



Position Statement

Diesel Exhaust Fluid (DEF) Storage Tanks

The EPA has set forth stringent emissions requirements to begin January 2010 which will require diesel engine manufacturers to choose a technology called Selective Catalytic Reduction (SCR) to meet the requirements. When added to the exhaust gases DEF reduces the NOx to the EPA required levels. If you purchase a car, truck, tractor or any diesel powered product with SCR technology it will require DEF. There will be a separate DEF tank on diesel vehicles to hold the DEF to be sprayed into the exhaust system.

DEF is a high purity chemical solution containing 32.5% urea mixed with high purity water. It is classified as a non-hazardous product. Snyder Industries has a long history of proven success providing both bulk storage tank and IBC solutions for urea storage.

Tank:

HDLPE, 1.35, 1.5 or 1.9 SG rating (ASTM D-1998 - 600 psi hoop stress design) – *complies with ISO 22241-3 section 4.1.2*
or

HDXLPE, 1.5 or 1.9 SG rating (ASTM D-1998 - 600 psi hoop stress design) – *complies with ISO 22241-3 section 4.1.2*

Full Drain Option:

SUMO™ (Snyder Unitized Molded Outlet):

- Available on single wall vertical tanks 2000 to 12,500 gallons.
- Encapsulated 316SS threaded ring with PVC adapter.

Double Wall Tanks:

Mini-Captor™ and CAPTOR™ Containment Systems (CCS) – 35 to 10,000 gallons

- Primary Tank
 - HDLPE, 1.5 or 1.9 SG rating (ASTM D-1998 - 600 psi hoop stress design) – *complies with ISO 22241-3 section 4.1.2*
or
 - HDXLPE, 1.5 or 1.9 SG rating (ASTM D-1998 - 600 psi hoop stress design) – *complies with ISO 22241-3 section 4.1.2*
- Secondary Containment Tank
 - HDLPE, 1.5 SG, Natural color – *complies with ISO 22241-3 section 4.1.2*

Fittings:

Material of Construction:

- Fitting: PVC (schedule 80), PP or 316SS
- Gasket: EPDM or Viton®
- Bolt: 316SS

Heat Tracing and Insulation:

DEF can start freezing at 12 deg. F depending on concentration. To prevent freezing or crystallization the contents in the tank may require a heat maintenance system. Heat Tracing and Insulation is available for both single and double wall vertical Snyder polyethylene tanks.

Plumbing to the tank:

Required use of **flexible connections** with fittings

- Allows for 4% lateral and vertical expansion and contraction of the tank
- Reduces pump and piping vibration stress on the tank, fittings, and gaskets
- Flexible connections, piping, and valves must have structural support independent of tank sidewall and dome

Venting:

Tanks are designed for use at atmospheric pressure. Pressure or vacuum situation can cause excessive deformation or damage to the tanks and void warranty. Venting equipment should be sized to limit pressure or vacuum in the tank to a maximum of ½" water column (0.018 PSI). If the tank will be pneumatically filled (through tanker discharge) additional pressure relief may be required.

Foundation and Restraints:

Tanks should be positioned on a smooth concrete or asphalt pad providing adequate support. The pad should be clean, smooth and level so it fully supports the entire tank bottom with no deflection. If a seismic restraint system is used the pad must be adequate in size for anchor plate attachments per the seismic code.

Temperature:

Tanks are rated up to 100° F, however, DEF can lose its potency if stored for prolonged periods over 86° F.