ | ✘ | ✓ | ✘ |
| Ethyl hexanol | ? | ? | ? | ? | ✓ | ✓ | ✓ | ✓ |
| Ethylene dichloride | ✘ | ✘ | ✓ | ○ | ✘ | ✘ | ✓ | ✘ |
| Ethylene glycol | ○ | ○ | ✓ | ○ | ✓ | ✓ | ✓ | ✓ |
| Fatty acids | ✘ | ✘ | ✓ | ○ | ○ | ✘ | ✓ | ○ |
| Freon 11 | ✓ | ? | ? | ? | ○ | ✘ | ○ | ✘ |
| Freon 12 | ✓ | ✓ | ✘ | ✓ | ○ | ✘ | ✓ | ✓ |
| Freon 22 | ✓ | ✘ | ✓ | ✓ | ✘ | ✘ | ✘ | ✓ |
| Fuel oil | ✘ | ✓ | ✓ | ✓ | ✓ | ✘ | ✓ | ○ |
| Gallic acid | ✘ | ✘ | ○ | ○ | ○ | ○ | ✓ | ○ |
| Gas, liquid, propane (LPG) | ✓ | ✘ | ✓ | ✓ | ✓ | ✘ | ✓ | ○ |
| Gas, natural | ○ | ✘ | ✓ | ✓ | ✓ | ✘ | ✓ | ✓ |
| Gasoline / petrol | ✓ | ○ | ✓ | ✓ | ✓ | ✘ | ✓ | ✘ |
| Gelatine | ✘ | ✘ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |

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|---------------------------------------|-----------------------|-------|--------|-------|----------------------------|------|-----|----|
| | Brass | Steel | SS 316 | SS304 | NBR | EPDM | FKM | CR |
| Glucose | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Glycerine (glycerol) | ○ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Glycols | ✘ | ○ | ○ | ○ | ✓ | ✓ | ✓ | ✓ |
| Green sulphate liquor | ✘ | ✘ | ✘ | ✘ | ○ | ✓ | ✓ | ○ |
| Gulf – FR fluid emulsion | ? | ? | ? | ? | ✓ | ✘ | ✓ | ○ |
| Gulf – FR fluid G | ? | ? | ? | ? | ✓ | ✓ | ✓ | ✓ |
| Gulf – FR fluid P | ? | ? | ? | ? | ✘ | ○ | ○ | ✘ |
| Helium | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Heptane | ✓ | ✓ | ✓ | ✓ | ✓ | ✘ | ✓ | ○ |
| Hydraulic oil (petroleum base) | ✓ | ✓ | ✓ | ✓ | ✓ | ✘ | ✓ | ✓ |
| Hydraulic oil (water base) | ? | ✓ | ✓ | ✓ | ○ | ✓ | ✘ | ○ |
| Hydrazine | ? | ✘ | ✓ | ✓ | ○ | ✓ | ✘ | ○ |
| Hydrogen gas | ○ | ○ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Hydrolube | ? | ? | ? | ? | ✓ | ✓ | ✓ | ○ |
| Iso octane | ✓ | ✓ | ✓ | ✓ | ✓ | ✘ | ✓ | ○ |
| Isobutyl alcohol | ? | ? | ✓ | ✓ | ○ | ✓ | ✓ | ✓ |
| Isopropyl alcohol | ✓ | ✓ | ○ | ✓ | ○ | ✓ | ✓ | ○ |
| Isopropyl ether | ✓ | ✓ | ✓ | ✓ | ○ | ✘ | ✘ | ✘ |
| JP3 and JP4 | ✓ | ✓ | ✓ | ✓ | ✓ | ✘ | ✓ | ○ |
| Kerosene | ✓ | ✓ | ✓ | ✓ | ✓ | ✘ | ✓ | ○ |
| Lard (animal fat) | ✓ | ✓ | ✓ | ✓ | ✓ | ○ | ✓ | ○ |
| Linseed oil | ✘ | ✓ | ✓ | ✓ | ✓ | ✘ | ✓ | ✘ |
| Lubricating oil SAE 10, 20, 30, 40,50 | ✓ | ✓ | ✓ | ✓ | ✓ | ✘ | ✓ | ○ |
| Magnesium salts | ? | ? | ? | ? | ✓ | ✓ | ✓ | ✓ |
| Magnesium sulphate | ✘ | ✘ | ○ | ○ | ✓ | ✓ | ✓ | ✓ |
| Mercury | ✘ | ✘ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Methane | ✓ | ✘ | ✓ | ✓ | ✓ | ✘ | ✓ | ○ |
| Methanol | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✘ | ✓ |
| Methyl bromide | ? | ✓ | ✓ | ✓ | ○ | ✘ | ✓ | ✘ |

