

PENTAIR FLOW TECHNOLOGIES, LLC

Pentair Flow Technologies, LLC
293 Wright Street
Delavan, WI 53115

Material Safety Data Sheet (MSDS) Water System Pressure Tanks

Shipment Data:	Booking # Containers:
Product Data:	

Description:

These are water pump system tanks, designed for use in residential water systems, for the purpose of regulating the water pressure in the home. Typically pre-charged with either compressed air or compressed nitrogen, they are ruggedly built to withstand over 300 psi of test pressure. Maximum operating pressure is 100 to 125 psi depending on model of tank.

They are articles under OSHA's description, so the concept of an MSDS really does not apply to these products. Nevertheless, because they qualify as hazardous materials under Dangerous Goods regulations when pressurized, we have prepared this document to clarify their HazMat status when shipped as Limited Quantity shipments.

Materials and contents (in transportation):

Steel Tanks: These models have a heavy-gauge steel construction, corrosion-resistant high-gloss, appliance-quality finish, and rugged seamless water cell. They may be charged with air or nitrogen, as indicated above.

Fiberwound Tanks: These models are constructed of a durable composite construction – a one-piece molded inner liner of high-density polyethylene, fiberglass wrap, and ethylene-vinyl acetate air cell. They may be charged with air or nitrogen, as indicated above.

Health and Safety Hazards

The contents of these tanks do not present a real danger in ground or sea transportation, so no emergency response or first aid explanations are necessary. However, the varying HazMat definitions employed by the applicable regulators do require that these tanks sometimes be shipped as HazMat products. See the below tables for specifics.

Transportation Safety

See the below table for applicable shipping instructions:

Product	Mode	Transportation Text and Rules
All Tanks, empty (no pre-charge at all)*	All Modes	Non-Hazardous / Not Regulated
All Tanks, pre-charged 25 psi per gauge (psig) and below, of either nitrogen or air	Truck, Rail, or Sea	Non-Hazardous / Not Regulated
Steel Tanks, 26-40 psig of nitrogen	Truck, Rail, and Domestic Water only	49 CFR 173.306(g) Limited Quantity Exception. UN1066, Nitrogen, compressed, 2.2 Ltd Qty ___cyl. See HazMat Shipping Instructions.
Composite (Fiberwound) Tanks, 26-48 psig of air	Truck, Rail, and Domestic Water only	DOT Special Permits 14700 and 14818 Limited Quantity Exception. UN1002, Air, compressed, 2.2 Ltd Qty ___cyl. See HazMat Shipping Instructions.
Steel Tanks, 26-40 psig of nitrogen	International Water	49 CFR 173.306(g) Limited Quantity Exception. Authorized by DOT, as IMO Competent Authority UN1066, Nitrogen, compressed, 2.2 Ltd Qty ___cyl. See HazMat Shipping Instructions.
Composite (Fiberwound) Tanks, 26-48 psig of air	International Water	DOT Special Permits 14700 and 14818 Authorized by DOT, as IMO Competent Authority UN1002, Air, compressed, 2.2 Ltd Qty ___cyl. See HazMat Shipping Instructions.

Nota Bene: Company policy prohibits shipping tanks at precharges or modes contrary to the options listed above. Pressurized tanks by airfreight, for example, would be HazMat shipments and are currently prohibited by Company policy.

* Company policy is to remove all precharge and leave the valve open when shipping airfreight. The tank is then merely an empty, clean, non-hazardous, unregulated article. This applies to both domestic and international air shipping.

Limited Quantity Exception Summary

49 CFR 173.306(g) and Special Permits SP-14700 and 14818, are all Limited Quantity exceptions for water pump system tanks, for road, rail, and sea transport, issued by the DOT, either on their own behalf (for domestic transport) or on behalf of the IMO (for international water transport). These provisions allow our water pump system tanks to be shipped under Ltd Qty exceptions, instead of being treated as a regular HazMat load. For example:

- The product and package are not subject to labeling. See 172.400a(b) and 173.306(g).
- The product and package are not subject to marking (See 172.315(a) and 173.306(g)(2), other than the four following required marks:
 - a test pressure mark on the tank itself,
 - the “new” Limited Quantities mark from 172.315, on the overpack (a square-on-point diamond mark with the UN number instead is grandfathered in through December 31, 2015).
 - the manufacturer name, city and state, on the overpack.
 - The word “OVERPACK” – in letters at least 0.5 inch high, on the overpack.

Note: “OVERPACK” replaces the old mark: “Inside Container Comply With Prescribed Regulations.” Boxes manufactured before 12-31-16 are grandfathered in, as per 173.25(a)(4), (i) and (ii).

- The net product weight is not stated on the shipping papers. Instead of a weight or volume, only the total number of tanks (called “cylinders”) is shown, as required by 172.202(a)(5)(iii)(B).
- The truck/railcar/container/equipment is not subject to placarding. See 172.500(b)(3), and the line in 173.306(g) stating that it is not subject to Subpart F of part 172 (placarding).
- The carrier does not have to be a HazMat carrier, and the driver does not need HazMat certification. See 173.306(g), the bottom line of the first paragraph, stating that it is not subject to parts 174 or 177, other than the standard retention of shipping papers.
- The documents are excepted from the usual 24-hour phone number requirement, as per 172.604(d)(1).
- The only carrier requirement is the 375-day retention rule for the shipping papers. See 174.24 and 177.817.

Limited Quantity Exceptions – additional for international seafreight, when shipped above 26 psig

Chapter 7.9 of the International Maritime Organization Dangerous Goods Code (IMDG) allows for the Competent Authority of an exporting state to issue approvals on behalf of the IMO, and are binding among all countries that subscribe to the IMO. See the definition of Competent Authority and Competent Authority Approval in 49CFR 107.1.

- In addition to the above points, international ocean shipments do require a HazMat Declaration, and a copy of the Competent Authority Approval must be included in the shipping papers.
- Contrary to the domestic exception from placarding, international ocean shipments do require a “Limited Quantities” or “Ltd Qty” placard on the container wherever a class placard is usually required.

Emergency Response Information

Immediate hazards to health	If pre-charged as above, these tanks contain either nitrogen or air – non-flammable, non-poisonous gases. They present no hazard to health. The risk of transportation danger is immeasurably low, and includes transportation risks attendant to moving large items plus the remote possibility of injury from flying or dislodged parts in the event of a transportation collision.
Risks of fire or explosion	Because these tanks contain a pre-charge of air or nitrogen as stated above, they would not be at special risk of causing a fire or explosion, but if there were another cause for a fire or explosion, there is a slim chance that a tank could burst, adding projectiles to the inherent dangers of the fire.
Immediate precautions to be taken in the event of an accident or incident	Control or prevent fire. Remove tanks from vicinity of fire if safe to do so.
Immediate methods for handling fires	These tanks are not flammable, though their cardboard boxes are. Use standard means for fighting paper fires.
Initial methods for handling spills or leaks in the absence of fire	None. There is nothing to spill, and nitrogen and air mix with the nitrogen and air in the vehicle, so a leak would be harmless unless a charged tank were shipped by air (which would have been contrary to company policy).