Precast Concrete On-Site Wastewater Tanks

DURABLE WATERTIGHT PROTECTION

One of the most important components in protecting a community's groundwater, on-site wastewater systems are in service today in more than 40 million homes in the United States alone. On-site wastewater systems use the surrounding soil to filter the discharge from on-site wastewater tanks, the primary structure in a on-site wastewater system.

On-site wastewater tanks discharge a clarified effluent by settling solid wastes and preventing buoyant material from being discharged from the tank. Precast concrete on-site wastewater tanks operate successfully where municipal sewers are not an option. Precast concrete provides durable watertight protection of watersheds to ensure ground and surface water quality.

WHY PRECAST CONCRETE?

- Strength increases over time
- Weight helps resist buoyant forces
- Durability
- Ease of installation
- Low susceptibility to damage during backfill
- Environmentally sound
- Watertight when produced according to industry standards

Precast Concrete On-Site Wastewater Tanks

Precast concrete on-site wastewater tanks are stronger than tanks made from any other material. Precast concrete has the flexibility to be made to withstand extreme loading conditions without the worry of a catastrophic failure. Precast concrete on-site wastewater tanks have many other advantages over tanks made from other materials:

LONG-TERM MECHANICAL PROPERTIES

Precast concrete gradually strengthens over time. Other products, such as steel and HDPE, can deteriorate and lose strength. Precast concrete on-site wastewater tanks can be pumped empty without fear of having the tank collapse.

BUOYANCY

With a specific gravity of 2.40, precast concrete on-site wastewater tanks resist buoyant forces better than tanks made from other materials. In comparison, fiberglass has a specific gravity of 1.86, while high-density polyethylene (HDPE) has a specific gravity of 0.97. Additional labor-intensive and time-consuming on-site preparation is often required to anchor structures made from more buoyant materials.

For more information on precast concrete on-site wastewater tanks, please contact:

ENVIRONMENTALLY FRIENDLY

Besides water, concrete is the most frequently used material on earth. It is nontoxic, environmentally safe and made from natural ingredients, making it an ideal material for on-site wastewater tanks. Concrete is used throughout North America in various applications and does not affect groundwater or surface water quality.

WATERTIGHTNESS

Precast concrete can be made watertight when produced in accordance with the "NPCA Best Practices Manual for Precast Concrete On-site Wastewater Tanks" and/or ASTM C 1227, "Standard Specification for Precast Concrete On-site Wastewater Tanks." These industry standards specify the necessary procedures to be followed during the manufacturing of watertight tanks.

Standard sealants are specially formulated to adhere to precast concrete and produce a watertight joint. When proper installation and application standards are followed, complete watertightness is ensured.

Precast concrete on-site wastewater tanks can be produced in a wide variety of configurations (such as two-piece tank, monolithic tank with separate cover and seamless, one-piece monolithic tank) that meet local standards worldwide. They can be designed to withstand a broad range of soil and loading conditions.

Precast concrete is the material of choice for on-site wastewater tanks. Precast concrete on-site wastewater tanks are watertight, durable during storage and transportation, easily installed, resist damage better than other products during backfill and are environmentally safe.

NPCA
Precast ... The Concrete Solution

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