Superior Tank Co., Inc. utilizes only brand name Axalta/DuPont and 3M powder coating for our bolted steel tanks. Over the last 30 years our factory powder coated tanks have withstood the test of time in real life operating conditions. In addition, we verified the quality of our powder coating using two different sets of certified laboratory testing.

**Corrosion Protection Testing**
All factory powder coated tanks manufactured by STCI include a Silica-Zirconium (SiZr) liquid seal which is sprayed onto the prepared steel underneath the powder coating.

Certified laboratory testing has shown the SiZr seal significantly slows the rate of corrosion and prevents the spread of corrosion when the coating surface is damaged by a dropped tool or thrown rock. By keeping the corrosion localized, the seal minimizes corrosion spreading and undercutting. In addition, the SiZr seal increases the coating adhesion and bonding to the steel thereby increasing the durability.

Salt spray testing in accordance with ASTM B 117-97 procedures was conducted on two factory powder coated steel panels. Both samples were place in the testing chamber and exposed to Salt Spray for 1000 hours. The panel treated with the SiZr seal experienced 0.0mm average corrosion creepage vs. the untreated panel with an average corrosion creepage of 3.2mm.

The SiZr seal can make the difference between a minor cosmetic touch up and a major corrosion & coating repair.

**Durability Testing**
In addition, the lab tests verified the resilience and longevity of our powder coating under a variety of harsh environmental conditions. Numerous samples of our tanks with powder coating were subjected to various tests:

1. **Abrasion resistance (ASTM D 4060-10) @ 1000 cycles:**
   The wear index of .02-.07 mg loss/cycle – Unsurpassed abrasion resistance even after 1000 abrasion cycles

2. **Salt spray testing (ASTM B117) @ 5% solution concentration, 95F and 96 hours:**
   No deterioration of coating – examined at 10x magnification – Outstanding resistance to a corrosive environment

3. **Temperature/Humidity testing @ 90-95% RH, 95F and 1000 hours:**
   No deterioration of coating – examined at 10x magnification – Even after 1000 hours of extreme condition testing, our powder coating showed no signs of deterioration

To see our Powder Coating process, or other time lapse videos, visit: [http://www.superiortank.com/about/factory-videos/](http://www.superiortank.com/about/factory-videos/)
# TANK COATING COMPARISON

<table>
<thead>
<tr>
<th>CATEGORIES</th>
<th>POWDER COATED BOLTED STEEL TANK</th>
<th>GLASS LINED TANK</th>
</tr>
</thead>
<tbody>
<tr>
<td>Durable and non-seeping seam seal</td>
<td>✅ Heavy duty Viton, EPDM or Buna-N gasket</td>
<td>✗ Trowel applied mastic which can ooze and leak</td>
</tr>
<tr>
<td>Well suited for hydrocarbon or corrosive chemical storage</td>
<td>✅ Specially formulated powder coating for corrosive materials and hydrocarbon liquids</td>
<td>✅ Resistant to corrosive or hydrocarbon liquids</td>
</tr>
<tr>
<td>Lifespan cost</td>
<td>✅ Lower initial cost, long lifespan &amp; low renovation cost</td>
<td>✗ Very high initial cost. Renovation not possible; only complete replacement</td>
</tr>
<tr>
<td>Coating application</td>
<td>✅ Electrostatically applied for 100% coverage</td>
<td>✗ Liquid coating is sprayed onto panels with potential for uneven coverage and dripping</td>
</tr>
<tr>
<td>Panel edge coverage</td>
<td>✅ Double layer coating as interior and exterior coatings overlap at edges</td>
<td>✗ Coating vulnerable to edge thinning due to cohesion pulling liquid back from edge</td>
</tr>
<tr>
<td>Corrosion resistance &amp; coating durability</td>
<td>✅ Even if coating is penetrated, SiZr under seal will isolate corrosion to local area</td>
<td>✗ Significant undercutting can occur when coating damage occurs</td>
</tr>
<tr>
<td>Coating renovation</td>
<td>✅ Renovation and complete recoat in field possible</td>
<td>✗ Field coating renovation not possible; making complete replacement necessary</td>
</tr>
<tr>
<td>Impact resistance</td>
<td>✅ Very good elasticity of coating</td>
<td>✗ Brittle finish can shatter if impacted</td>
</tr>
</tbody>
</table>

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## HIGHLIGHTS:

**POWDER COATED BOLTED STEEL TANK**

- Various formulas tailored to diverse liquids
- Field repairable & can be renovated for longer life
- Exceptional durability over range of conditions
- Most affordable

**GLASS LINED TANK**

- Vulnerable to impact damage
- “Run to fail” lifecycle - no renovation possible
- Resistant to various chemicals
- Highest overall cost
Superior Tank Co., Inc. applies the final finish to all bolted steel tanks before they leave our factory. Every square inch is prepared for coating using sandblasting per the most stringent standard of Near White SSPC SP10/NACE No.2. All coatings are applied in a special environmentally controlled area to ensure a defect free finish. Coatings are applied in two separate stages allowing for maximum durability of both interior and exterior surfaces. Interior coatings are selected for chemical resistance and hardness and exterior coatings are designed for UV and corrosion protection.

Our specially designed powder coated finish is distinct in numerous ways:
- Electrostatic application at factory in environmentally controlled conditions for 100% adherence and uniformity
- Heat cured immediately for outstanding bonding
- High impact and abrasion resistant
- Easy to repair in the field, if needed
- Environmentally safe (no site application permits required)
- Flexible with no cracking or sparring associated with other coatings
- Double edge coating (interior and exterior coating) for superior corrosion protection
- Thicker (5 mil) application for greater durability
- NAP-Guard system for outstanding protection against acids, hydrocarbons and inorganic compounds

DuPont™/Alesta™ Standard Powder Coatings:

<table>
<thead>
<tr>
<th>Interior - Epoxy:</th>
<th>Exterior - TGIC Polyester:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tank Tan</td>
<td>Uni-Cream</td>
</tr>
<tr>
<td>(FDA Only)</td>
<td>Almond</td>
</tr>
<tr>
<td>Appliance White</td>
<td>Camel</td>
</tr>
<tr>
<td></td>
<td>Superior Sand</td>
</tr>
<tr>
<td></td>
<td>Sky White</td>
</tr>
<tr>
<td></td>
<td>(ASA-61) Elephant Gray</td>
</tr>
<tr>
<td></td>
<td>(ASA-70) Fog Gray</td>
</tr>
<tr>
<td></td>
<td>Bumper Black</td>
</tr>
<tr>
<td></td>
<td>Evergreen</td>
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</tbody>
</table>

Independent laboratory testing of STCI powder coating finish ensures many years of real world durability and longevity:
- Unsurpassed abrasion resistance even after 1000 abrasion cycles.
- Outstanding resistance to a corrosive environment (Salt Spray Testing).
- Even after 1000 hours of extreme condition lab testing, our powder coating showed no signs of deterioration (temperature and humidity testing)

3M Scotchkote™ 134 Premium Powder Coating also available! - Interior only
- Best for storage of corrosive liquids. - ie. (H2S)
- Best chemical resistance (tested with over 1000 chemicals).
- Tested to extreme conditions in aqueous, HC and gas phases without blisters or coating loss: 300 degrees @ 3000psi.

INNOVATIVE SiZr Seal!
- Applied under powder coating finish
- Increases powder coating adhesion
- Minimizes spread of corrosion if finish is damaged
- Prevents undercutting of powder coating
- Laboratory proven results - see website for details!