**Abcite® X60**

- Approved to AS/NZS 4020:2005 – Testing of Supercladding Anti-Fouling Paints
- Thermoplastic coating specifically for enhanced long term corrosion protection, high impact strength and good weathering capability.

**Abcite® X70**

- ABCITE® X70 is a high build thermoplastic powder coating specifically developed for applications requiring long term protection against severe environmental conditions, and for use in high pollution environments.

**Abcite® 3150**

- ABCITE® 3150 is a high build thermoplastic powder coating particularly suitable for applications requiring long-term protection against severe environmental conditions and for use in high pollution environments.

**Abcite® 500 ES**

- ABCITE® 500 ES Thermoset Powder Coating
- Specialises in high build 2-3 coats of 150-300μm
- Excellent adhesion properties
- Great for high pollution environments
- High impact strength
- Good compliance with ISO 12944"for corrosion protection, high impact strength and good weathering capability.

**Abcite® Supercladding**

- Thermoplastic coating for the naval and industrial industries.
- High chemical resistance, including acids, alkalis and road salts.
- High impact strength.
- Good weathering properties.
- Excellent adhesion properties.
- Solvent free.
- Has excellent edge coverage and substrate adhesion.

**Product Description**

- **Abcite® X60** has been developed specifically for enhanced long term corrosion protection, high impact strength and good weathering capability.
- **Abcite® X70** is a high impact-resistant, solvent-free, high build thermoplastic coating with excellent long-term protection against severe environmental conditions.
- **Abcite® 3150** is a high build thermoplastic powder coating suitable for applications requiring long-term protection against severe environmental conditions and high pollution environments.
- **Abcite® 500 ES** is a high build thermoset powder coating suitable for high pollution environments.

**Independently Tested to ISO Standards**

- **ISO 12944-4** – Corrosion Protection Systems for Exterior Use
- **ISO 12944-5** – Corrosion Protection Systems for Interior Use
- **ISO 12944-8** – Corrosion Protection Systems for Exterior Use

**Chemical Resistance**

- **Enhanced Chemical Resistance**
- **Resistance to**:
  - Acids
  - Alkalis
  - Humidity

**Slip Resistance with User-Friendly Feel**

- **Abcite® X60** has high slip resistance properties, providing a non-slip surface even in wet conditions.

**Abrasion Resistance**

- **Abcite® X60** has excellent abrasion resistance, ensuring long-term protection against severe environmental conditions.

**Independently Tested to ISO Standards**

- **ISO 12944-4** – Corrosion Protection Systems for Exterior Use
- **ISO 12944-5** – Corrosion Protection Systems for Interior Use
- **ISO 12944-8** – Corrosion Protection Systems for Exterior Use

**Soft Touch**

- **Abcite® X60** provides a soft touch finish, ideal for applications requiring a non-slip surface.

**Edge Coverage**

- **Abcite® X60** provides excellent edge coverage, ensuring a seamless finish.

**Max Service Temp**

- **Continuous**:
  - 80°C
  - 75°C
  - 70°C

**Application Process**

- **Fluidised Bed or ES spray**

**ULTRA TOUGH**

For enhanced long term substrate protection.

**SUPER DURABLE**

Kulorthene Series ABCITE® thermoplastic powder coatings have been developed specifically for enhanced long term corrosion protection, high impact strength and excellent exterior weathering.

**Benefits Include:**

- Exceptional resistance against salt spray, humidity, most common chemicals, acids, and alkalis.
- Abcite® coatings have high elongation properties, excellent mechanical resistance, are solvent free, have excellent substrate adhesion without the need for primers, superior chip resistance, and will provide superior substrate protection even at sub-zero temperatures.

**Abcite® coating remains flexible at -30°C**

- Traditional powder coatings may craze, chip or break at these temperatures.

**What’s the difference between Kulorthene Series Abcite® and traditional thermoset powder coatings?**

- Abcite® is a thermoplastic powder coating material and bonds to the substrate through entanglement of polymer chains, offering exceptional toughness, flexibility and durability.

**Kulorthene Series - Abcite®**

- Long-term corrosion resistance, even at sub-zero temperatures.
- Excellent adhesion to a wide range of substrates.
- Very good sound and electrical insulation properties.

**Abcite® being applied to a thin sheet of stainless steel**

- Sharp edges well covered.
- Abcite® being applied to a thin sheet of stainless steel.

