

## WHAT CHEMICALS CAN I STORE IN YOUR TANKS?

- Identify the chemicals to be stored in the tanks. Be certain to obtain a Certificate of Composition, MSDS (Material Safety Data Sheet) or other data from the chemical supplier so that the actual chemical compounds can be identified properly to evaluate the effect of the chemical on polyethylene storage containers. Be sure to check that the tank, fittings and fitting gasket material are compatible with the chemicals to be contained and the anticipated storage temperatures. Review the [Chemical Resistance Data Chart](#). This will determine if the chemical to be stored is compatible with polyethylene. If this resistance data does not list the chemical you intend to store in the tank, contact the chemical manufacturer for recommendations regarding storage in polyethylene tanks.

## WHAT MATERIALS ARE USED TO MANUFACTURE YOUR POLY TANKS?

- Ace Roto-Mold tanks are offered in medium and high density polyethylene. The polyethylene utilized in the manufacture of Ace Roto-Mold tanks depends upon the size of the tank. There are minimal differences in the characteristic between medium and high density polyethylene. High density polyethylene offers a slightly higher density, chemical resistance and impact resistance than medium density polyethylene. [Vertical Tanks](#) 3100 gallons and larger, [Cone Bottom Tanks](#) 4600 gallons and larger, all [Septic](#) and [Cistern](#) tanks, all [Crop Care Tanks](#) as well as the 2350, 2750 and 3250 gallon [Free Standing Leg Tanks](#) are all made standard in high density polyethylene. Please note that all Ace Roto-Mold tanks are available in high density polyethylene if requested.

## HOW HEAVY A MATERIAL CAN POLYETHYLENE TANKS HOLD?

- Ace Roto-Mold standard tanks have a specific gravity of 1.7. Our vertical tanks ranging from 20-625 gallons are standard with a specific gravity of 2.0. Specific gravity is the ratio of the chemical weight per gallon divided by the weight of water per gallon (8.33 lb per gallon) As an example, if a chemical weighs 10 lb per gallon, the specific gravity of the chemical is  $10.0/8.33 = 1.2$  SG. (Metric: kilogram/cubic meter or gram/liter) Substances with a specific gravity greater than 1.0 are heavier than water, those with a specific gravity of less than 1.0 are lighter than water.

## WHAT IS THE WALL THICKNESS OF YOUR TANKS?

- Wall thickness varies from top to the bottom of the tank. Our tanks 2000 gallons or smaller tend to have an even wall thickness due to the roto-molding process. Ace Roto-Mold standard tanks have a specific gravity of 1.7. We use the right amount of material and resin grades in order to insure that specific gravity is reached. We do provide wall thickness maps for our Vertical tanks 5000 gallons and up as well as our Cone Bottom tanks 4600 gallons and up. Please consult the [factory](#) regarding these maps.

## WHAT ARE DRILL POINTS ON YOUR TANKS?

- Drill points are a molded in feature of a tank used as a quick locating point for fittings. Drill points are typically located in standard fitting locations only. They appear as an indentation and are typically 1/4" in diameter but may be even bigger in large tanks. They are often mistaken as a partially drilled hole. Even though the drill point is indented, the wall thickness is compensated for on the inside wall of the tank during the molding process. I.E., if you were able to run your hand over the inside wall where the drill point is located you would feel a bump that would be comparable in height to the indentation on the outside. The only time drill points are visible is when tanks are ordered with no fittings or with fittings installed in non-standard locations.

## WHAT IS THE WARRANTY ON YOUR TANKS?

- Den Hartog Industries' polyethylene tanks are warranted to be free from defects in materials and workmanship under normal use and service for a period of 24 months on polyethylene Stock Tanks, 60 months on Septic/Cistern tanks and 36 months on all other polyethylene tanks. Warrantor's responsibility extends solely to repair and replacement of your Den Hartog product and its component parts. Warrantor does not assume responsibility for, nor shall be liable for, any special, incidental or consequential damages.

## HOW MANY YEARS WILL MY TANK LAST?

- Life expectancy of a tank depends upon multiple variables. Some of these variables include; the type of material stored in the tank, if the tank is kept indoors or outdoors, if the tank is stationary or used in transportable applications, UV exposure. All of these factors, including several more, have an effect on a polyethylene tank.

## IS THERE SOME WAY TO TELL WHEN MY TANKS WAS MADE?

- All Ace Roto-Mold tanks are embossed with a date stamp in the month/year format. Please consult the [factory](#) regarding common stamp placement on different styles of Ace Roto-Mold tanks.

## IS THERE UV PROTECTION IN THE RESIN YOU USE?

- Ace Roto-Mold tanks are molded from polyethylene compounded with the latest technology in ultraviolet (UV) light stabilizers. The UV stabilizers will reduce the harmful effects of ultraviolet light exposure and are intended to extend the life of a tank over similar materials that are not compounded with stabilizers. Our UV rating is "8", which generally means that after 8000 hours of exposure to the sun, there will be 50% of UV protection remaining. This rating also needs to consider location and prolonged exposure to the sun.

