

# UREA DEF STORAGE

## UNDERGROUND FIBERGLASS TANK



Containment Solutions (CSI) was the first fiberglass tank manufacturer in North America to complete independent third party testing for Urea DEF compatibility. CSI underground fiberglass chemical tanks meet the quality and storage requirements in the ISO standard and the PEI Recommended Practice for storing Urea DEF.

### UNDERSTANDING UREA DEF

Urea DEF (Diesel Exhaust Fluid) is used to control diesel engine discharges in order to meet EPA emission standards. Most new diesel vehicles use SCR (Selective Catalytic Reduction) systems to inject Urea DEF directly into the exhaust stream to chemically neutralize about 90% of harmful NOx emissions. Urea DEF, or AUS 32, is a mixture of 32.5% urea solution in demineralized/deionized or distilled water. The purity of the Urea DEF is critical for the SCR process to work. This process also improves fuel efficiency 3%-6%.

As the number of SCR systems on the road increase to meet EPA standards, diesel dispensing facilities will require ample storage to meet the growing demand. Most estimates project that by 2014, DEF demand will reach between 300 and 750 million gallons nationwide.

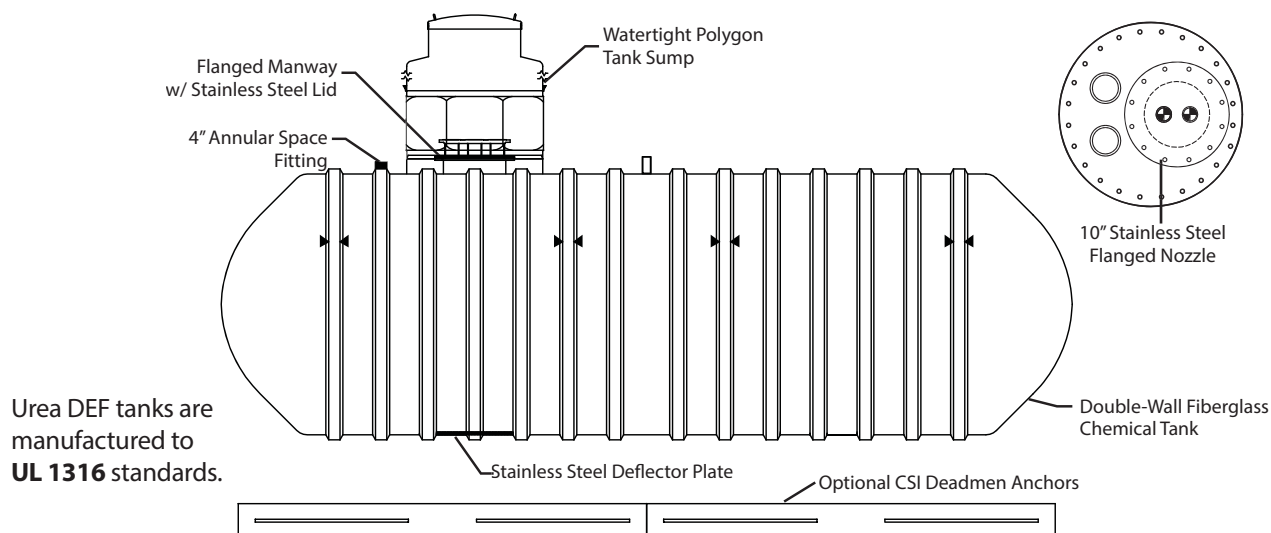
### CSI, RECOGNIZED STORAGE SOLUTION

Containment Solutions contracted with an internationally accredited lab to complete thorough testing of our fiberglass reinforced plastic (FRP) tank for compatibility with Urea Diesel Exhaust Fluid. The report concluded that the DEF solution conformed to ISO 22241-2 after several tests of exposure to the tank surface, confirming that CSI's tanks are suitable for the storage of Urea DEF. The test results also led to a major DEF manufacturer recognizing CSI as the first approved equipment supplier for bulk DEF storage.

### UNDERGROUND FOR BULK STORAGE

Urea DEF must remain between the temperature limitations of 12° - 77°F in order to maintain its full shelf life. Extreme temperatures can deteriorate diesel exhaust fluid, making an underground tank the ideal solution.

## TYPICAL UREA DEF CHEMICAL TANK DESIGN



### WHAT MAKES CSI A BETTER CHOICE?

Thanks to a unique computer driven manufacturing process, our inner tank wall is not air-inhibited resulting in a glossy, smooth surface without the need for wax coatings/liners. The automated process produces a consistent, more uniform tank.

Underground fiberglass tanks offer unique storage benefits such as balanced temperature control and ultimate fluid flexibility.

### BALANCED TEMPERATURE

DEF has a very specific shelf life which can be significantly impacted by extreme temperatures. By storing the sensitive fluid underground the natural insulation of a buried tank will keep the environmental temperature consistent and balanced, optimizing the DEF shelf life.

### FUTURE USE

All underground DEF storage tanks from CSI are built to UL 1316 standards, providing the tank owner with an option to exchange the stored fluid sometime in the future, should the need arise. With regulations and technologies constantly changing, having an adaptable tank is the ultimate in owner/site flexibility.

### CSI UREA DEF TANKS

- Double-wall tanks recommended, single-wall tanks also available
- All tanks are built to UL 1316 standards
- All manway lids, fittings, hardware, and deflector plates are stainless steel
- Tank mounted fittings threaded stainless steel or fiberglass flanged nozzles
- 30-Year limited warranty

## STAINLESS STEEL MANWAYS

All DEF tanks use stainless steel manways with either stainless steel fittings or flanged nozzles. The corrosion resistant manways are compatible with a wide range of fluids including DEF.

Aboveground DEF tanks are also available. Contact a CSI representative for more information.

