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Ultra-Pure Fluoropolymer Solutions

Innovation, Ingenuity and Excellence
Edlon is the leader in designing unique innovative solutions for the most corrosive environments and has been doing so for almost 40 years. Our history and understanding of fluoropolymers date back to the very beginning when ex-DuPont research scientists and engineers incorporated Edlon in 1964. Edlon invented isostatic molding and fusion welding for sheet linings in high purity chemical process equipment and piping. Today, Edlon can assist and design equipment to your specifications helping to meet your PPT purity levels. Edlon has in-depth technical expertise with all plastic materials including PFA 450HP, PFA350, PTFM, PTFE, FEP, ETFE, ECTFE, PVDF, PP and HDPE. All materials are of the highest quality and purity available.

Multiple Lining Options

PFA 450HP (Perfluoroalkoxy) - High Purity
PFA-HP exhibits the same chemical, thermal, & mechanical stress characteristics as standard PFA however, it has improved color, a lower level of fluoride ion extractables and a decreased chance of metal ion contamination. The end result is a smoother, pore free surface with higher purity characteristics, ideal for semiconductor, pharmaceutical and biotechnology application.

PFA 350 (Perfluoroalkoxy)
PFA exhibits chemical resistance virtually identical to PTFE. Suitable for service from 0°F to 500°F, PFA is a fluorinated thermoplastic. PFA provides excellent low and high temperature toughness and exceptional flame resistance. It is the recommended material in harsh environments where chemical, thermal, and mechanical stresses are present. Due to its low porosity, PFA is well-suited for ultra-pure applications.

PTFM (PTFE - Modified)
PTFM is a modified version of PTFE that has a small quantity of the same Perfluoro Alkxy side chain monomer as PFA. It exhibits similar characteristics as PTFE but has improved temperature and mechanical properties. In addition, PTFM possesses improved weldability, improved creep resistance, superior particle to particle adhesion as well as reduced melt viscosity & permeability. The end result is a smoother, pore free surface with higher purity characteristics, ideal for semiconductor, pharmaceutical and biotechnology applications.

PTFE (Polytetrafluoroethylene)
PTFE, the most commonly used fluoropolymer, has excellent high-temperature corrosion resistance to virtually all chemicals except fluorine and molten alkali metals. In addition, PTFE possesses unusual non-stick properties, which can reduce or eliminate the build-up deposits in lined process equipment. Service temperatures range from -20°F to 500°F.

FEP (Fluorinated ethylene propylene)
FEP has excellent chemical resistance and mechanical strength. Suitable for service from -65°F to 300°F, FEP is a fully fluorinated thermoplastic. Its high tensile & yield strengths make it the ideal material for low temperature/cryogenic applications.

ETFE (ethylene tetrafluoroethylene)
ETFE combines the mechanical toughness with outstanding chemical resistance that approaches the fully fluorinated polymers. Effective from -20°F to 300°F, ETFE is easily processed making it an excellent material for rotomolding and rotolining.

ECTFE (ethylene chlorotrifluoro ethylene)
ECTFE features excellent permeation and abrasion resistance. Rated from 0°F to 300°F, it has a surface smoothness exceeding that of other fluoropolymers making it an excellent option for ultra-pure service when ordered unpigmented and clean room prepared. In addition, its unique molecular structure makes ECTFE ideal for high build coatings.

PVDF (Polyvinylidene fluoride)
PVDF has excellent resistance to many chemicals, including halogens and strong oxidants. PVDF exhibits excellent abrasion and permeation resistance and can be used in systems from 0°F to 275°F. Edlon uses the Kynar® Flex material to maximize low temperature ductility. PVDF has found wide acceptance in high purity DI water service.

PP (Polypropylene)
Type II PP, a hydrocarbon copolymer, has good corrosion resistance, low moisture absorption and good mechanical properties. Since its chemical resistance is greatly affected by the concentration and temperature of the process fluid, its use is generally limited from 0°F to 225°F. Polypropylene presents itself as an economical solution to many moderately corrosive high purity needs.

HDPE (High Density Polyethylene)
HDPE is rated from -20°F to 180°F and features the best abrasion resistance of any of the Edlon polymers offered. Its low price and toughness make it an ideal alternative where chemical resistance permits.
Edlon has perfected its manufacturing skills and processes that enable you to meet your highest purity requirements and prides itself in being the highest purity fluoropolymer fabricator in the industry.

Several Edlon customers have gone through extensive high purity testing with the Edlon Secure & Pure™ day tank product line. In comparison testing, Edlon registered the highest purity. Three competitive high purity PFA lined tanks and one Edlon PFA lined Industrial grade tank were filled with 10% HCL and recirculated for seven days. At the conclusion, Edlon had the lowest normalized metals extraction rate!

<table>
<thead>
<tr>
<th>Supplier</th>
<th>Component</th>
<th>Chemical Used</th>
<th>Wetted Material</th>
<th>Normalized Extraction Rate, ng/cm²/day @ 7 days</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>High Purity Test Vessel</td>
<td>10% HCl</td>
<td>PFA</td>
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</tr>
<tr>
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<td>PFA</td>
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<tr>
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<td>High Purity Test Vessel</td>
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<td>PFA</td>
<td>1.46</td>
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<tr>
<td>Edlon</td>
<td>Industrial Test Vessel</td>
<td>10% HCl</td>
<td>PFA</td>
<td>1.36</td>
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</table>

The Edlon Secure & Pure™ high purity PFA lined tank was then tested with a stronger concentration 37% HCL solution. After seven days of recirculation, samples were taken and the results were astounding. Despite the higher concentration, Edlon achieved a normalized extraction rate of less than half that of the competitors high purity PFA lined tank.

<table>
<thead>
<tr>
<th>Supplier</th>
<th>Component</th>
<th>Chemical Used</th>
<th>Wetted Material</th>
<th>Normalized Extraction Rate, ng/cm²/day @ 7 days</th>
</tr>
</thead>
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<tr>
<td>Edlon</td>
<td>High Purity Test Vessel</td>
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<td>PFA</td>
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</table>

Today, Edlon has taken the necessary steps to help you meet the high purity requirements by elevating the level of its manufacturing techniques to rise above the industry. Edlon will continue to raise the bar in high purity manufacturing to help meet tomorrow’s high purity requirements by partnering with our customers and continuously implementing innovative solutions. These techniques include:

- All Pure-Fusion seams are produced in a class 10,000 clean room environment
- All metal and FRP fabrication take place in a separate self-contained facility. This helps prevent any chance of cross contamination
- All Pure-Fusion seams are spark tested between 10,000 - 20,000 Volts DC
- All Secure & Pure™ equipment is cleaned with electronic grade IPA, soaked and rinsed with ultra-pure 18 Mega Ohm DI water
- All Secure & Pure™ equipment is 100% pressure tested with ultra pure 18 Mega Ohm DI water to guarantee strength and reliability
- All Secure & Pure™ equipment is shrink wrapped and crated for shipment. Nitrogen blanketing and barrier bagging are available upon request
- Edlon’s Pure-Fusion seaming technique helps to eliminate the potential for particle entrapment or metal ion contamination that is potentially possible with the industry standard hot-gas air weld
- Edlon’s Secure & Pure™ high purity clean tanks help you save time & money with faster qualification during start up

The question remains: Why trust someone other than Edlon with your high purity requirements?
Edlon’s Secure & Pure™ product line offers the strongest linings in the industry. Using state-of-the-art technologies and equipment, Edlon’s proprietary Pure-Fusion seaming incorporates flat, indiscernible seams that provide you with a clean, smooth surface that minimizes entrapments. No more cracks and crevices for dangerous metal ion contamination, particle entrapment, or bacterial growth.