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|-----------------------------|-----------------------|-------|--------|-------|----------------------------|------|-----|----|
| | Brass | Steel | SS 316 | SS304 | NBR | EPDM | FKM | CR |
| Methyl chloride (wet) | ✓ | ✘ | ✓ | ✘ | ✘ | ✘ | ✓ | ✘ |
| Methyl chloride (dry) | ○ | ✘ | ✓ | ✓ | ✘ | ✘ | ✓ | ✘ |
| Methyl ether | ? | ? | ? | ? | ✓ | ✘ | ✓ | ✘ |
| Methyl ethyl ketone (MEK) | ✓ | ✓ | ✓ | ✓ | ✘ | ✓ | ✘ | ✘ |
| MIL-F81912 (JP-9) | ✓ | ✓ | ✓ | ✓ | ✘ | ✘ | ✓ | ✘ |
| MIL-H-5606 | ✓ | ✓ | ✓ | ✓ | ✓ | ✘ | ✓ | ○ |
| MIL-H-6083 | ✓ | ✓ | ✓ | ✓ | ✓ | ✘ | ✓ | ✓ |
| MIL-H-7083 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ○ | ○ |
| MIL-H-8446 (MLO-8515) | ○ | ✓ | ✓ | ✓ | ○ | ✘ | ✓ | ✓ |
| MIL-L-2104 & 2104B | ✓ | ✓ | ✓ | ✓ | ✓ | ✘ | ✓ | ○ |
| MIL-L-7808 | ✘ | ○ | ✓ | ✓ | ○ | ✘ | ✓ | ✘ |
| Milk | ○ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Mineral oils | ✓ | ✓ | ✓ | ✓ | ✓ | ✘ | ✓ | ○ |
| MLO-7277 and MLO-7557 | ○ | ✓ | ✓ | ✓ | ✘ | ✘ | ✓ | ✘ |
| Mobile HF | ✓ | ✓ | ✓ | ✓ | ✓ | ✘ | ✓ | ○ |
| Monomethyl hydrazine | ? | ? | ? | ? | ○ | ✓ | ? | ○ |
| Naphtha (coal or petroleum) | ○ | ✓ | ○ | ○ | ○ | ✘ | ✓ | ✘ |
| Naphthalene | ○ | ✓ | ○ | ○ | ✘ | ✘ | ✓ | ✘ |
| Naphthenic acid | ○ | ✓ | ○ | ○ | ○ | ✘ | ✓ | ✘ |
| Neatsfoot oil | ? | ? | ? | ? | ✓ | ○ | ✓ | ✘ |
| Nickel acetate | ✘ | ○ | ✓ | ✓ | ○ | ✓ | ✘ | ○ |
| Nickel chloride | ✘ | ✘ | ○ | ○ | ✓ | ✓ | ✓ | ○ |
| Nickel salts | ? | ? | ? | ? | ✓ | ✓ | ✓ | ○ |
| Nickel sulphate | ✘ | ✘ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Nitrogen | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Nitrous oxide | ○ | ○ | ○ | ✓ | ✓ | ? | ? | ? |
| Octyl alcohol | ✓ | ✓ | ✓ | ✓ | ○ | ✘ | ✓ | ○ |
| Olive oil | ○ | ✓ | ✓ | ✓ | ✓ | ○ | ✓ | ○ |
| Ortho-dichlorobenzene | ○ | ○ | ○ | ○ | ✘ | ✘ | ✓ | ✘ |
| Oxalic acid | ✘ | ✘ | ○ | ✓ | ○ | ✓ | ✓ | ○ |