## DO YOUR TANKS HAVE A UL RATING?

- UL 94 groups materials into categories based on their flammability. The polyethylene we use has undergone the horizontal flame test and has a UL94HB rating which means that specimens must not have a burn rate greater than 1.5 inches/minute for thickness between .120 and .500 inches and 3 inches/minute for a thickness less than .120 inches. Specimens must stop burning before the flame reaches the 4 inch mark.

## ARE YOUR ABOVE GROUND TANKS NSF APPROVED?

- National Sanitary Foundation (NSF) compliance considers a number of factors for approval. Among these are material and final configuration of the product including fittings and accessories that are exposed to the chemical. For this reason, please consult the [factory](#) regarding NSF approval.

## DO YOUR TANKS CONTAIN ANY BPA'S?

- Our tanks are made from polyethylene. Bisphenol A (BPA) is not used as a component in the manufacture of polyethylene. BPA is primarily used in polycarbonate and in epoxies used to line cans. Polyethylene does not leach chemicals and has been used for direct food contact for many years.

## DOES THE COLOR OF A TANK GIVE ANY INDICATION AS TO THE QUALITY OF THE TANK?

- Ace Roto-Mold tanks are manufactured from polyethylene compounded with ultraviolet (UV) stabilizers. The UV stabilizers will reduce the harmful effects of ultraviolet light exposure and are intended to extend the life of a tank over similar materials that are not compounded with stabilizers. The standard color for most Ace Roto-Mold tanks is natural (translucent white). All tanks may be ordered in non-standard colors such as yellow, black, green or blue as an option. The color of the tank does not increase the life expectancy or UV resistance of a tank. Please note however, that the color may have an effect on FDA compliance.

## DOES THE COLOR OF A TANK HAVE AN IMPACT ON ALGAE GROWTH?

- Black colored tanks are the most efficient in preventing light transmission. Other colors, if highly concentrated, can also eliminate translucence but can weaken the tank since the pigment is technically a contaminate when introduced to polyethylene. Although natural colored polyethylene tanks transmit the most amount of light energy, tanks that are tinted, with the exception of black) will typically provide enough light energy to sustain photosynthesis and promote Algae unless the amount of light energy transmission is properly evaluated. Any amount of light energy will allow Algae formation.

## CAN I STORE CHEMICALS OR FERTILIZERS IN ACE H2O WATER ONLY STORAGE TANKS?

- No, [Ace H2O Water Only Storage Tanks](#) are designed for water storage only. They are not rated to contain chemicals or fertilizers.

## ARE YOUR TANKS FDA COMPLIANT & ARE THEY SUITABLE FOR WATER STORAGE?

- Ace Roto-Mold tanks are manufactured utilizing FDA compliant resins. All Ace Roto-Mold natural colored above ground tanks and below ground cisterns are safe for water storage. Natural, black, blue and green colored tanks are in full compliance with current FDA standards for polyethylene tanks. However, certain colors (i.e. yellow) when blended in resin, may effect compliance. Consult the [factory](#) regarding colors and FDA compliance. Please specify on your tank order if FDA compliance is required and we will assist in your selection.

## WHAT IS THE MAXIMUM TEMPERATURE THAT YOUR TANKS CAN WITHSTAND?

- Depending upon the chemicals to be stored, Ace Roto-Mold tanks will handle sustained temperatures of up to 120° F (49° C) and intermittent temperatures of up to 140° F (60° C). Consult the chemical manufacturer or [Chemical Resistance Data Chart](#) for recommendations regarding storage in polyethylene tanks and service temperature limits. Please note that higher service temperatures will lower the specific gravity rating of your tank.

## WILL FREEZING TEMPERATURES HURT MY POLY TANK?

- Freezing temperatures will not have an effect on a polyethylene tank, however if you plan to keep a liquid in the tank that you know will freeze, be sure to leave sufficient room for expansion. Be aware there is a greater chance of a polyethylene tank cracking during transportation in cold temperatures.
- Fittings that are exposed to chemicals will have a low temperature rating equivalent to the freezing limit of the chemicals the fitting is exposed to. Note that heaters, heat bands or chemical inhibitors that prevent chemical freeze up will allow the fittings to be exposed to ambient temperatures below the freeze point of the chemical. Again, the low temperature rating of all fittings must be above the point at which the chemicals freeze or solidify.

## CAN I STORE PETROLEUM PRODUCTS IN YOUR TANKS?

- Tanks manufactured by Ace Roto-Mold are suitable for storage of new, unused motor oil up to 500 gallons (1893 liters) in capacity. Industry testing has indicated that long-term storage (5 years or more) of oil can soften the tank walls and cause swelling. Therefore, while limited capacity storage is permitted, the user must be aware of these long-term implications and limited tank life. All fitting gaskets must be Viton. Further, it is recommended that all oil installations feature secondary containment to manage any environmental applications. Used motor oil is not recommended for storage in Ace Roto-Mold tanks due to contaminants. Also note that only cross-linked tanks are suitable for gasoline, diesel, kerosene and other petroleum based fuels.