As the tests show above, only Edlon provides you with security and dependability!
Edlon’s Secure & Pure™ ultra high purity CMP slurry tanks are the most advanced in the industry. Multiple lining & fabrication options are available. Edlon’s experienced design team can incorporate various accessories including heat exchanger coils, 360° cleaning systems, baffles, mixers and spargers. All tanks are of the highest quality meeting Edlon’s stringent high purity requirements. A wide range of CMP slurry tanks are available. Edlon has the “Smart Solution” to fit your application.

Benefits:
- State-of-the-art seaming technology & fabrication techniques
- Innovative solutions provide improved design performance
- Ideal for low to mid temperature & pressure ratings
- Individually engineered & designed to meet your application requirements
- Exterior cosmetics expected in a high purity tank

Several design options available to meet your needs:
- Flat Bottom
- Cone Bottom
- Fiberglass Reinforced Plastic (FRP or GRP) and Stainless Steel Overpacks are Available. Please see “Bulk Chemical Distribution Tanks” for additional details.

Fluoropolymer Fabrication:
- Internal lining options include: sheetlining only
- All Edlon’s proprietary Pure-Fusion welding at the liner joint connections
- All Pure-Fusion seaming procedures are performed in a Class 10,000 clean room
- All interior surfaces are wiped down with Electronic Grade IPA
- All tanks soaked and rinsed with 18 Mega Ohm DI water
- All tanks are shrink wrapped and crated for maximum protection during shipment
- Vessels are high purity cleaned to help minimize startup time
# CMP Slurry Tanks

**Plastic/Fluoropolymer**

**Volume** | **Diameter** | **Straight Side Height**
--- | --- | ---
10 L  | 11"  | 6"
20 L  | 11"  | 13"
30 L  | 18"  | 7"
50 L  | 18"  | 12"
100 L | 18"  | 24"
200 L | 24"  | 27"
400 L | 30"  | 35"
500 L | 30"  | 43"
800 L | 36"  | 48"
1200 L| 48"  | 40"
1500 L| 48"  | 51"
1800 L| 48"  | 61"
2000 L| 48"  | 67"
2500 L| 60"  | 54"
3000 L| 60"  | 65"
3500 L| 60"  | 76"
4000 L| 60"  | 86"

<table>
<thead>
<tr>
<th>Volume</th>
<th>Diameter</th>
<th>Straight Side Height</th>
</tr>
</thead>
<tbody>
<tr>
<td>10 L</td>
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<td>20 L</td>
<td>15&quot;</td>
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<tr>
<td>50 L</td>
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<td>57&quot;</td>
</tr>
<tr>
<td>3200 L</td>
<td>63&quot;</td>
<td>61&quot;</td>
</tr>
</tbody>
</table>

Custom Sizes Available

**Design Specifications:**
- Temperature: Ambient to 150°F (65°C)
- Pressure: Atmospheric to 15 psi

Note: Please consult Edlon with your specific application

**Lining Options:**
- PFA450 HP
- PFA350
- PTFM, FEP
- ETFE, ECTFE
- PVDF, Polypropylene
- Unlined HDPE or PP
- Thicknesses available in: 0.060", 0.090", 0.125" & up

**Ports:**
- Flare-Type Fittings
- NPT
- Sight Window
- Dump Chute
- Bung Connection
- Manway
- 150# ANSI Flange

**Bolts:**
- PVC
- PVDF
- 304SS
- 316SS
- Teflon Coated Stainless Steel

**Accessory Options:**
- Internal Heat Exchanger
- Dip Tubes
- Spargers/Spraying Systems
- Static Mixer
- Prop Mixer
- External Sight Tube
- Valve Manifolds
- Level Sensor
- Baffles
- Strainers
- Vortex Breakers
- Leak Detectors
For the ultimate in purity protection, Edlon offers its Secure & Pure™ fluoropolymer lined plastic bulk chemical distribution tanks. These tanks are engineered to be extremely durable offering long lasting high purity containment. They are constructed with a high density polyethylene or polypropylene overpack and an ultra high purity fluoropolymer interior liner.

**Benefits:**
- State-of-the-art seaming technology & fabrication techniques
- Innovative solutions provide improved design performance
- Ideal for low to mid temperature & pressure ratings
- Individually engineered & designed to meet your application requirements
- Exterior cosmetics expected in a high purity tank

Several design options available to meet your needs:
- Flat Bottom
- Cone Bottom

**Fluoropolymer Fabrication:**
- Internal lining options include: sheetlining only
- All Edlon’s proprietary Pure-Fusion welding on seam connections
- Seaming procedures are performed in a Class 10,000 clean room
- All interior surfaces are wiped down with Electronic Grade IPA
- All tanks soaked and rinsed with 18 Mega Ohm DI water
- All tanks are shrink wrapped and crated for maximum protection during shipment
Bulk Chemical Delivery Tanks

Plastic/Fluoropolymer

---

**Design Specifications:**
- Temperature: Ambient to 150°F (65°C)
- Pressure: Atmospheric to 15 psi

**Note:** Please consult Edlon with your specific application

**Lining Options:**
- PFA450 HP, PFA350
- PTFM, FEP
- ETFE, ECTFE
- PVDF, Polypropylene
- Thicknesses available in: 0.060", 0.090", 0.125" & Up

**Ports:**
- Flare-Type Fittings
- NPT

---

**Bolts:**
- PVC
- PVDF
- 304SS & 316SS
- Teflon Coated Stainless Steel

**Accessory Options:**
- Internal Heat Exchanger
- Dip Tubes

---

**Volume** | **Diameter** | **Straight Side Height**
---|---|---
10 L | 11" | 6"
20 L | 11" | 13"
30 L | 18" | 7"
50 L | 18" | 12"
100 L | 18" | 24"
200 L | 24" | 27"
400 L | 30" | 35"
500 L | 30" | 43"
800 L | 36" | 48"
1200 L | 48" | 40"
1500 L | 48" | 51"
1800 L | 48" | 61"
2000 L | 48" | 67"
2500 L | 60" | 54"
3000 L | 60" | 65"
3500 L | 60" | 76"
4000 L | 60" | 86"

Custom Sizes Available

---

**Volume** | **Diameter** | **Straight Side Height**
---|---|---
10 L | 11" | 6"
20 L | 15" | 7"
30 L | 15" | 10"
50 L | 15" | 17"
100 L | 18" | 24"
200 L | 22" | 32"
400 L | 30" | 34"
500 L | 30" | 42"
800 L | 42" | 34"
1200 L | 42" | 52"
1500 L | 51" | 44"
1800 L | 51" | 52"
2000 L | 51" | 58"
2500 L | 63" | 47"
3000 L | 63" | 57"
3200 L | 63" | 61"

Custom Sizes Available

---

**Spargers/Spraying Systems**
- Static Mixer
- Prop Mixer
- External Sight Tube
- Valve Manifolds
- Level Sensor
- Baffles
- Temperature Probe
- Strainers
- Double Containment
- Pressure Relief (Conservation Vent/Rupture Disk)
- Leak Detectors
If you are looking for pressure handling capabilities in a bulk chemical delivery tank, Edlon’s Secure & Pure™ fluoropolymer lined stainless steel tanks are your answer. These tanks are ideal for atmospheric to high pressure and high temperature applications. There are several different options to choose from. Edlon can fabricate the entire range from an ultra high purity PFA lined tank to a less costly high purity polypropylene lined tank.

