Chemical Compatibility Guide for:

# FTI EFP Pumps

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FINISH THOMPSON INC.

## Chemical Resistance and Material Selection Guide for FTI Drum Pumps

The information in the following guide lists the corrosion resistance of the 3 materials available for Finish Thompson drum pump outer tubes. Additional wetted materials will be found inside the pump tube (such as Alloy 625, PTFE, FKM, etc.). Generally, if the outer tube is suitable, these materials will also be suitable. Therefore, pump material selection is based on the outer tube material. Additional information such as fluid viscosity, temperature and motor preference is ultimately required to determine the proper pump and motor models best suited for each application.

This guide is to be considered as a basis for recommendation, but not as a guarantee. Where chemical compatibility is in question, the material should be tested under actual field conditions to determine the best choice. All test data listed is at ambient temperature (72º F) unless otherwise stated. Contact FTI sales with any questions.

| **Compatibility Ratings:** | |
|---|---|
| **R** | Recommended |
| **F** | Fair, should be tested under field conditions |
| **NR** | Not Recommended |
| **-** | Unknown, contact chemical supplier |
| ***** | Use only Air or EXP electric motors w/ stainless steel tubes & SPK when pumping flammables |
| **Note:** When pumping solvents, the TTS Series w/ SPK and EXP electric or Air motor is generally the best choice. | |
| | |
| **Tube Construction Material vs. Drum Pump Models (See Table on Next Page for specific systems):** | |
| **Polypropylene** | EFP and PFP models |
| **Stainless Steel** | EFS, PFS and TTS model |
| **Motor Type:** | |
| **ODP** | Open Drip-Proof |
| **A** | Air |
| **TEFC** | Totally Enclosed Fan Cooled |
| **EXP** | Explosion-Proof |
| | |

# FTI Pump Systems

| New Pig Part # | Description | Motor Type | |
|---|---|---|---|
| DRM8005 | FTI .5 HP Air-Operated Drum Pump System with PFP Pick-Up Tube | A | Air |
| IBC8006 | FTI .5 HP Air-Operated IBC Pump System with PFP Pick-Up Tube | A | Air |
| IBC8007 | FTI .5 HP Air-Operated IBC Pump System with PFP Pick-Up Tube | A | Air |
| DRM8007 | FTI .5 HP Electric Drum Pump System with PFP Pick-Up Tube | ODP | Open Drip-Proof |
| IBC8010 | FTI .5 HP Electric IBC Pump System with PFP Pick-Up Tube | ODP | Open Drip-Proof |
| IBC8011 | FTI .5 HP Electric IBC Pump System with PFP Pick-Up Tube | ODP | Open Drip-Proof |
| DRM435-01 | FTI PFP Pick-Up Tube | N/A | N/A |
| IBC002 | FTI IBC PFP Pick-Up Tube | N/A | N/A |
| IBC006 | FTI IBC PFP Pick-Up Tube | N/A | N/A |

| Chemical | PFP | Motor Type |
|---|---|---|
| **Acetaldehyde*** | NR | A, EXP |
| **Acetate Solvents*** | NR | A, EXP |
| **Acetic Acid, 10-80%** | R | ODP, A, TEFC |
| **Acetone*** | NR | A, EXP |
| **Alcohols*** | NR | A, EXP |
| **Aluminum Chloride** | R | ODP, A, TEFC |
| **Aluminum Hydroxide** | R | ODP, A, TEFC |
| **Ammonia, Aqua, 10%*** | NR | A, EXP |
| **Ammonium Nitrate** | R | ODP, A, TEFC |
| **Ammonium Sulfate** | R | ODP, A, TEFC |
| **Amyl Acetate*** | NR | A, EXP |
| **Arsenic Acid** | R | ODP, A, TEFC |
| **Barium Carbonate** | R | ODP, A, TEFC |
| **Benzene* (Benzol)*** | NR | A, EXP |
| **Bleach (sodium hypochlorite)** | NR | ODP, A, TEFC |
| **Borax (sodium borate)** | R | ODP, A, TEFC |
| **Boric Acid** | R | ODP, A, TEFC |
| **Brine** | R | ODP, A, TEFC |
| **Butyl Acetate*** | NR | A, EXP |
| **Butylene*** | NR | A, EXP |
| **Butyric Acid** | R | ODP, A, TEFC |
| **Calcium Carbonate** | R | ODP, A, TEFC |
| **Calcium Chloride** | R | ODP, A, TEFC |
| **Calcium Hypochlorite** | R | ODP, A, TEFC |
| **Calcium Sulfate** | R | ODP, A, TEFC |
| **Carbon Disulfide*** | NR | A, EXP |
| **Carbon Tetrachloride** | NR | ODP, A, TEFC |
| **Carbonic Acid** | R | ODP, A, TEFC |
| **Caustic Soda** | R | ODP, A, TEFC |
| **Chlorinated water >3,500 ppm** | NR | ODP, A, TEFC |

