



FINISH THOMPSON INC.

# TECHNICAL

## Tips and Tidbits

Issue No. 10 July/August 2007



### Product Features and Benefits

- **Polypropylene – An Outstanding Choice for Many Chemical Applications**

Invented in 1954 with commercial production beginning in 1957, polypropylene is a thermoplastic widely used in many FTI pump products.

Polypropylene is manufactured from propylene. Propylene is a colorless, flammable gas at room temperature that comes from the oil refining process. In the presence of a catalyst, the plastic polypropylene is created.

FTI uses polypropylene because it offers excellent chemical resistance to a wide variety of products including many acids and bases. It is lightweight yet very strong with high tensile and compressive strength and is relatively easy to mold. It is a non-toxic plastic that is often used in dishwasher safe food containers.

FTI uses different versions of polypropylene depending upon where it is used in the product. We use both homopolymers and copolymers depending upon the application. Copolymers are mixtures of different types of polypropylene that allow for specific physical properties.

Many of our components are manufactured from chemically coupled, glass-fiber filled polypropylene. The addition of the glass-fiber provides increased strength and stiffness so they are used in areas where mechanical strength is critical like housings and barriers.

Our new DB and SP products manufactured from polypropylene feature inner magnetic drives with unfilled polypropylene molded over the rare earth magnets to eliminate any possibility of wicking.

While resistant to a wide variety of products, always refer to a chemical resistance guide or contact the chemical manufacturer to ensure that polypropylene is the right choice for the application. Chemicals that should not be used with polypropylene include chromic acid, hydrofluoric acid, higher concentrations of nitric acid and sulfuric acid, sodium hypochlorite and many solvents.

Of course, FTI sales are always available to help with any application.





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### Promising Applications

- **HVDP Drum Pumps Used in Personal Care Applications**

Our high viscosity drum pumps are capable of pumping viscous fluids, up to 100,000 cP. Many of the products used by consumers for their daily hygiene are rather viscous. In fact, they are so viscous that standard centrifugal or drum pumps often do not work during the products manufacturing process.

Our HVDP Series pumps excel at handling a wide range of viscous materials. Companies worldwide use them to pump a wide variety of products including liquid soaps, bath gels, shampoos, hair gels, hand lotions, facial masks, lanolin, toothpaste and insect repellent. Often the companies are pumping various ingredients from drums into mixing tanks where the finished product is produced.

Since we use these products everyday, they also provide a good comparison of the types of viscosities that can be pumped with the HVDP Series (say for industrial applications). Have a thick liquid that needs to be transferred out of drums or other containers? Contact us to see if the HVDP is right for your application.





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### Success Stories

- **Copper Mine Uses DB Series Pumps**

A copper mine recently purchased a DB11V for use in their solvent extraction plant. The mine wanted a mag drive pump that is able to handle a wide variety of chemicals and is very reliable. They chose our DB Series with PVDF construction due to the wide range of chemicals that it handles and its outstanding reliability backed by a five-year warranty.

The pump is installed in a solvent extraction process and is being used to pump copper sulfide solutions and various hydrocarbons. The solvent extraction process is a hydrometallurgical process (the use of liquid reagents in the treatment or reduction of ores) to extract copper from the copper sulfide solution.

Click on the following links to learn more about the process:

<http://teach2.eac.edu/pmcbride/4steps.htm>

<http://www.cesl.com/english/copperprocess.html>



*If you have an application or success story you'd like to share, please submit it to [scantlebury@finishthompson.com](mailto:scantlebury@finishthompson.com).*

*If you wish to be removed from this mailing list, reply and type "remove" in the subject line.*