**Benefits:**
- State-of-the-art seaming technology & fabrication techniques
- Innovative solutions provide improved design performance
- Ideal for atmospheric to high temperature, high pressure ratings
- Individually engineered & designed to meet your application requirements
- Exterior cosmetics expected in high a purity tank

**Several design options available to meet your needs:**
- Flat Bottom
- Dished Bottom
- Cone Bottom
- Atmospheric Rating
- Low Pressure Rating
- High Pressure Rating

**Fluoropolymer Fabrication:**
- Internal lining options include: rotomolding, coating and sheetlining
- Our Secure & Pure lined vessels are manufactured clean
- Superior Pure-Fusion seaming technology minimizes steps, cracks & ledges, which may trap contaminants.
- Seaming procedures are performed in a Class 10,000 clean room
- All interior surfaces are wiped down with Electronic Grade IPA
- All tanks soaked and rinsed with 18 Mega Ohm DI water
- All tanks are shrink wrapped and crated for maximum protection during shipment
- Vessels are high purity cleaned to help minimize startup time

**Stainless Steel Fabrication:**
- All stainless steel fabrication is performed in a separate, self-contained facility
- Standard with 2:1 elliptical bottom heads, optional ASME F&D
- Built to ASME Code Section VIII Division I, API 650, UL 142 (where applicable), UBC, UFC Seismic Zone 1-5
- Vessel fabrication is performed using some of the latest welding equipment including fully automated robotic and sub-arc welding tools
- Exterior finish options include: standard mill finish; hand polished; electropolished; glass bead blasted; epoxy powder coated and fluoropolymer coated
### Design Specifications:

- **Temperature:** Ambient to 500°F (260°C)
- **Pressure:**
  1. Atmospheric to 15 psi: Built per ASME Code Section VIII
  2. 15 psi & up: Stamped per ASME Code Section VIII
  3. Full Vacuum Available

Note: Please consult Edlon with your specific application.

### Ports:
- Flare-Type Fittings
- NPT
- Sight Window
- Dump Chute
- Bung Connection
- Manway
- 150#, 300# & DIN Flanges

### Lining Options:
- PFA (450HP & 350)
- PTFM, PTFE
- FEP
- ETFE, ECTFE
- PVDF, Polypropylene
- Thicknesses available in: 0.060", 0.090", 0.125" & up

### Bolts:
- 304SS & 316SS
- Teflon Coated Stainless Steel

### Accessory Options:
- Internal Heat Exchanger
- Dip Tubes
- Spargers/Spraying Systems
- Static Mixer
- Prop Mixer
- External Sight Tube
- Valve Manifolds
- Level Sensor
- Baffles
- Body Flanges for Internal Access
- Pressure Relief (Conservation Vent/Rupture Disk)
- Temperature Probe
- Strainer
- Vortex Breakers
- Teflon Lined Pipe, Fittings & Hose
- Teflon Expansion Joints
- Leak Detectors

### Bulk Chemical Delivery Tanks

**Stainless/Fluoropolymer**

<table>
<thead>
<tr>
<th>Volume</th>
<th>Diameter</th>
<th>Straight Side Height &quot;A&quot;</th>
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Custom Sizes Available
Bulk Chemical Delivery Tanks

Stainless/Fluoropolymer

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<tr>
<th>Volume</th>
<th>Diameter</th>
<th>Straight Side Height “A”</th>
<th>Straight Side Length “B”</th>
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<td>90”</td>
</tr>
<tr>
<td>10000 L</td>
<td>96”</td>
<td>64”</td>
<td>64”</td>
<td>84”</td>
<td>74”</td>
</tr>
<tr>
<td>12000 L</td>
<td>96”</td>
<td>81”</td>
<td>81”</td>
<td>101”</td>
<td>91”</td>
</tr>
<tr>
<td>15000 L</td>
<td>96”</td>
<td>106”</td>
<td>106”</td>
<td>126”</td>
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</tr>
<tr>
<td>18000 L</td>
<td>108”</td>
<td>97”</td>
<td>97”</td>
<td>120”</td>
<td>108”</td>
</tr>
<tr>
<td>20000 L</td>
<td>108”</td>
<td>110”</td>
<td>110”</td>
<td>133”</td>
<td>122”</td>
</tr>
</tbody>
</table>

Custom Sizes Available

Design Specifications:
- Temperature:
  Ambient to 500°F (260°C)
- Pressure:
  1) Atmospheric to 15 psi: Built per ASME Code Section VIII
  2) Full Vacuum Available
Note: Please consult Edlon with your specific application

Ports:
- Flare-Type Fittings
- NPT
- Sight Window
- Dump Chute
- Bung Connection
  - Manway
  - 150#, 300# & DIN Flanges

Lining Options:
- PFA450 HP
- PFA350
- PTFM, PTFE
- FEP
- ETFE, ECTFE
- PVDF, Polypropylene
- Thicknesses available in: 0.060”, 0.090”, 0.125”, & up

Bolts:
- 304SS & 316SS
- Teflon Coated Stainless Steel

Accessory Options:
- Internal Heat Exchanger
- Dip Tubes
- Spargers/Spraying Systems
- Static Mixer
- Prop Mixer
- External Sight Tube
- Valve Manifolds
- Level Sensor
- Baffles
- Body Flanges for Internal Access
- Temperature Probe
- Strainer
- Double Containment Boxes
- Vortex Breakers
- Pressure Relief (Conservation Vent/Rupture Disk)
- Teflon Lined Pipe, Fittings & Hose
- Teflon Expansion Joints
- Leak Detectors
If you are looking for security and high quality in a fiberglass bulk chemical delivery tank, Edlon's Secure & Pure™ fluoropolymer lined FRP tanks are your answer. These tanks are the most advanced in the industry utilizing advanced polymer techniques in both fluoropolymer and fiberglass reinforced plastic construction. The ideal dual laminate for atmospheric to medium pressure/medium temperature applications. Whether your application requires a fluoropolymer lined FRP tank or a polypropylene lined FRP tank, Edlon has the smart solution.

