

# Chemical Compatibility Guide for: FTI TTS Pumps

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## 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 (72° F) unless otherwise stated. Contact FTI sales with any questions.

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

# FTI Pump Systems

New Pig Part #	Description	Motor Type	
DRM8000	FTI .67 HP Electric Explosion-Proof Drum Pump System With TTS Pick-Up Tube	EXP	Explosion-Proof
IBC8000	FTI .67 HP Electric Explosion-Proof IBC Pump System With TTS Pick-Up Tube	EXP	Explosion-Proof
DRM8001	FTI .33 HP Electric Drum Pump System With TTS Pick-Up Tube	TEFC	Totally Enclosed Fan Cooled
IBC8001	FTI .33 HP Electric IBC Pump System With TTS Pick-Up Tube	TEFC	Totally Enclosed Fan Cooled
DRM8003	FTI .5 HP Air-Operated Explosion-Proof Drum Pump System With TTS Pick-Up Tube	A	Air
IBC8004	FTI .5 HP Air-Operated Explosion-Proof IBC Pump System With TTS Pick-Up Tube	A	Air
DRM8004	FTI .5 HP Air-Operated Drum Pump System With TTS Pick-Up Tube	A	Air
IBC8005	FTI .5 HP Air-Operated IBC Pump System	A	Air
DRM271	FTI TTS Pick-Up Tube	N/A	N/A
IBC003	FTI IBC TTS Pick-Up Tube	N/A	N/A

Chemical	TTS (max temp 150°F)	Motor Type
Acetaldehyde*	R	A, EXP
Acetate Solvents*	R	A, EXP
Acetic Acid, 10-80%	R	ODP, A, TEFC
Acetone*	R	A, EXP
Alcohols*	R	A, EXP
Aluminum Chloride	NR	ODP, A, TEFC
Aluminum Hydroxide	R	ODP, A, TEFC
Ammonia, Aqua, 10%*	R	A, EXP
Ammonium Nitrate	R	ODP, A, TEFC
Ammonium Sulfate	R	ODP, A, TEFC
Amyl Acetate*	R	A, EXP
Arsenic Acid	R	ODP, A, TEFC
Barium Carbonate	F	ODP, A, TEFC
Benzene* (Benzol)*	R	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*	R	A, EXP
Butylene*	R	A, EXP
Butyric Acid	R	ODP, A, TEFC
Calcium Carbonate	R	ODP, A, TEFC
Calcium Chloride	R	ODP, A, TEFC
Calcium Hypochlorite	NR	ODP, A, TEFC
Calcium Sulfate	R	ODP, A, TEFC
Carbon Disulfide*	R	A, EXP
Carbon Tetrachloride	R	ODP, A, TEFC
Carbonic Acid	R	ODP, A, TEFC

<b>Chemical</b>	<b>TTS (max temp 150°F)</b>	<b>Motor Type</b>
Caustic Soda	R	ODP, A, TEFC
Chlorinated water >3,500 ppm	R	ODP, A, TEFC
Chlorobenzene*	R	A, EXP
Chromic Acid 40%	NR	ODP, A, TEFC
Citric Acid	R	ODP, A, TEFC
Copper Cyanide	R	ODP, A, TEFC
Cyclohexane*	R	A, EXP
Cyclohexanol*	R	A, EXP
Cyclohexanone*	R	A, EXP
Detergent Solutions	R	ODP, A, TEFC
Diacetone Alcohol*	R	A, EXP
Dichloroethylene *	R	A, EXP
Diesel Fuel*	R	A, EXP
Diethyl Ether*	R	A, EXP
Ether*	R	A, EXP
Ethyl Acetate*	R	A, EXP
Ethyl Chloride*	R	A, EXP
Ethyl Ether*	R	A, EXP
Ethylene Chloride*	R	A, EXP
Ethylene Glycol	R	ODP, A, TEFC
Fatty Acids	R	ODP, A, TEFC
Ferric Chloride	NR	ODP, A, TEFC
Ferric Nitrate	R	ODP, A, TEFC
Ferrous Chloride	NR	ODP, A, TEFC
Formaldehyde 37%	R	ODP, A, TEFC
Formic Acid	R	ODP, A, TEFC
Fuel Oils*	R	A, EXP
Furfural*	R	A, EXP
Gasoline*	R	A, EXP
Glucose	R	ODP, A, TEFC
Glycerine (Glycerol)	R	ODP, A, TEFC
Hexane*	R	A, EXP
Hydrobromic Acid, 20%	NR	ODP, A, TEFC
Hydrochloric Acid, 37%	NR	ODP, A, TEFC
Hydrofluoric Acid, 50%	NR	ODP, A, TEFC
Hydrogen Peroxide	R	ODP, A, TEFC
Ink	R	ODP, A, TEFC
Iodine	NR	ODP, A, TEFC
Isopropyl Alcohol*	R	A, EXP
Isopropyl Ether*	R	A, EXP
Jet Fuels*	R	A, EXP
Kerosene*	R	A, EXP
Lacquer Solvents*	R	A, EXP

<b>Chemical</b>	<b>TTS (max temp 150°F)</b>	<b>Motor Type</b>
Lactic Acid	R	ODP, A, TEFC
Latex	R	ODP, A, TEFC
Lubricants	R	ODP, A, TEFC
Magnesium Chloride	F	ODP, A, TEFC
Magnesium Hydroxide	R	ODP, A, TEFC
Mercuric Chloride	NR	ODP, A, TEFC
Mercuric Cyanide	R	ODP, A, TEFC
Methyl Acetone*	R	A, EXP
Methyl Ethyl Ketone*	R	A, EXP
Methyl Isobutyl Ketone*	R	A, EXP
Methylene Chloride	R	ODP, A, TEFC
Naphthalene*	R	A, EXP
Naptha*	R	A, EXP
Nickel Chloride	R	ODP, A, TEFC
Nickel Sulfate	R	ODP, A, TEFC
Nitric Acid, 10-40%	R	ODP, A, TEFC
Nitric Acid, 40-70%	R	ODP, A, TEFC
Nitrobenzene*	R	ODP, A, TEFC
Oleic Acid	R	ODP, A, TEFC
Oleum	F	ODP, A, TEFC
Phenol	R	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)	NR	ODP, A, TEFC
Plating Solutions (Copper)	-	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	R	ODP, A, TEFC
Sodium Bicarbonate	R	ODP, A, TEFC
Sodium Carbonate	R	ODP, A, TEFC
Sodium Chloride	F	ODP, A, TEFC
Sodium Hydroxide	R	ODP, A, TEFC
Sodium Hypochlorite	NR	ODP, A, TEFC
Sodium Nitrate	R	ODP, A, TEFC
Sulfuric Acid, <70%	NR	ODP, A, TEFC
Sulfuric Acid, >70%	NR	ODP, A, TEFC
Tannic Acid	R	ODP, A, TEFC

<b>Chemical</b>	<b>TTS (max temp 150°F)</b>	<b>Motor Type</b>
<b>Tetrahydrofurane *</b>	R	A, EXP
<b>Toluene*</b>	R	A, EXP
<b>Trichloroethylene</b>	R	ODP, A, TEFC
<b>Turpentine*</b>	R	A, EXP
<b>Urea</b>	R	ODP, A, TEFC
<b>Vinegar</b>	R	ODP, A, TEFC
<b>Water</b>	R	ODP, A, TEFC
<b>White Liquor</b>	R	ODP, A, TEFC
<b>Xylene (xylol)*</b>	R	A, EXP
<b>Zinc Chloride</b>	R	ODP, A, TEFC
<b>Zinc Sulfate</b>	R	ODP, A, TEFC