#### CAN I USE AN ABOVE GROUND TANK FOR THE STORAGE OF BIODIESEL?

- Please click on the following link for Den Hartog Industries' official statement regarding Biodiesel. [Biodiesel Statement](#)

#### CAN I STORE DEF (DIESEL EXHAUST FLUID) IN YOUR TANKS?

- Please click on the following link for Den Hartog Industries' official statement regarding DEF. [DEF Statement](#)

#### CAN I STORE DEIONIZED WATER IN YOUR TANKS?

- Polyethylene tanks manufactured by Ace Roto-Mold are suitable for storage of deionized water up to 100° F (38° C).

#### DO YOU MANUFACTURE TANKS MADE FROM NYLON MATERIALS?

- Nylon has become a popular material in the rotational molding industry. Nylon is best known for its strength, creep resistance, fatigue resistance and high service temperature. It has excellent chemical resistance to a wide range reagents including gasoline and diesel fuel. Ace Roto-Mold can produce tanks in a Nylon material in sizes of 20 gallons or less.

#### DOES THE PRESENCE OF OZONE EFFECT A POLYETHYLENE TANK?

- Ozone is sometimes used for the purification of water. There is little data on the suitability of storing ozonated water in polyethylene tanks. It may cause embrittlement of the tank wall. 100% ozone is not recommended for polyethylene. In lower concentrations it is recommended that the tank be carefully inspected on a semi-annual basis.

#### CAN YOUR TANKS BE PRESSURIZED?

- No, our tanks cannot be pressurized or exposed to vacuum.

#### WHAT IS THE RECOMMENDED TIGHTNESS OF THE HOOPS ON MY TANK?

- The hoops should be tightened for full contact with the tank, however not to the point of tank distortion. The holes used to mount the hoop should be positioned close to the tank to allow full contact at the bottom of the leg and hoop contact point. Please note that hoops with j-bolts and feet are not intended to be tightened to the point of complete contact with the mounting surface.

## ARE THESE TANKS REPAIRABLE THROUGH PLASTIC WELDING?

- Yes, polyethylene tanks can be repaired through welding by qualified personnel.

## HOW TIGHT CAN I TIGHTEN A BULKHEAD FITTING?

- Be careful not to over tighten poly fittings. If over tightened, these fittings can be damaged and leak. Tighten nut to hand-tight plus 1/2 turn. If thread sealant is used, be certain that it is rated for use with the fittings and chemicals to be contained.

## WHAT TYPE OF SURFACE IS REQUIRED FOR PLACEMENT OF A VERTICAL TANK?

- When selecting the tank site, insure that the site is level and that adequate drainage is provided for water runoff. The bottom of all tanks must be completely supported. Reinforced concrete support pads are recommended for tanks with capacities over 1000 gallons (3785 liters). In all cases be certain that the base material is designed to support the bearing capacity requirements of the tank, including seismic and wind loads. If the tank is installed in a stand or skid, note that the bearing capacity requirements of the concrete or soil will be increased. Always anchor the tank according to seismic or wind load zone requirements for the site. Always consult the applicable building codes governing the tank site for specific support and anchoring requirements.

## CAN I PAINT MY TANK?

- Although there are products being marketed that claim to have successful adhesion to polyethylene, Den Hartog Industries does not support this practice. Paints with adhesion promoters will work for only a limited time before peeling is experienced. Polyethylene has a high thermal coefficient of expansion and contraction that causes the adhesion failure.

## CAN A SEPTIC TANK BE USED FOR POTABLE WATER?

- No, drinking water can only be stored in our below ground cisterns and above ground tanks. The pigments used in septic tanks are not approved by the NSF for potable water.

## CAN I USE A RIBBED SEPTIC TANK OR CISTERN ABOVE GROUND?

- Ace Roto-Mold's standard septic and cistern tanks are designed for below ground use only. Use of these tanks above ground could result in the deformation of the tank. However, Ace Roto-Mold [Aquifer Low Profile Cistern Tanks](#) are designed for and can be utilized in both below and above ground applications.

## WHAT CERTIFICATIONS DO YOU HAVE ON YOUR SEPTIC TANKS?

- Ace Roto-Mold septic tanks are both IAPMO Z1000 and CAN/CSA-B-66 approved. IAPMO Z1000 standards are ANSI-accredited consensus standards for waste disposal products. They cover material, testing and marking requirements of these products. CAN/CSA-B-66 standards specify minimum design and material requirements as well as manufacturing practices and markings for prefabricated septic tanks. Essentially all of the Canadian provinces require CSA approval prior to approving or evaluating a septic tank.