**Benefits:**

- State-of-the-art seaming technology & fabrication techniques
- Innovative solutions provide improved design performance
- Ideal for atmospheric to medium temperature, medium pressure ratings
- Individually engineered & designed to meet your application requirements
- Exterior cosmetics expected in a high purity tank

**Several design options available to meet your needs:**

- Atmospheric to 15 psi – Built per RTP-1
- 15 psi & up – Built per RTP-1. ASME Code Section X available upon request

**Fluoropolymer Fabrication:**

- Internal lining options include: sheetlining only
- Seaming procedures are performed in a class 10,000 clean room
- All interior surfaces are wiped down with Electronic Grade IPA
- All tanks soaked and rinsed with 18 Mega Ohm DI water
- All tanks are shrink wrapped and crated for maximum protection during shipment
- Vessels are high purity cleaned to help minimize startup time

**FRP Fabrication:**

- Isophthalic and premium grade vinyl ester resins are available
- All FRP work is performed in a separate, self-contained facility
- All fluoropolymer interior surfaces sealed during the FRP fabrication process to prevent cross contamination
- All FRP meets or exceeds RTP-1 construction
- Multiple FRP fabrication techniques are available including transfer molding, hand layup and filament winding
- Corrosion resistant exterior gel coatings are available
- Seismic Zone 1-5, UBC
- Experts in the industry using the latest technology in FRP fabrication
- Edlon mandates all laminates and FRP accessories to be tested to prove mechanical properties regardless of specifications
Bulk Chemical Delivery Tanks

FRP/Fluoropolymer

Design Specifications:
- Temperature: Ambient to 180°F (82.2°C)
- Pressure:
  1) Atmospheric to 15 psi: Built per RTP-1
  2) 15 psi & up: Built per RTP-1. ASME Code Section X available upon request
  3) Full Vacuum Available
Note: Please consult Edlon with your specific application

Ports:
- Flare-Type Fittings
- NPT
- Sight Window
  - Dump Chute
  - Bung Connection

Lining Options:
- PFA450 HP, PFA350
- PTFM, PTFE
- FEP, ETFE, ECTFE
- PVDF, Polypropylene
- Thicknesses available in: 0.060", 0.090", 0.125" & up

Bolts:
- 304SS & 316SS
- Teflon Coated Stainless Steel

Accessory Options:
- Internal Heat Exchanger
- Dip Tubes
- Spargers/Spraying Systems
- Static Mixer
- Prop Mixer
- External Sight Tube
- Valve Manifolds
- Level Sensor
- Baffles
- Strainers
- Double Containment
- Pressure Relief (Conservation Vent/Rupture Disk)
- Temperature Probes
- Teflon Lined Pipe, Fittings & Hose
- Teflon Expansion Joints
- Vortex Breakers
- Leak Detectors

<table>
<thead>
<tr>
<th>Volume</th>
<th>Diameter</th>
<th>Straight Side Height “A”</th>
<th>Straight Side Height “B”</th>
<th>Straight Side Height “C”</th>
</tr>
</thead>
<tbody>
<tr>
<td>50 L</td>
<td>18”</td>
<td>9”</td>
<td>6”</td>
<td>6”</td>
</tr>
<tr>
<td>100 L</td>
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<td>800 L</td>
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<td>1200 L</td>
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<td>1500 L</td>
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<td>1800 L</td>
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<td>2000 L</td>
<td>48”</td>
<td>59”</td>
<td>51”</td>
<td>51”</td>
</tr>
<tr>
<td>2500 L</td>
<td>60”</td>
<td>44”</td>
<td>34”</td>
<td>34”</td>
</tr>
<tr>
<td>3000 L</td>
<td>60”</td>
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<td>56”</td>
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<td>4000 L</td>
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<td>4500 L</td>
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</tr>
<tr>
<td>5000 L</td>
<td>66”</td>
<td>78”</td>
<td>67”</td>
<td>67”</td>
</tr>
</tbody>
</table>

Custom Sizes Available

Volume Diameter
50 L 18”
100 L 18”
200 L 24”
400 L 30”
500 L 30”
800 L 36”
1200 L 42”
1500 L 48”
1800 L 48”
2000 L 48”
2500 L 60”
3000 L 60”
3500 L 60”
4000 L 60”
4500 L 66”
5000 L 66”
**Design Specifications:**
- **Temperature:** Ambient to 180°F (82.2°C)
- **Pressure:**
  1) Atmospheric to 15 psi: Built per RTP-1
  2) Full Vacuum Available
Note: Please consult Edlon with your specific application

**Ports:**
- Flare-Type Fittings
- NPT
- Sight Window
- Dump Chute
- Bung Connection
- Manway
- Level Sensor
- 150#, 300# & DIN Flange

**Lining Options:**
- PFA (450HP & 350)
- PTFM, PTFE
- FEP
- ETFE, ECTFE
- PVDF, Polypropylene
- Thicknesses available in: 0.060", 0.090", 0.125", & up

**Bolts:**
- 304SS & 316SS
- Teflon Coated Stainless Steel

**Accessory Options:**
- Internal Heat Exchanger
- Dip Tubes
- Spargers/Spraying Systems
- Static Mixer
- Prop Mixer
- External Sight Tube
- Valve Manifolds
- Level Sensor
- Baffles
- Strainers
- Pressure Relief (Conservation Vent/Rupture Disk)
- Temperature Probe
- Double Containment Boxes
- Teflon Lined Pipe, Fittings & Hose
- Teflon Expansion Joints
- Vortex Breaker
- Leak Detectors

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### Volume Specifications

<table>
<thead>
<tr>
<th>Volume</th>
<th>Diameter</th>
<th>Straight Side Height &quot;A&quot;</th>
<th>Straight Side Length &quot;B&quot;</th>
<th>Straight Side Height &quot;C&quot;</th>
<th>Straight Side Height &quot;D&quot;</th>
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<td>3500 L</td>
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<td>4000 L</td>
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<td>86&quot;</td>
<td>76&quot;</td>
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<td>4500 L</td>
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<td>77&quot;</td>
<td>77&quot;</td>
<td>80&quot;</td>
<td>87&quot;</td>
</tr>
<tr>
<td>5000 L</td>
<td>66&quot;</td>
<td>67&quot;</td>
<td>67&quot;</td>
<td>89&quot;</td>
<td>78&quot;</td>
</tr>
<tr>
<td>7000 L</td>
<td>72&quot;</td>
<td>Consult Factory</td>
<td>90&quot;</td>
<td>105&quot;</td>
<td>97&quot;</td>
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<tr>
<td>9000 L</td>
<td>84&quot;</td>
<td>Consult Factory</td>
<td>81&quot;</td>
<td>99&quot;</td>
<td>90&quot;</td>
</tr>
<tr>
<td>10000 L</td>
<td>96&quot;</td>
<td>Consult Factory</td>
<td>64&quot;</td>
<td>84&quot;</td>
<td>74&quot;</td>
</tr>
<tr>
<td>12000 L</td>
<td>96&quot;</td>
<td>Consult Factory</td>
<td>81&quot;</td>
<td>101&quot;</td>
<td>91&quot;</td>
</tr>
<tr>
<td>15000 L</td>
<td>96&quot;</td>
<td>Consult Factory</td>
<td>106&quot;</td>
<td>126&quot;</td>
<td>116&quot;</td>
</tr>
<tr>
<td>18000 L</td>
<td>108&quot;</td>
<td>Consult Factory</td>
<td>97&quot;</td>
<td>120&quot;</td>
<td>108&quot;</td>
</tr>
<tr>
<td>20000 L</td>
<td>108&quot;</td>
<td>Consult Factory</td>
<td>110&quot;</td>
<td>133&quot;</td>
<td>122&quot;</td>
</tr>
</tbody>
</table>

Custom Sizes Available
Edlon’s ultra high purity Secure & Pure™ all plastic small pressure vessels are the perfect solution for in-cabinet or restricted space needs. Featuring state-of-the-art fluoropolymer technology, these tanks are engineered to fit your specific requirements. Innovation and flexibility are key to our success.

