To meet 2010 EPA regulations in North America, most producers of diesel engines have announced plans to use Selective Catalytic Reduction (SCR) technology, requiring Diesel Exhaust Fluid (DEF).

Diesel Exhaust Fluid (DEF) is a high purity chemical fluid consisting of 32.5% urea mixed with high purity water.

By providing the right kind of storage tank for DEF, safety can be maintained and the integrity of the product can be preserved. Sierra Sales offers single wall and double wall containment designs along with several options and features that make our tank systems ideal for handling your DEF.

<table>
<thead>
<tr>
<th>CHEMICAL</th>
<th>RESIN TYPE</th>
<th>SPECIFIC GRAVITY RATING</th>
<th>FITTING MATERIAL</th>
<th>GASKET MATERIAL</th>
<th>BOLT MATERIAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>DEF</td>
<td>HDLPE</td>
<td>1.35, 1.5, 1.9</td>
<td>316SS</td>
<td>EPDM or VITON®</td>
<td>316SS</td>
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<tr>
<td></td>
<td>(non-pigmented)</td>
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www.petanks.com
Stationary Tanks:
- 22 to 16,500 Gallons
- 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

Full Drain Option:
SUMO™ (Snyder Unitized Molded Outlet):
- Available on single wall vertical tanks 2,000 to 12,500 gallons
- Encapsulated 316SS threaded ring with 316SS adapter

Double Wall Tanks:
CAPTOR™ Containment Systems (CCS) – 15 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
- Secondary Containment Tank
  - HDLPE, 1.5 SG, Natural color – complies with ISO 22241-3 section 4.1.2
  - Provides 115%-120% containment of primary tank capacity

Intermediate Bulk Containers:
- 120-550 Gallons
- HDPE & Stainless Steel construction
- Wide variety of designs and options
- UN/DOT approved

Fittings:
Material of Construction:
- Fitting: 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 Sierra Sales polyethylene tanks.

Flexmaster Flexible Connector:
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

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. Seismic and wind restraint systems are
  available for both single and double wall vertical Sierra Sales polyethylene tanks.

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

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