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| Oxygen (100-200 °C) | ✓ | ✓ | ✓ | ✓ | ✘ | ✘ | ○ | ✘ |
| Oxygen (cold) | ✓ | ✓ | ✓ | ✓ | ○ | ✓ | ✓ | ✓ |
| Ozone | ✘ | ✘ | ✓ | ✓ | ✘ | ✓ | ✓ | ✘ |
| Palmitic acid | ✓ | ○ | ✓ | ✓ | ✓ | ○ | ✓ | ○ |
| Para-dichlorobenzene | ○ | ✓ | ✓ | ✓ | ✘ | ✘ | ✓ | ✘ |
| Parker O-Lube | ✓ | ✓ | ✓ | ✓ | ✓ | ✘ | ✓ | ✓ |
| Peanut oil | ○ | ✓ | ✓ | ✓ | ✓ | ✘ | ✓ | ✘ |
| Pentane (2-3 methyl & 2-4 dimethyl) | ○ | ○ | ○ | ○ | ✓ | ✘ | ✓ | ○ |
| Perchloric acid - 2N | ✘ | ✘ | ○ | ○ | ✘ | ○ | ✓ | ○ |
| Perchloroethylene | ✘ | ○ | ○ | ○ | ○ | ✘ | ✓ | ✘ |
| Petrolatum | ✓ | ✓ | ✓ | ✓ | ✓ | ✘ | ✓ | ○ |
| Petroleum oil (below 120 °C) | ✓ | ✓ | ✓ | ✓ | ✓ | ✘ | ✓ | ○ |
| Phenol | ✓ | ✓ | ✓ | ✓ | ✘ | ✘ | ✓ | ✘ |
| Phosphoric acid (3 molar) | ✘ | ✘ | ○ | ○ | ✓ | ✓ | ✓ | ○ |
| Phosphoric acid (concentrated) | ✘ | ✘ | ○ | ○ | ✘ | ✓ | ✓ | ✘ |
| Phosphorous trichloride | ✘ | ✘ | ✓ | ✓ | ✘ | ✓ | ✓ | ✘ |
| Picric acid (molten) | ✘ | ✘ | ○ | ○ | ○ | ○ | ✓ | ○ |
| Picric acid (water solution) | ✘ | ✘ | ○ | ○ | ✓ | ✓ | ✓ | ✓ |
| Pine oil | ○ | ○ | ✓ | ○ | ✓ | ✘ | ✓ | ✘ |
| Plating solutions (chrome) | ✓ | ✘ | ✓ | ✓ | ? | ✓ | ✓ | ✘ |
| Plating solutions (other) | ? | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✘ |
| Potassium acetate | ○ | ✓ | ○ | ○ | ○ | ✓ | ✘ | ○ |
| Potassium chloride | ✘ | ✘ | ✓ | ○ | ✓ | ✓ | ✓ | ✓ |
| Potassium cyanide | ✘ | ○ | ○ | ○ | ✓ | ✓ | ✓ | ✓ |
| Potassium dichromate | ✘ | ✓ | ○ | ○ | ✓ | ✓ | ✓ | ✓ |
| Potassium hydroxide (50%) | ✘ | ○ | ✓ | ○ | ○ | ✓ | ✘ | ○ |
| Potassium nitrate | ○ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Potassium salts | ? | ? | ? | ? | ✓ | ✓ | ✓ | ✓ |
| Potassium sulphate | ✘ | ○ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |

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|---|-----------------------|-------|--------|-------|----------------------------|------|-----|----|
| | Brass | Steel | SS 316 | SS304 | NBR | EPDM | FKM | CR |
| PRL - high temp. hydr. Oil | ? | ? | ? | ? | ○ | ✘ | ✓ | ○ |
| Producer gas | ○ | ✓ | ✓ | ✓ | ✓ | ✘ | ✓ | ○ |
| Propane | ✓ | ✘ | ✓ | ✓ | ✓ | ✘ | ✓ | ○ |
| Propyl acetate | ✘ | ✓ | ✓ | ✓ | ✘ | ○ | ✘ | ✘ |
| Propyl alcohol | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Propylene | ✓ | ✓ | ✓ | ✓ | ✘ | ✘ | ✓ | ✘ |
| Pydraul 10E | ✘ | ✓ | ✓ | ✓ | ✘ | ✓ | ✘ | ✘ |
| Pydraul A-200 (C series) | ✘ | ✓ | ✓ | ✓ | ✘ | ✘ | ✓ | ✘ |
| Pydraul (3 series) | ✘ | ✓ | ✓ | ✓ | ✘ | ✓ | ✓ | ✘ |
| Pyrogard 42, 43, 53, 55 (phosphate ester) | ? | ? | ? | ? | ✘ | ✓ | ✓ | ✘ |
| Pyrogard D | ? | ? | ? | ? | ✓ | ✘ | ✘ | ○ |
| Sea water (salt water) | ○ | ✘ | ✓ | ✓ | ✓ | ✓ | ✓ | ○ |
| Shell irus 905 | ? | ? | ? | ? | ✓ | ✘ | ✓ | ○ |
| Silicone greases | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Silver nitrate | ✘ | ✘ | ✓ | ○ | ○ | ✓ | ✓ | ✓ |
| Skydrol 500 (type 2) | ✘ | ✓ | ✓ | ✓ | ✘ | ✓ | ✘ | ✘ |
| Skydrol 7000 (type 2) | ✘ | ✓ | ✓ | ✓ | ✘ | ✓ | ○ | ✘ |
| Soap solutions | ✘ | ✘ | ✓ | ✓ | ✓ | ✓ | ✓ | ○ |
| Sodium acetate | ✓ | ✓ | ✓ | ✓ | ○ | ✓ | ✘ | ○ |
| Sodium bicarbonate | ○ | ○ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Sodium bisulphate or bisulphite | ✘ | ✘ | ○ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Sodium borate | ✘ | ○ | ○ | ○ | ✓ | ✓ | ✓ | ✓ |
| Sodium carbonate | ? | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Sodium chloride | ✘ | ○ | ○ | ○ | ✓ | ✓ | ✓ | ✓ |
| Sodium cyanide | ✘ | ✓ | ✓ | ✓ | ✓ | ✓ | ? | ✓ |
| Sodium hydroxide | ✘ | ○ | ✓ | ○ | ○ | ✓ | ○ | ○ |
| Sodium hydroxide (50%) | ✘ | ✘ | ✓ | ○ | ○ | ✓ | ○ | ○ |
| Sodium metaphosphate | ○ | ✓ | ○ | ○ | ✓ | ✓ | ✓ | ○ |
| Sodium nitrate | ✘ | ○ | ✓ | ✓ | ○ | ✓ | ? | ○ |

- ✓ - satisfactory
- ○ - fair
- ✘ - not recommended
- ? - insufficient data available