Benefits:
- State-of-the-art seaming technology & fabrication techniques
- Innovative solutions provide improved design performance
- Ideal for atmospheric to medium temperature, high pressure ratings
- Individually engineered & designed to meet your application requirements
- Exterior cosmetics expected in a high purity tank

Several design options available to meet your needs:
- PFA, PTFM, ECTFE, PVDF, Solid Polypropylene Pressure Vessel
- Fluoropolymer lined PVDF or PP Pressure Vessel

Fluoropolymer Fabrication:
- Internal lining options include: rotomolding, sheetlining and molded pipe
- All Seaming procedures are performed in a Class 10,000 clean room
- All interior surfaces are wiped down with Electronic Grade IPA
- All tanks soaked and rinsed with 18 Mega Ohm DI water
- All tanks are shrink wrapped and crated for maximum protection during shipment
- Vessels are high purity cleaned to help minimize startup time
- All tanks are pressure tested at 1 1/3 to 2 times the design pressure rating depending on the application
Small Pressure Vessels

Plastic/Fluoropolymer

PFA or PTFM Lined PP or PVDF Pressure Vessels

<table>
<thead>
<tr>
<th>Volume</th>
<th>Diameter</th>
<th>Straight Side Height</th>
</tr>
</thead>
<tbody>
<tr>
<td>5L</td>
<td>4&quot; or 6&quot;</td>
<td>25&quot; or 12&quot;</td>
</tr>
<tr>
<td>10L</td>
<td>6&quot;</td>
<td>24&quot;</td>
</tr>
<tr>
<td>15L</td>
<td>6&quot;</td>
<td>36&quot;</td>
</tr>
<tr>
<td>20L</td>
<td>6&quot;</td>
<td>42&quot;</td>
</tr>
<tr>
<td>25L</td>
<td>6&quot; or 8&quot;</td>
<td>48&quot; or 34&quot;</td>
</tr>
<tr>
<td>30L</td>
<td>8&quot;</td>
<td>41&quot;</td>
</tr>
<tr>
<td>50L</td>
<td>8&quot;</td>
<td>67&quot;</td>
</tr>
</tbody>
</table>

Custom & Larger Sizes Available

Design Specifications:
- **Temperature:** Ambient to 250°F (121.1°C)
- **Pressure:**
  - ½" thru 6" – Atmospheric to 100 psi
  - 8" and Larger – Atmospheric to 15 psi

Note: Please consult Edlon with your specific application

Lining Options:
- PFA (350 & 450HP)
- PTFM
- ETFE
- ECTFE
- PVDF
- Polypropylene
- Thicknesses available in: 0.060", 0.090", 0.125" and up

Port Options:
- Flare-Type
- NPT
- ANSI
- Sanitary
- Bung
- 150# ANSI Flange

Accessory Options:
- Internal Heat Exchanger
- Dip Tubes
- Spargers/Spraying Systems
- Static Mixer
- Prop Mixer
- External Sight Tube
- Valve Manifolds
- Strainer
- Temperature Probe
- Level Sensor
Edlon’s ultra high purity Secure & Pure™ fluoropolymer lined stainless steel in-cabinet small pressure vessels feature several different fabrication techniques and materials specified to meet your stringent requirements.

**Benefits:**
- State-of-the-art seaming technology & fabrication techniques
- Innovative solutions provide improved design performance
- Ideal for atmospheric to medium temperature, high pressure ratings
- Individually engineered & designed to meet your application requirements
- Exterior cosmetics expected in a high purity tank

**Several design options available to meet your needs:**
- Integral Dished Top & Bottom Head
- Flat Flanged Top & Dished Bottom Head
- Flat Flanged Top & Integral Flat Bottom Head
- Flat Flanged Top & Bottom Head

**Fluoropolymer Fabrication:**
- Internal lining options include: rotomolding, coating, sheetlining, and molded pipe
- All interior surfaces are rinsed with Electronic Grade IPA
- All tanks soaked and rinsed with 18 Mega Ohm DI water
- All tanks are shrink wrapped and crated for maximum protection during shipment
- Vessels are high purity cleaned to help minimize startup time

**Stainless Steel Fabrication:**
- All stainless steel fabrication is performed in a separate, self-contained facility
- Steel built and stamped per ASME Code Section VIII
- D.O.T. Certification available. Please refer to Chemical Transport Section
Small Pressure Vessels

Stainless/Fluoropolymer

<table>
<thead>
<tr>
<th>Volume (Min)</th>
<th>Volume (Max)</th>
<th>Diameter</th>
<th>Overall Height “A”</th>
<th>Overall Height “B”</th>
<th>Overall Height “C”</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Gal (3.8L)</td>
<td>7 Gal (26.5L)</td>
<td>9”</td>
<td>10” to 32”</td>
<td>8” to 30”</td>
<td>N/A</td>
</tr>
<tr>
<td>6 Gal (22.7L)</td>
<td>16 Gal (60.6L)</td>
<td>12”</td>
<td>21” to 43”</td>
<td>16” to 38”</td>
<td>N/A</td>
</tr>
<tr>
<td>20 Gal (75.7L)</td>
<td>35 Gal (132.5L)</td>
<td>18”</td>
<td>26” to 44”</td>
<td>23” to 41”</td>
<td>N/A</td>
</tr>
<tr>
<td>55 Gal (208.2L)</td>
<td></td>
<td>24”</td>
<td>N/A</td>
<td>Consult Factory</td>
<td>45”</td>
</tr>
</tbody>
</table>

Custom Sizes Available

Design Specifications:
- Temperature:
  Ambient to 300°F (149°C)
- Pressure:
  9”D – Atmospheric to 165 psi
  12”D – Atmospheric to 190 psi
  18”D – Atmospheric to 145 psi
  24”D – Atmospheric to 50 psi
- D.O.T. Certification Available, Refer to Chemical Transport Section for details

Note: Please consult Edlon with your specific application

Lining Options:
- PFA
- ETFE
- ECTFE
- PVDF
- Polypropylene
- Polyethylene
- Thicknesses available in: 0.125” & up

Port Options:
- Flare-type Fitting
- NPT Fitting
- Bung Connection
- 150# ANSI Flange

Accessory Options:
- Internal Heat Exchanger
- Dip Tubes
- Spargers/Spraying Systems
- Static Mixer
- Prop Mixer
- External Sight Tube
- Valve Manifolds
- Level Sensor
- Temperature Probe
- Pressure Relief (Conservation Vent/Rupture Disk)
- Leak Detectors
## Small Pressure Vessels

**Stainless/Fluoropolymer**

![Diagram of small pressure vessels](image)