| Chemical | PFP | Motor Type |
|---|---|---|
| **Chlorobenzene*** | NR | A, EXP |
| **Chromic Acid 40%** | NR | ODP, A, TEFC |
| **Citric Acid** | R | ODP, A, TEFC |
| **Copper Cyanide** | R | ODP, A, TEFC |
| **Cyclohexane*** | NR | A, EXP |
| **Cyclohexanol*** | NR | A, EXP |
| **Cyclohexanone*** | NR | A, EXP |
| **Detergent Solutions** | R | ODP, A, TEFC |
| **Diacetone Alcohol*** | NR | A, EXP |
| **Dichloroethylene *** | NR | A, EXP |
| **Diesel Fuel*** | NR | A, EXP |
| **Diethyl Ether*** | NR | A, EXP |
| **Ether*** | NR | A, EXP |
| **Ethyl Acetate*** | NR | A, EXP |
| **Ethyl Chloride*** | NR | A, EXP |
| **Ethyl Ether*** | NR | A, EXP |
| **Ethylene Chloride*** | NR | A, EXP |
| **Ethylene Glycol** | R | ODP, A, TEFC |
| **Fatty Acids** | - | ODP, A, TEFC |
| **Ferric Chloride** | R | ODP, A, TEFC |
| **Ferric Nitrate** | R | ODP, A, TEFC |
| **Ferrous Chloride** | R | ODP, A, TEFC |
| **Formaldehyde 37%** | R | ODP, A, TEFC |
| **Formic Acid** | R | ODP, A, TEFC |
| **Fuel Oils*** | NR | A, EXP |
| **Furfural*** | NR | A, EXP |
| **Gasoline*** | NR | A, EXP |
| **Glucose** | R | ODP, A, TEFC |
| **Glycerine (Glycerol)** | R | ODP, A, TEFC |
| **Hexane*** | NR | A, EXP |
| **Hydrobromic Acid, 20%** | F | ODP, A, TEFC |
| **Hydrochloric Acid, 37%** | R | ODP, A, TEFC |
| **Hydrofluoric Acid, 50%** | NR | ODP, A, TEFC |
| **Hydrogen Peroxide** | F (To 50%) | ODP, A, TEFC |
| **Ink** | - | ODP, A, TEFC |
| **Iodine** | R | ODP, A, TEFC |
| **Isopropyl Alcohol*** | NR | A, EXP |
| **Isopropyl Ether*** | NR | A, EXP |
| **Jet Fuels*** | NR | A, EXP |
| **Kerosene*** | NR | A, EXP |
| **Lacquer Solvents*** | NR | A, EXP |
| **Lactic Acid** | R | ODP, A, TEFC |
| **Latex** | - | ODP, A, TEFC |

| Chemical | PFP | Motor Type |
|---|---|---|
| **Lubricants** | NR | ODP, A, TEFC |
| **Magnesium Chloride** | R | ODP, A, TEFC |
| **Magnesium Hydroxide** | R | ODP, A, TEFC |
| **Mercuric Chloride** | R | ODP, A, TEFC |
| **Mercuric Cyanide** | R | ODP, A, TEFC |
| **Methyl Acetone*** | NR | A, EXP |
| **Methyl Ethyl Ketone*** | NR | A, EXP |
| **Methyl Isobutyl Ketone*** | NR | A, EXP |
| **Methylene Chloride** | NR | ODP, A, TEFC |
| **Naphthalene*** | NR | A, EXP |
| **Naptha*** | NR | A, EXP |
| **Nickel Chloride** | R | ODP, A, TEFC |
| **Nickel Sulfate** | R | ODP, A, TEFC |
| **Nitric Acid, 10-40%** | F | ODP, A, TEFC |
| **Nitric Acid, 40-70%** | NR | ODP, A, TEFC |
| **Nitrobenzene*** | NR | ODP, A, TEFC |
| **Oleic Acid** | R | ODP, A, TEFC |
| **Oleum** | NR | ODP, A, TEFC |
| **Phenol** | NR | ODP, A, TEFC |
| **Phosphoric Acid** | R | ODP, A, TEFC |
| **Plating Solution (Chrome)** | NR | ODP, A, TEFC |
| **Plating Solution (Lead)** | R | ODP, A, TEFC |
| **Plating Solution (Nickel)** | R | ODP, A, TEFC |
| **Plating Solution (Zinc)** | R | ODP, A, TEFC |
| **Plating Solutions (Copper)** | R | ODP, A, TEFC |
| **Potassium Bicarbonate** | R | ODP, A, TEFC |
| **Potassium Chloride** | R | ODP, A, TEFC |
| **Potassium Cyanide** | R | ODP, A, TEFC |
| **Potassium Hydroxide** | R | ODP, A, TEFC |
| **Potassium Nitrate** | R | ODP, A, TEFC |
| **Soap Solutions** | R | ODP, A, TEFC |
| **Sodium Acetate** | NR | ODP, A, TEFC |
| **Sodium Bicarbonate** | R | ODP, A, TEFC |
| **Sodium Carbonate** | R | ODP, A, TEFC |
| **Sodium Chloride** | R | ODP, A, TEFC |
| **Sodium Hydroxide** | R | ODP, A, TEFC |
| **Sodium Hypochlorite** | NR | ODP, A, TEFC |
| **Sodium Nitrate** | R | ODP, A, TEFC |
| **Sulfuric Acid, <70%** | R | ODP, A, TEFC |
| **Sulfuric Acid, >70%** | NR | ODP, A, TEFC |
| **Tannic Acid** | R | ODP, A, TEFC |
| **Tetrahydrofurane *** | NR | A, EXP |
| **Toluene*** | NR | A, EXP |

| Chemical | PFP | Motor Type |
|---|---|---|
| **Trichloroethylene** | NR | ODP, A, TEFC |
| **Turpentine*** | NR | A, EXP |
| **Urea** | R | ODP, A, TEFC |
| **Vinegar** | NR | ODP, A, TEFC |
| **Water** | R | ODP, A, TEFC |
| **White Liquor** | R | ODP, A, TEFC |
| **Xylene (xylol)*** | NR | A, EXP |
| **Zinc Chloride** | R | ODP, A, TEFC |
| **Zinc Sulfate** | R | ODP, A, TEFC |