Whatever the challenge, Sherwin-Williams is committed to providing tailor made specifications to fulfil your project requirements. With our global supply chain and skilled technical service network, we ensure that your assets will remain protected.

Our global footprint allows us to supply our lining solutions anywhere in the world, helping protect your investment from corrosion. With operations in over 100 countries, we are ready for wherever your next project takes you.

We understand choosing a linings supplier is often a complex decision.

That’s why Sherwin-Williams supply linings suitable for a wide variety of applications, including:

- Internal lining for process vessels and piping
- Internal lining of above and below ground storage tanks
- External lining of buried tanks, vessels and equipment

We also provide a range of linings suitable for use onto concrete surfaces which protect against chemical, abrasion and impact attack. Specialised systems are available for applications where concrete movement is expected.
Tank linings are designed to withstand chemical resistance, high temperature and high pressure (HTHP), and mechanical abrasion. Sherwin-Williams linings are typically used for the bulk storage of crude and refined petrochemicals – but also may be used in oil process vessels and other aggressive immersion services.

Dependent upon the product being stored, the requirements and features of the tank lining varies. Sherwin-Williams tank lining products protect the surface of the tank itself and ensures that contamination of the product being stored is avoided. These solutions combine exceptional anticorrosive performance with effective chemical resistance.

**TRUSTED TRACK RECORD**

Sherwin-Williams have expert teams located throughout Europe who provide the highest level of service in selecting, specifying and applying the linings systems.

Our tank lining coatings have been applied through 16,000,000 litres of paint covering the equivalent of more than 3,000 soccer pitches.

<table>
<thead>
<tr>
<th>Product</th>
<th>Volume ltr (since 2007)</th>
<th>Approximate area m²</th>
<th>Soccer pitches</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nova-Plate® UHS</td>
<td>3,500,000</td>
<td>5,000,000</td>
<td>670</td>
</tr>
<tr>
<td>Dura-Plate® UHS</td>
<td>6,000,000</td>
<td>8,000,000</td>
<td>1,070</td>
</tr>
<tr>
<td>Phenicon® HS</td>
<td>6,000,000</td>
<td>12,000,000</td>
<td>1,600</td>
</tr>
<tr>
<td>Nova-Plate® 325</td>
<td>500,000</td>
<td>700,000</td>
<td>100</td>
</tr>
</tbody>
</table>
TANK AND PIPE LININGS
PRODUCT PORTFOLIO

Nova-Plate UHS
Versatile solvent-free epoxy novolac, focused on refineries and terminals

Lining: Nova-Plate UHS @ 500µm dft
Carbon steel: Blast clean to Sa2½ BS EN ISO 8501-1:2007

<table>
<thead>
<tr>
<th>Key features</th>
<th>Coating system</th>
<th>Approvals</th>
<th>Typical use</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Solvent-free novolac epoxy tank</td>
<td>Typical specification: Grit blast Sa 2½ 1 x 500µm dft</td>
<td>• Meets MIL-PRF-23236, Type VII, Class 5, 7, 13, 19, Grade C</td>
<td>• Refineries and terminals</td>
</tr>
<tr>
<td>lining</td>
<td></td>
<td>• Norsok MS01 System 7C (140ºC)</td>
<td>• Crude</td>
</tr>
<tr>
<td>• Chemical resistance</td>
<td></td>
<td>• Exxon Mobil</td>
<td>• Refined petrochemicals</td>
</tr>
<tr>
<td>• Single coat application</td>
<td></td>
<td>• Shell DEP</td>
<td>• Ethanol</td>
</tr>
<tr>
<td>• Robust and versatile to cope with</td>
<td></td>
<td>• Oil tanking</td>
<td>• Methanol</td>
</tr>
<tr>
<td>crude, refined oil products</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Suitable for use under thermal</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>insulation</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Dura-Plate UHS with Opti-Check Technology
High-performance, general-purpose solvent-free epoxy amine lining

Option 1 without Opti-Check Technology
Lining: Dura-Plate UHS @ 500µm dft
Carbon steel: Blast clean to Sa2½ BS EN ISO 8501-1:2007

Option 2 with Opti-Check Technology
Lining: Dura-Plate UHS direct mix with Opti-Check @ 500µm dft
Carbon steel: Blast clean to Sa2½ BS EN ISO 8501-1:2007

Option 3 with Opti-Check Technology
Lining: Dura-Plate UHS white @ 350–500µm dft
Lining: Dura-Plate UHS primer with Opti-Check @ 150µm dft
Carbon steel: Blast clean to Sa2½ BS EN ISO 8501-1:2007