<table>
<thead>
<tr>
<th>Volume (Min)</th>
<th>Volume (Max)</th>
<th>Diameter</th>
<th>Straight Side Height “A”</th>
<th>Straight Side Height “B”</th>
<th>Straight Side Height “C”</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;0.5 Gal (1.9L)</td>
<td>13 Gal (49.4L)</td>
<td>1” - 4”</td>
<td>N/A</td>
<td>N/A</td>
<td>5” &amp; up</td>
</tr>
<tr>
<td>0.6 Gal (2.5L)</td>
<td>29 Gal (111L)</td>
<td>6”</td>
<td>5.5” to 120”</td>
<td>5.5” to 120”</td>
<td>5.5” &amp; up</td>
</tr>
<tr>
<td>1.2 Gal (4.8L)</td>
<td>52 Gal (197L)</td>
<td>8”</td>
<td>6” to 120”</td>
<td>6” to 120”</td>
<td>6” &amp; up</td>
</tr>
<tr>
<td>2.8 Gal (10.9L)</td>
<td>81 Gal (308L)</td>
<td>10”</td>
<td>8.5” to 120”</td>
<td>8.5” to 120”</td>
<td>8.5” &amp; up</td>
</tr>
<tr>
<td>4.1 Gal (15.7L)</td>
<td>117 Gal (444L)</td>
<td>12”</td>
<td>8.5” to 120”</td>
<td>8.5” to 120”</td>
<td>8.5” &amp; up</td>
</tr>
<tr>
<td>5.6 Gal (21.4L)</td>
<td>79 Gal (302L)</td>
<td>14”</td>
<td>N/A</td>
<td>N/A</td>
<td>8.5” &amp; up</td>
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<tr>
<td>7.3 Gal (28L)</td>
<td>104 Gal (395L)</td>
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<td>N/A</td>
<td>N/A</td>
<td>8.5” &amp; up</td>
</tr>
<tr>
<td>9.2 Gal (35L)</td>
<td>132 Gal (500L)</td>
<td>18”</td>
<td>8.5” to 120”</td>
<td>8.5” to 120”</td>
<td>8.5” &amp; up</td>
</tr>
<tr>
<td>11.3 Gal (43L)</td>
<td>163 Gal (617L)</td>
<td>20”</td>
<td>N/A</td>
<td>N/A</td>
<td>8.5” &amp; up</td>
</tr>
<tr>
<td>16.6 Gal (63L)</td>
<td>234 Gal (889L)</td>
<td>24”</td>
<td>8.5” to 120”</td>
<td>8.5” to 120”</td>
<td>8.5” &amp; up</td>
</tr>
</tbody>
</table>

*Custom Sizes Available*

### Design Specifications:
- **Temperature:** Ambient to 500°F (260°C)
- **Pressure:**
  1. 1/2” thru 6”: Atmospheric to 150 psi & up (max pressure based on port type)
  2. 8” & up: Atmospheric to 15 psi: Built per ASME Code Section VIII
  3. 8” & up: 15 psi to 150 psi & up (max pressure based on port type): Stamped per ASME Code Section VIII
  4. Full Vacuum Available

*Note: Please consult Edlon with your specific application*

### Lining Options:
- PFA (450HP & 350)
- PTFM
- PTFE
- FEP
- ETFE
- ECTFE
- PVDF
- Polypropylene
- Polyethylene

### Accessory Options:
- Internal Heat Exchanger
- Dip Tubes
- Spargers/Spraying Systems
- Static Mixer
- Prop Mixer
- External Sight Tube
- Valve Manifolds
- Pressure Relief (Conservation Vent/Rupture Disk)
- Temperature Probe
- Strainer
- Level Sensor
- Teflon Lined Pipe, Fittings & Hose
- Teflon Expansion Joints
- Leak Detectors
Edlon offers a complete line of Secure & Pure™ fluoropolymer lined FRP atmospheric to high pressure dispense tanks. Perfect for inside your cabinet or in tight spaces.

Benefits:
• State-of-the-art seaming technology & fabrication techniques
• Innovative solutions provide improved design performance
• Ideal for atmospheric to medium temperature, high pressure ratings
• Individually engineered & designed to meet your application requirements
• Exterior cosmetics expected in a high purity tank

Several design options available to meet your needs:
• Vertical
• Horizontal

Fluoropolymer Fabrication:
• Internal lining options include: rotomolding, sheetlining and molded pipe
• All seaming procedures are performed in a Class 10,000 clean room
• All interior surfaces are rinsed with Electronic Grade IPA
• All tanks soaked & rinsed with 18 Mega Ohm DI water
• All tanks are shrink wrapped and crated for maximum protection during shipment
• Vessels are high purity cleaned to help minimize startup time

FRP Fabrication:
• Isophthalic and premium grade vinyl ester resins are available
• All FRP work is performed in a separate self-contained facility
• All interior surfaces are sealed off during the FRP fabrication process to prevent cross contamination
• Multiple FRP fabrication techniques are available including transfer molding, hand layup and filament winding
• Designed and built per ASME Code Stamp, Section X; layup tested to be above code requirements
• Corrosion resistant exterior coatings are available
• Edlon mandates all laminates and FRP accessories to be tested to prove mechanical properties regardless of specifications
• All tanks are pressure tested at 1 1/3 to 2 times the design pressure rating depending on the application
Small Pressure Vessels

FRP/Fluoropolymer

Volume | Diameter | Straight Side Height
--- | --- | ---
5L | 4 or 6” | 25 or 12”
10L | 6” | 24”
15L | 6” | 36”
20L | 6” | 42”
25L | 6 or 8” | 48 or 34”
30L | 8” | 41”
50L | 8” | 67”

Custom & Larger Sizes Available

Design Specifications:
- Temperature: Ambient to 180°F (82.2°C)
- Pressure:
  1) 2” thru 6”: Atmospheric to 100 psi: Built per RTP-1
  2) 8” & Up: Atmospheric to 15 psi: Built per RTP-1
  3) 8” & Up: 15 psi & up: Built per RTP-1. ASME Code Section X available upon request
- Full Vacuum Available
- Note: Please consult Edlon with your specific application

Lining Options:
- PFA (350 & 450HP)
- PTFM, PTFE
- FEP
- ETFE, ECTFE
- PVDF, Polypropylene
- Thicknesses available in: 0.060”, 0.090”, 0.125” & up

Port Options:
- Flare-type Fitting
- NPT Fitting
- Bung Connection
- Sanitary
- 150# ANSI Flange

Accessory Options:
- Internal Heat Exchanger
- Dip Tubes
- Spargers/Spraying Systems
- Static Mixer
- Prop Mixer
- External Sight Tube
- Valve Manifolds
- Level Sensor
- Strainers
- Temperature Probes
Edlon’s ultra high purity Secure & Pure™ fluoropolymer lined chemical transport tanks are ideal for moving your high purity media from site to site. They incorporate state-of-the-art technology in fabrication technique, product performance, engineering design & innovation and overall quality & cosmetics.

Benefits:
- Fluoropolymer lining eliminates metallic ion contamination
- Product purity to the PPT levels
- Approved for handling highly concentrated acids
- Custom ports – assure connection compatibility

Several design options available to meet your needs:
- 1 Gallon to 35 Gallon Transporter
- 55 Gallon Transporter
- 120 Gallon to 600 Gallon Transporter
- 10,000 L to 20,000 L ISO / IMO Container
- 3500 Gallon to 5000 Gallon Tank Trailers

Fluoropolymer Fabrication:
- Internal lining options include: rotomolding, coating and sheetlining
- All interior surfaces are wiped with Electronic Grade IPA
- All tanks soaked & rinsed with 18 Mega Ohm DI water
- Vessels are high purity cleaned to help minimize startup time

Chemicals:
- Hydrochloric Acid
- Hydrogen Peroxide (Stabilized)
- Hydrofluoric Acid
- Phosphoric Acid
- Nitric Acid
- Sulfuric Acid
- Ammonia Hydroxide
- Plus hundreds more available, even at full concentration. Please see your local Edlon Representative or check the D.O.T.-HAZ-MAT table for packing requirements relative to your specific media
Chemical Transport