| Media | Body Material Options | | | | Seal Ring Material Options | | | |
|-----------------------------|-----------------------|-------|--------|-------|----------------------------|------|-----|----|
| | Brass | Steel | SS 316 | SS304 | NBR | EPDM | FKM | CR |
| Sodium perborate | ✘ | ✘ | ✓ | ✓ | ○ | ✓ | ✓ | ○ |
| Sodium peroxide | ✘ | ✓ | ○ | ○ | ○ | ✓ | ✓ | ○ |
| Sodium phosphates | ✓ | ✘ | ○ | ✓ | ✓ | ✓ | ✓ | ○ |
| Sodium salts | ? | ? | ? | ? | ✓ | ✓ | ✓ | ○ |
| Sodium sulphate | ✘ | ○ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Sodium sulphite & sulphide | ✘ | ✘ | ○ | ✘ | ✓ | ✓ | ✓ | ✓ |
| Sodium thiosulphate | ✘ | ✘ | ✓ | ○ | ○ | ✓ | ✓ | ✓ |
| Soybean oil | ○ | ✓ | ✓ | ✓ | ✓ | ✘ | ✓ | ✘ |
| Stannous chloride (15 %) | ✘ | ✘ | ○ | ✘ | ✓ | ✓ | ✓ | ✓ |
| Steam (below 200 °C) | ✓ | ✘ | ✓ | ✓ | ✘ | ✓ | ✘ | ✘ |
| Stoddard solvents | ○ | ✓ | ✓ | ✓ | ✓ | ✘ | ✓ | ○ |
| Sucrose solutions | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ○ |
| Sulphur | ○ | ✓ | ✓ | ✓ | ✘ | ✓ | ✓ | ✓ |
| Sulphur liquors | ✓ | ✓ | ✓ | ✓ | ○ | ○ | ✓ | ○ |
| Sulphur (molten) | ✘ | ✘ | ✓ | ✓ | ✘ | ✘ | ✓ | ✘ |
| Sulphur dioxide (dry) | ✘ | ✓ | ✓ | ✘ | ✘ | ✓ | ✘ | ✘ |
| Sulphur trioxide (dry) | ○ | ○ | ○ | ✘ | ✘ | ○ | ✓ | ✘ |
| Tannic acid (10%) | ✓ | ✘ | ○ | ✘ | ✓ | ✓ | ✓ | ○ |
| Tar (bituminous) | ○ | ✓ | ✓ | ✓ | ○ | ✘ | ✓ | ✘ |
| Tartaric acid | ○ | ✘ | ✘ | ○ | ✓ | ○ | ✓ | ○ |
| Terpineol | ? | ? | ? | ? | ○ | ✘ | ✓ | ✘ |
| Tertiary butyl alcohol | ✓ | ✓ | ✓ | ✓ | ○ | ○ | ✓ | ○ |
| Tetrachloroethane | ? | ○ | ✓ | ○ | ✘ | ✘ | ✓ | ✘ |
| Tetrachloroethylene | ✘ | ○ | ○ | ? | ✘ | ✘ | ✓ | ✘ |
| Tetraethyl lead | ✓ | ✓ | ✓ | ✓ | ○ | ✘ | ✓ | ○ |
| Tetraethyl lead (blend) | ✓ | ✓ | ✓ | ✓ | ○ | ✘ | ✓ | ✘ |
| Titanium tetrachloride | ○ | ✓ | ○ | ✘ | ○ | ✘ | ✓ | ✘ |
| Toluene | ✓ | ✓ | ✓ | ✓ | ✘ | ✘ | ✓ | ✘ |
| Transformer oil | ✓ | ✓ | ✓ | ✓ | ✓ | ✘ | ✓ | ○ |
| Transmission fluid (type A) | ✓ | ✓ | ✓ | ✓ | ✓ | ✘ | ✓ | ○ |

- ✓ - satisfactory
- ○ - fair
- ✘ - not recommended
- ? - insufficient data available

| Media | Body Material Options | | | | Seal Ring Material Options | | | |
|-------------------------------|-----------------------|-------|--------|-------|----------------------------|------|-----|----|
| | Brass | Steel | SS 316 | SS304 | NBR | EPDM | FKM | CR |
| Trichloroethane | ? | ○ | ✓ | ? | ✘ | ✘ | ✓ | ✘ |
| Trichloroethylene | ✘ | ○ | ○ | ○ | ✘ | ✓ | ○ | ✘ |
| Tricresyl phosphate | ? | ✓ | ○ | ○ | ✘ | ✓ | ○ | ✘ |
| Turbine oil #15 (MIL-L-7808A) | ? | ○ | ✓ | ✓ | ○ | ✘ | ✓ | ✘ |
| Turpentine | ✘ | ○ | ✓ | ✓ | ✓ | ✘ | ✓ | ✘ |
| Varnish | ✓ | ✓ | ✓ | ✓ | ○ | ✘ | ✓ | ✘ |
| Water | ✓ | ✘ | ✓ | ✓ | ✓ | ✓ | ○ | ○ |
| Whiskey | ✓ | ✘ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Wine | ✓ | ✘ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Wood oil | ? | ○ | ✓ | ✓ | ✓ | ✘ | ✓ | ○ |
| Xylene | ✓ | ○ | ✓ | ✓ | ✘ | ✘ | ✓ | ✘ |
| Zinc sulphate | ✘ | ✘ | ○ | ○ | ✓ | ✓ | ✓ | ✓ |

| Seal Material | Temperature Range |
|---------------|--------------------|
| NBR | -40°C up to +110°C |
| EPDM | -50°C up to +150°C |
| FKM | -25°C up to +200°C |
| CR | -50°C up to +150°C |

Note: This chart is intended as a guide only and is not to be considered as a recommendation to use AKJia quick couplings in a specific application or with a specific fluid. Other factors that must be considered include but are not limited to: fluid and ambient temperature, system pressure, both operating and peaks, frequency of connection and disconnection, and applicable standards or regulations.