How to choose the right tank?

BUYING GUIDE

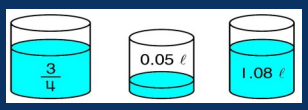
5 questions to ask yourself to choose the right tank

1. For what kind of use?

Determine the function of the tank, and then select the model designed for this purpose:

- Each tank model has been designed to perform a specific job safely
- Uses: transport, storage, secondary containment basins, settling, mixes, underground, etc.

2. What volume do I need?



Estimate the volume of liquid to contain:

- Convert the volume in liters or gallons to browse our website.
- For secondary containment basins, validate if a regulation governs you, if necessary, 110% of the total capacity of the tank.

3. Am I limited in size?

Validate all dimensions :

- Make sure the tank dimensions are suitable for the space where it is intended.
- Allow space for fittings and valves, opening the lid and machinery to connect or carry.

4. What liquid will be contained?

Make sure to identify the liquid to contain:

- You can request the certificate of composition MSDS (Material Safety Data Sheet) from your supplier.
- Always validate the chemical compatibility of the liquid with polyethylene (PE).
- All tanks are made with food resin FDA approved.
- Always validate the chemical compatibility of the liquid with the hardware fittings, valves and seals.

5. What is the relative density of the liquid to be contained?

$$\text{sp gr} = \frac{d_{\text{sample}}}{d_{\text{water}}}$$

The relative density of a liquid is always measured at 20 ° C :

- If the density of the liquid is greater than that of the tank, the walls may swell and yield under the pressure
- The higher the temperature of a liquid increases, the relative density increases.
- The higher the temperature of a liquid increases, the density (capacity) of the tank decreases.
- Anticipate a tank with a higher density if you use it outside in the summer or if you put a hot liquid inside. (max 49° C)

Relative density of tanks available:

- Depending on the model the relative densities are 1.5, 1.7, 1.9 or 2.0
- For specific needs, a 2.2 density is also available upon request.
- For reference, the specific gravity of water is 1.0.

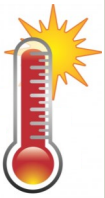
The right tank for the right use

BUYING GUIDE

The SHAPE of the tank is in function of the APPLICATION

 Free Standing Horizontal Tanks	> Transport > Storage	 Conical Open Top Tanks	> Storage of thick products > Decantation > For mixtures
 Vertical Closed Top Tanks	> Storage	 Conical Closed Top Tanks	> Decantation > Viscous products or thick products
 Vertical Open Top Tanks	> Storage > For mixtures > Secondary containment basins	 Double Walls Tanks	> Storage of chemical products
 Pick-Up Tanks	> For Pick-up transportation only	 Plastic Tote (IBC)	> Transport > For forklift handling
 Rectangular Utility Tanks	> Transport > Storage	 Containment basins	> Secondary containment basins > To contain leaks
 Rectangular Open Top Tanks	> Storage > For mixtures > For dry goods	 Tank Fittings & Accessories	> Additional Fittings > Valves, flanges, polyboss > Cap, lids, etc.

Conversion Chart of Relative Density			
Relative density	**Liquid weight at 20 ° C**	**Reference with water**	**Temperature Effect on the density of the liquid and the tank**
1.0	8.34 lb / US Gallon	Relative density of water = 1.0 1 US Gallon = 8.34 lb 3.79 litres = 8.34 lb	**An increase of the liquid's temperature considerably decreases the rating of the specific gravity of the tank.** **** The higher the temperature of a liquid increases, its relative density increases, while the density (capacity) of the tank decreases.** Always anticipate a greater density of the tank if you plan to use in conditions where the temperature is not controlled (if it exceeds 20 ° C) or if you heat the liquid.
1.5	12.50 lb / US Gallon		
1.7	14.16 lb / US Gallon		
1.9	15.83 lb / US Gallon		
2.0	16.66 lb / US Gallon		
2.2	18.32 lb / US Gallon		

Maximum temperature of the liquid	Minimum temperature of the liquid	U-V Exposure
The tanks may contain continuous liquid at a maximum temperature of 49 °C / 120 °F. 	The minimum temperature is just above that of the liquid freezing point. The tanks can crack if a liquid freezes inside. 	All tanks dispose of a U-V rays inhibitor for outdoor use. 

Tanks and Pressure... The tanks are not designed to be put under pressure, their walls are not rigid enough.	
Positive Pressure	During a rapid filling using a pump, if the vent is not big enough to evacuate the air as soon as the filling is being done, creates a positive pressure inside the tanks and the pressure will inflate the walls. The walls could yield and crack if the pressure is too great.
Negative Pressure	During rapid emptying by means of a pump, if the vent is not large enough to allow air to enter the tank during the emptying of the liquid, a negative pressure will be created inside the tank. This suction draws the walls inward and they could collapse, and could stick together when the pressure is too great.

Certification / Conformity	
Certified NSF	**NSF = National Sanitary Foundation** An accredited organization that accreditates and certifies products to ensure they meet standards of public health and safety. NSF listed products meet the criteria of cleaning and hygiene for food contact.
FDA Compliant	**FDA = Food and Drug Administration** The FDA does not approve a product, it establishes the rules that require compliance. When we say that a product complies with FDA standards, this indicates that the manufacturing methods and materials used meet the FDA requirements. All products conform to standards are made from virgin primary resin to which food coloring may have ben added. They can all be used for food contact. **No article made of recycled material is FDA compliant.**

Molding and process	
By rotational Molding	**All tanks are manufactured by rotational molding, except the Totes.** The plastic in powder form is mixed with a color if necessary, then charged into a mold which goes into a high temperature furnace. The mold rotates on two axes allowing the plastic and the color to disperse evenly and reproducing the internal shape of the mold. Once the mold is taken out of the oven, the plastic cools and solidifies. When the room is cooled, it may be then extracted from the mold. This process provides a surface smooth finish and allows the creation of large hollow products, single wall and double wall. The rotationally molded tanks have a softer plastic but greater durability.
By Blow Molding	**Applies only to Totes.** The plastic in pellet form is mixed with a dye if necessary, then it is preheated. An air pressure will blow the plastic in a mold cavity. The tool is cooled with water for blowing, then once refreshed, the piece is removed from the mold. This process provides a smooth surface finish and allows the creation of lighter products than other processes. The blow molded tanks (Totes) have a softer plastic, so should definitely be used in combination with a steel cage for retaining walls under liquid pressure.

Our sales representatives will be happy to help you choose the best model to suit your needs.
Contact us at (450) 471-2772 Ext 1