**Chemtransporter™**

### 1 Gallon to 35 Gallon

<table>
<thead>
<tr>
<th>Volume (Min/Max)</th>
<th>Diameter</th>
<th>Overall Height</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Gal (3.8L) to 7 Gal (26.5L)</td>
<td>9&quot;</td>
<td>10&quot; to 32&quot;</td>
</tr>
<tr>
<td>6 Gal (22.7L) to 16 Gal (60.6L)</td>
<td>12&quot;</td>
<td>21&quot; to 43&quot;</td>
</tr>
<tr>
<td>20 Gal (75.7L) to 35 Gal (141.6L)</td>
<td>18&quot;</td>
<td>26&quot; to 44&quot;</td>
</tr>
<tr>
<td>55 Gal (209L)</td>
<td>24&quot;</td>
<td>NA</td>
</tr>
</tbody>
</table>

#### Design Specifications:
- 304SS – 1 Gal - 35 Gal – 140 psi - 165 psi @ 100°F
- 316SS – 1 Gal - 35 Gal – 140 psi - 165 psi @ 100°F
- 304SS – 1 Gal - 55 Gal – 50 psi - 100 psi @ 100°F
- 316SS – 1 Gal - 55 Gal – 50 psi - 100 psi @ 100°F
- ASME Section VIII Division 1
- Certifiable D.O.T. UN 1A1 Container

#### Ports:
- 4 NPT Female Pipe Fittings on Top Head – 1/4" - 18 NPT
- (2) 2" - Required for 55 Gal only
- Multiple port options available based on your requirements. Please consult factory

#### Accessory Options:
- Dip Tubes, Spargers
- Level Sensor
- Temperature Probe

### 55 Gallon

**Features:**
- Stainless Steel Ring Chime to Protect Fittings during Shipment
- O-Ring Material – Teflon
- Exterior Surface Finish: White Pickle or Electropolished
- Stainless Steel Skirt (Skid Mounted for 55 Gal Only)

**Lining Options:**
- ETFE, ECTFE, PVDF, PP
- Internal lining options include: rotomolding only

### 120 Gallon to 600 Gallon

<table>
<thead>
<tr>
<th>Volume</th>
<th>Diameter</th>
<th>Straight Side Height</th>
</tr>
</thead>
<tbody>
<tr>
<td>120 Gal</td>
<td>36&quot;</td>
<td>19&quot;</td>
</tr>
<tr>
<td>220 Gal</td>
<td>36&quot;</td>
<td>42&quot;</td>
</tr>
<tr>
<td>330 Gal</td>
<td>42&quot;</td>
<td>46&quot;</td>
</tr>
<tr>
<td>400 Gal</td>
<td>42&quot;</td>
<td>58&quot;</td>
</tr>
<tr>
<td>500 Gal</td>
<td>48&quot;</td>
<td>55&quot;</td>
</tr>
<tr>
<td>600 Gal</td>
<td>48&quot;</td>
<td>67&quot;</td>
</tr>
</tbody>
</table>

#### Design Specifications:
- Temperature: Ambient to 350°F & up (176.6°C)
- Pressure: 100 psi – ASME Code Stamped, Section VIII, Division I
- Certified D.O.T. Specification 51 (bulk transport containers over 119 gallons)

#### Lining Options:
- PFA450 HP, PFA350, PTFM, PTFE, FEP
- ETFE, ECTFE, PVDF, PP
- Thicknesses available in: 0.06, 0.090, 0.025 & up
- Internal lining options include: rotomolding and sheetlining

#### Ports:
- Manway
- Emergency Vent
- Pressure Relief
- Rupture Disk

#### Accessory Options:
- Dip Tubes
- Spargers

Note: Please consult Edlon with your specific application
Chemical Transport

10,000L - 24,000L Isocontainer

Design Specifications:
• Temperature: Ambient to 250°F (121.1°C)
• Pressure:
  1) Atmospheric to 60 psi & up
  2) Full Vacuum Available

Lining Options:
• PFA350, PTFM, PTFE, FEP,
• ETFE, ECTFE, PVDF, PP
• Internal lining options include: coating and sheetlining

Approvals:
• ISO 1496III, IMDG IMO-1, USDOT IM-101, ASME Sec. VIII Div. 1 (designed), RID/ADR, AAR 600, UIC, CSC, Customs / TIR, TC Impact App., App. Agency

Volume Diameter Straight Side Length
3500 Gallon 48" 40 ft
5000 Gallon 60" 42 ft

Tank Trailer

Design Specifications:
• Temperature: Ambient to 260°F
• Pressure: Atmospheric to 10 psi

Lining Options:
• PFA350, PTFM, PTFE, FEP, ETFE, ECTFE, PVDF, PP
• Internal lining options include: sheetlining only

Features:
• 304SS & 316SS Shell Construction
• Spill box - stainless steel box around fittings and drain tubes

Features:
• 304SS & 316SS Shell Construction
• Spill box - stainless steel box around fittings and drain tubes
• Walkway - aluminum grip strut with access to all sides of the spillbox & one side of the container
• Ladder - carbon steel or stainless steel
• Exterior finish - organic zinc-rich primer on the frame, chloride free primer on the tank, and acrylic top coat on both

Standard Connections:
• 20” to 24” Manway with Lid
• 4” Rupture Disk
• 2” Spare w/Blind
• 2 1/2” Pressure Relief
• 3/4” Nitrogen Vent
• 3” Chemical

Accessory Options:
• Heating System, Insulation & Cladding, Thermometer
• Dip Pipes & Spargers
• Teflon Lined Pipe & Fittings, Hose & Expansion Joints
• Teflon Lined Rupture Disks, Diaphragm Valves & Pressure Relief Valves
• Exterior finish - organic zinc-rich primer on the frame, chloride free primer on the tank, and acrylic top coat on both
• Ladder - carbon steel or stainless steel

Standard Connections:
• 3” ANSI Nozzle with Blind
• 8” ANSI Nozzle with Blind
• 12” ANSI Nozzle with Blind
• 20” to 24” ANSI Manway with Blind

Accessory Options:
• Dip Tubes & Spargers
• Valve Manifolds
• Conservation Vent/Rupture Disk
• Temperature Probe
• PTFE Lined Pipe, Fittings, & Stainless Steel Braided Hose
• Teflon Lined Valves & Expansion Joints
• Level Sensor
Edlon’s Secure & Pure™ plastic lined piping system is the perfect solution for moving high purity chemicals and DI water. Combined with Secure & Pure vessels, Edlon can provide complete assurances for your high purity requirements.

Features:
- Ideal for semiconductor and biotech chip fabs, water makers and high purity chemical applications
- Liners use virgin, unpigmented resin systems to minimize leachants in long-term semiconductor service
- Combines strength of a metal exterior with non-contaminating unpigmented plastic interior
- Metal shell resists exterior corrosion, UV effects & weathering
- Protects high purity lines from mechanical and seismic damage
- Standard rotating lap joint flanges on both pipe and fittings assure easy fit up and fast assembly
- No special support spacing needed
- Eliminates expansion problems common to solid thermoplastic systems
- A complete range of liners to meet chemical resistance, purity and temperature capability requirements
- Smooth interior finish
- Produced and cleaned to semiconductor specifications. Bagging available at customer request
- Easy, low cost and fast installation. No expensive, complicated fabrication equipment required

Note: Please see Edlon Lined Pipe, Fittings & Accessories catalog for additional information
Edlon’s Guardian™ fluoropolymer coated Factory Mutual approved ducting offers long lasting secure protection against corrosive fume exhaust. The fluoropolymer coating is applied using Edlon’s proprietary coating technology to ensure tenacious bond strength to the steel substrate and uniform continuous coating thickness to resist chemical attack.