<table>
<thead>
<tr>
<th>Key features</th>
<th>Coating system</th>
<th>Approvals</th>
<th>Typical use</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Fast curing to service in +/- 4 days</td>
<td>Typical specification: Grit blast Sa 2½ 1 x 500µm dft</td>
<td>• Approvals: Meets MIL-PRF-23236, Type VII, Class 5, 7, 9 and 11, Grade C</td>
<td>• Refineries, terminals and pipelines, offshore</td>
</tr>
<tr>
<td>• Single-coat application</td>
<td></td>
<td>• NSF approved to Standard 61 for potable water</td>
<td>• Fuel tanks, nuclear industry</td>
</tr>
<tr>
<td>• Opti-Check™ Optically Activated Pigments (OAP)</td>
<td></td>
<td>• Complies with the performance requirements of EI Standard 1541 (2nd Edition) for aviation fuel storage and transport</td>
<td>• Dedicated crude storage tanks and dedicated water ballast tanks</td>
</tr>
<tr>
<td>technology</td>
<td></td>
<td></td>
<td>• Water and waste-water treatment plants and storage tanks</td>
</tr>
<tr>
<td>• Enhanced edge retention properties</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Chemical and abrasion resistance</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Low odour, low VOC</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**TANK AND PIPE LININGS**

**PRODUCT PORTFOLIO**

### Phenicon HS with Opti-Check Technology

**High-performance, high-solids epoxy novolac lining**

- **Lining 2nd coat:** Phenicon HS white @ 125µm dft
- **Lining 1st coat:** Phenicon HS with Opti-Check @ 125µm dft
- **Carbon steel:** Blast clean to Sa2½
  BS EN ISO 8501-1:2007

<table>
<thead>
<tr>
<th>Key features</th>
<th>Coating system</th>
<th>Approvals</th>
<th>Typical use</th>
</tr>
</thead>
</table>
| • Chemical resistance and cargo versatility  
  • Ease of application using standard airless spray equipment  
  • Cost effective  
  • Low-temperature curing agent available | Typical specification: Grit blast Sa 2½ 2 x 125µm dft | Contact Sherwin-Williams for specific approvals | • Crude  
  • Refined  
  • EtOH |

### Magnalux 41V2

**High-performance novolac glass-flake vinyl ester**

- **Lining 2nd coat:** Magnalux 41V2 @ 500µm dft
- **Lining 1st coat:** Magnalux 41V2 @ 500µm dft
- **Carbon steel:** Blast clean to Sa2½
  BS EN ISO 8501-1:2007

<table>
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<tr>
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</table>
| Exceptional protection against:  
  • Aggressive chemicals  
  • Abrasion  
  • Elevated temperatures | Typical specification: Grit blast Sa 2½ 2 x 500µm dft | Contact Sherwin-Williams for specific approvals | • Storage of acidic materials, secondary containment and process vessels |
## TANK AND PIPE LININGS

### PRODUCT PORTFOLIO

**Nova-Plate 325**
High-temperature, high-pressure lining for crude oil storage and processing

1. **Lining:**
   Nova-Plate 325 @ 500µm dft

2. **Carbon steel:**
   Blast clean to Sa2½
   BS EN ISO 8501-1:2007

<table>
<thead>
<tr>
<th>Key features</th>
<th>Coating system</th>
<th>Approvals</th>
<th>Typical use</th>
</tr>
</thead>
</table>
| • High-temperature, high-pressure tank lining (HTHP)  
• Extends service life  
• Single-coat application  
• Saves on downtime  
• Novolac technology  
• Can be used as both a high pressure tank and pipe lining | Typical specification: Grit blast Sa 2½  
1 x 500µm dft | • Norsok M501 System 7C (180°C)  
• Shell DEP | • Oil storage tanks up to 149°C  
• Secondary containment  
• Cathodic protection systems  
• Ethanol storage tanks  
• Tanks and vessels  
• Piping and valves |
Opti-Check Technology with Optically Activated Pigments (OAP)

Using a fluorescing pigmentation that illuminates the coating for instant verification under ultraviolet light, allowing our linings to be inspected during application to efficiently identify and resolve missed areas. This helps create a continuous film and a high-quality finish with minimal downtime.

Opti-Check is available in a variety of tank lining products, allowing applicators to check the coating instantly for:

- Pinholes and holidays
- Uniform coverage
- Correct film thickness

The fluorescing technology significantly extends the service life of tank linings by illuminating the coating during application by using a portable ASTM E2501 approved light source.

**Benefits**

- Makes defects easy to identify allowing for faster and more thorough inspection
- Saves time and improves productivity of coating inspection
- Extends service life of coating by ensuring correct film thickness is achieved
- Helps correct application

**Features**

- Uses eye-safe appropriate UV light
- Quickly highlights defects, holidays and pinholes
- Highlights low film thicknesses during application
- Can be used to “verify” stripe coating

**How it works**

Size and number of pinholes/holidays have been exaggerated for illustration purposes.
THE SHERWIN-WILLIAMS DIFFERENCE

Sherwin-Williams Protective & Marine delivers world-class industry subject matter expertise, unparalleled technical and specification service, and unmatched regional commercial team support to our customers around the globe. Our broad portfolio of high-performance coatings and systems that excel at combating corrosion helps customers achieve smarter, time-tested asset protection. We serve a wide array of markets across our rapidly growing international distribution footprint, including oil and gas, water and wastewater, bridge and highway, steel fabrication, flooring, food and beverage, rail and power, marine and passive fire protection.

TANK AND PIPE LININGS
COMPREHENSIVE GUIDE FOR PROTECTIVE COATINGS

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