

DuPont Fluoroproducts

Fluorochemical Enhanced Bulk Storage and Handling Systems

Prefabricated Feedtank for Fluorochemicals

- Simple installation
- Low maintenance
- Optimum safety
- Cost benefit of product bulk purchase
- Designed to minimize fugitive emissions

Installation

- Delivered to site for placement on a concrete pad.
- DuPont can provide typical designs for site foundation, electrical tie-in, and process piping connection.

Easy as

1 Delivery **2** Connect **3** Fill

The enhanced bulk storage and handling system is a prefabricated and tested unit, ready to install on your site. The unit has been designed to optimize economy, efficiency, and safety in the storage and dispensing of the DuPont fluorochemical products you are currently using.

The delivered system includes all components, such as storage tank, supports, piping, valves, pumps, motors, and gauges as an integrated unit. Once set in place and connected to your electrical and process systems, it is ready to be put in service.

Storage Tank

- The storage tank is designed, constructed, and tested in accordance with the latest ASME Unfired Pressure Vessel Code. A manufacturer's data report Form U1A is provided.
- Tank and accessories are cleaned, primed, and coated with the Imron® paint system. Imron polyurethane enamel is a high-performance finish developed by DuPont for a wide variety of industrial applications. It offers superior chip and chemical resistance.
- An access manhole is provided for interior inspection and maintenance.
- The steel support frame is designed for shipping and lifting stresses, as well as normal service loads. The support frame is placed on a concrete slab so a level operating conditions is achieved.



**Table 1
Standard Design**

Nominal Capacity, gal*	Overall Height, ft	Overall Width, ft	Overall Length, ft	Approximate Shipping Weight, lb	
				250 psig Tank	320 psig Tank
3,900	10	8	16	11,360	13,360
6,665	10	8	26	15,980	19,100
9,200	10	8	35	21,100	25,400

*Approximate capacity in pounds of most fluorochemicals can be determined by multiplying by 10 lb/gal.

- The bulk storage unit is designed for easy off-loading by a crane. The support frame is designed to allow future relocation.
- Tank sizes listed in the table are available as standard. Contact your DuPont sales representative if you have a special requirement.
- System design includes shutoff and isolation valves so maintenance or replacement of piping or pump components can be done without discharging tank contents.
- For Suva® HFC-134a, a DuPont Fluorochemical Emission Elimination Delivery (FEED) System is provided for filling the tank to eliminate venting during delivery. The FEED system is also available for other products.

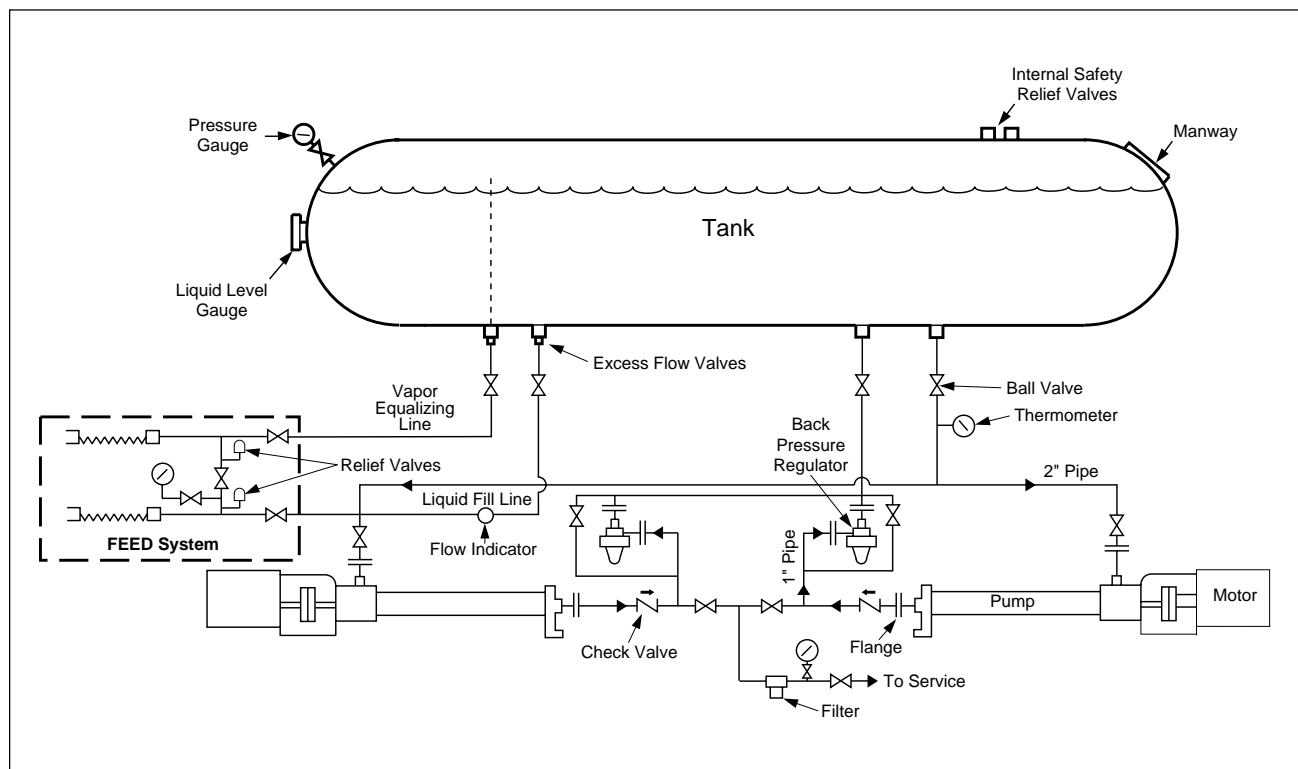
Pump and Piping Module

- A dual pump configuration is provided to suit the plant pressure and process requirements; also allows continuous operation when pump maintenance is performed.
- Pump(s) can be serviced without removal from the system.
- Pump drive motor is selected to suit pump output requirements and plant electric power characteristics.
- Valved bypass piping is provided between the tank and pump discharge to protect the pump and regulate pressure to suit process requirements.
- All piping is welded seamless carbon steel (Schedule 80), and all components have a working pressure rating not less than 1,000 psi.

Gauges, Safety, and Monitoring Devices

- Gauges provided:
 - float-actuated liquid level gauge
 - gauge to indicate tank pressure
 - thermometer with range of –40°F to 160°F to indicate product temperature
 - gauge to indicate pump discharge pressure
- A flow indicator shows liquid flow in the loading line.
- Safety relief valves automatically relieve any tank pressure that is in excess of the design criteria.
- Excess flow valves are provided in the storage tank liquid fill and vapor lines.

Figure 1. Typical Bulk Storage and Handling System Schematic



Electrical

- Unit is prewired and designed to suit the electrical power requirements of your plant.
- Motor starter and wiring are firmly attached as part of the support and piping module. A disconnect switch and a full voltage magnetic starter with pushbuttons are provided.
- A receptacle and disconnect switch for power to the delivery truck is included.

The enhanced bulk storage and handling system is normally used as a process feed tank for dispensing fluorochemicals, which are nonflammable. With appropriate design changes, the system can be used for flammable products or blends with flammable liquids or gases. For such cases, site selection, fire protection, facilities, and electrical design requirements should be reviewed.

For this type of application, contact your DuPont sales representative for information on special design requirements and safety guidelines.

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