**Design Specifications:**
- **Temperature:** Ambient to 302°F (150°C)
- **Mechanical Design:** 316L Stainless Steel designed to SMACNA Industrial Duct Construction Class I standards for maximum security
- **Flanged Joints:** stainless steel angle rings and fasteners are used in standard systems
- **Gasket Material:** Edlon Guardian™ PTFE Joint Sealant

**Material Lining Options:**
- SC-5001 FM ETFE
- SC-2001 FM ECTFE
- Both available in anti-static formulation – resistant to potential buildup of static electricity

**Features & Benefits:**
- Factory Mutual approved (FM 4922 approved) for fume and smoke removal without the use of sprinklers
- Guardian™ fluoropolymer internal coating provides the widest available range of corrosion protection and resistance to internal fouling
- Stainless steel substrate offers structural strength, reliability and system integrity
- Modular design ensures easy handling and contamination-free installation
- Cost effective solution for demanding service conditions
- All internal surfaces spark tested at 2000 Volts DC minimum
- End covers are factory applied to prevent end damage and keep out contaminants
- For additional information, please see our “Fluoropolymer Coated Ducting” brochure

**Standard Components:**
- 2” (50mm) to 120” (3000mm)
- Straight Ducts
- 45° & 90° Elbow
- Equal Tee & Reducing Tee
- Concentric & Eccentric Reducer
- Y-Piece
- Square to Round Adapter
- End Cap
- Equal Cross
- Off set
- Lateral Take Off
- Blastgate
- Balance Damper
- Field Joint
Edlon’s Secure & Pure™ coatings for wafer processing components and equipment are the perfect solution for protecting your high purity chemicals, cabinet components and wafers.

Coating Options:
- Unpigmented & pigmented available
- PFA – up to 0.050" (50 mils)
- ECTFE – up to 0.120" (120 mils)
- ETFE – up to 0.060" (60 mils)
- PVDF – up to 0.040" (40 mils)

Features & Benefits
- Applied in a state-of-the-art clean room coating booth
- Excellent adhesion to metal substrate
- Ultra smooth surface
- Excellent resistance to corrosion and superior release properties
- Field repairable
- Can be applied to existing equipment
- Pre machine and post machining capabilities
- Cost effective fluoropolymer solution
- All coatings are spark tested at 10,000 volts minimum to insure that the coating is pin-hole free

Typical Products:
- Wafer Carriers
- Etch and Rinse Tanks
- Robot Arms
- Tool Components
- Storage Tanks and Reactors
Edlon offers a wide range of Secure & Pure™ rotomolded and rotolined wafer processing components and equipment. These products are customized to meet your space and process requirements.

Vacuum & Thermoformed Liners

Edlon’s Secure & Pure™ vacuum forms reflect over 37 years of experience. They utilize an understanding of fluoropolymer fabrication, melt flow and shrinkage characteristics unparalleled in the industry.

Rotomoulded & Rotolined Wafer Processing Components & Equipment

Rotomolding Options:
- Unpigmented & pigmented available.
- PFA, ETFE, ECTFE, PVDF, PP & PE

Features & Benefits
- All resin is added into the mold in a cleanroom environment
- Excellent adhesion to metal substrate
- Ultra smooth surface
- Unique shapes & sizes

Typical Products:
- Wafer Carriers
- Etch Tanks
- Rinse Tanks
- Solid Tool Components

Lining Options:
- Unpigmented & pigmented available
- PFA, FEP, ETFE, ECTFE, PVDF, PP & PE

Features & Benefits
- Applied in a state-of-the-art clean room booth
- Ultra smooth surface
- Unique shapes & sizes
- Programmable PLC controlled state-of-the-art IR vacuum former
- Up to 60” x 60” vacuum forming
- Up to 144” x 144” thermoforming
Edlon has established an extensive machining department capable of high quality precision machining. Edlon manufactures solid plastic components and end products as well as supporting the other product line offerings. These capabilities combined with Edlon’s fluoropolymer coatings, rotomolding, sheet linings and vacuum forming help make Edlon the most complete fluoropolymer fabricator in the industry.

Capabilities:
• Multiple CNC Machines and Lathes for precision machining
• Programming in Virtual Gibbs, Mechanical Desktop, & Pro-E
• 3-D Modeling

Materials:
• PFA, PTFM, PTFE, ETFE, ECTFE, PVDF, PP, & PE

Sample Products:
• Static Mixers
• Dip Tubes
• Spargers/Spraying systems
• Filter Plates, Hold Down Plates & Miscellaneous Accessories
• Vessel Components
• Single Cartridge Filter Housings
• Pre-Machining & Post Machining of Coated and Rotomolded Components
• Semiconductor Tool Cabinets and Components

Edlon has a complete line of Secure & Pure™ fluoropolymer lined filter housings. Please consult Edlon with your specific application.

Lining Options:
• PFA, PTFM, PTFE, FEP, ETFE, ECTFE, PVDF, PP

Ports:
• Flare-Type Fittings
• NPT
• 150#, 300# and DIN Flange

Bolts:
• 304SS & 316SS
• Teflon Coated Stainless Steel

Accessory Options:
• Dip Tubes
• Spargers
• Baffle Plate
• Hold Down Plate
• Tie-Down Rods
• Separator Plate
• Internal Heat Exchanger

Design Specifications:
• Temperature: Ambient to 350°F (161°C) & up
• Pressure: Full Vacuum to 300 psi & up
### Conversion Table

<table>
<thead>
<tr>
<th>To Convert</th>
<th>Multiply by</th>
<th>to Obtain</th>
</tr>
</thead>
<tbody>
<tr>
<td>U.S. Gallon</td>
<td>3.785</td>
<td>Liters</td>
</tr>
<tr>
<td>Liters</td>
<td>0.2642007</td>
<td>U.S. Gallons</td>
</tr>
<tr>
<td>Inches</td>
<td>25.4</td>
<td>Millimeters</td>
</tr>
<tr>
<td>Inches</td>
<td>1000</td>
<td>mils</td>
</tr>
<tr>
<td>Millimeters</td>
<td>39.37</td>
<td>mils</td>
</tr>
<tr>
<td>Millimeters</td>
<td>0.03937</td>
<td>Inches</td>
</tr>
<tr>
<td>°F Fahrenheit</td>
<td>-32(°F/9)</td>
<td>°C Celsius</td>
</tr>
<tr>
<td>°C Celsius</td>
<td>(°C × 9/5) + 32</td>
<td>°F Fahrenheit</td>
</tr>
<tr>
<td>psi (lbs/in²)</td>
<td>2.307</td>
<td>Ft. of Water</td>
</tr>
<tr>
<td>psi (lbs/in²)</td>
<td>0.0680457</td>
<td>Atmospheres</td>
</tr>
<tr>
<td>psi (lbs/in²)</td>
<td>2.0359273</td>
<td>in. of Mercury (at 0°C)</td>
</tr>
</tbody>
</table>
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