**Edge Covering**

- Excellent coverage of edges and substrate.
- Excellent performance in high humidity environments.
- Excellent performance in high pollution environments.

**Main Market Segments**

- Fencing, Outdoor Light Poles, Sign Posts, Street and Garden Infrastructure, Wind Turbine Towers, Marine Fittings, Mining Structures, etc.

**Independent Test Results**

- **Long service life**
  - Continuous service temperature up to 70°C
  - Peak service temperature up to 80°C

- **Chemical Resistance**
  - **Chemical Compatibility Chart**

- **Physical Properties**
  - **Elongation at Break**
    - **ASTM D638/ISO527**
      - 580% (Abcite® X60)
      - 460% (Abcite® X70)
      - 290% (Abcite® 3150)
  - **Thermal Conductivity**
    - **ASTM E1530**
      - 0.25 W/mK (Abcite® X60)
      - 0.28 W/mK (Abcite® X70)
  - **Hardness - Shore D**
    - **ASTM D2240/ISO868**
      - 50 (Abcite® X60)
      - 60 (Abcite® X70)
      - 65 (Abcite® 3150)

**CASE HISTORY**

**Metal Tray**

- A totally effective anti-corrosion coating for fabrication trays and conveyor belts.

**Resin Drains**

- High-build thermoset powder coating specifically developed for environments requiring long-term protection against severe environmental conditions.

**Connections Pipes & Valves**

- Thermoplastic coating provides outstanding flexibility for short or long-term use, particularly in high pollution environments.

**Stainless Steel**

- Stainless steel structures may require protection against corrosion.

**Fire Escape**

- Metal structures require enhanced protection against corrosion.

**Recreational Centre Childrens Playground**

- Soft touch finishes provide safety and comfort for children.

**Tough Structure**

- Abcite® being applied to a thin sheet of stainless steel.

**Abrasion Resistance**

- Abrasion resistance is essential for high traffic areas.

**Soft Touch**

- Soft touch finishes provide comfort and safety.

**Edge Covering**

- Excellent edge coverage is essential for durability.

**Max Service Temp**

- Continuous service temperature up to 80°C.

**Application Process**

- Fluidised Bed or ES spray
SUPER DURABLE

Kulorthene Series ABCITE® thermoplastic powder coatings have been developed specifically for enhanced long term corrosion protection, high impact strength and excellent exterior weathering.

BENEFITS INCLUDE:
- Exceptional resistance against salt spray, humidity, most common chemicals, acids, and alkalis. ABCITE® coatings have high vibration properties, excellent mechanical resistance, are solvent free, have excellent substrate adhesion without the need for primers, superior chip resistance, and will provide superior substrate protection even at sub zero temperatures.

ABCITE® high build, slip resistant, coatings have excellent thermal damage resistance is required where extra abrasion resistance is required such as dredge boats after coating with ABCITE®.

What is the difference between Kulorthene Series ABCITE® and traditional (thermoset) powder coatings?
ABCITE® is a thermoplastic powder coating which melts and flows to form a very tough, flexible and impermeable coating.

Traditional powder coatings on the other hand, harden on cooling and become brittle. A Kulorthene Series ABCITE® coating will be applicable from 20°C to 450°C.

What’s the difference between Kulorthene Series ABCITE® and traditional powder coatings?

- Traditional powder coatings are typically applied to 80°C.
- ABCITE® can be applied up to 400°C.

- Traditional powder coatings are not resistant to high temperatures.
- ABCITE® resists acids even at elevated temperatures.

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- Traditional powder coatings are not resistant to high temperatures.
- ABCITE® resists acids even at elevated temperatures.
**Kulorthene Series - Abcite®**

- Durable high build thermoplastic powder coatings that only need to melt onto the surface to provide adhesion, and only have to melt once.
- Coated surface re-melts on contact and self-heals minor local damage.
- Excellent adhesion without the need for primers.
- Excellent impact and abrasion resistance - will not chip or damage despite a high lightweight return.

**SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Property</th>
<th>Abcite® 500 ES</th>
<th>Abcite® 5500 ES AM</th>
<th>Abcite® 585</th>
</tr>
</thead>
<tbody>
<tr>
<td>Soft Touch</td>
<td>Excellent</td>
<td>Excellent</td>
<td>Best in class</td>
</tr>
<tr>
<td>Impact Resistance</td>
<td>ASTM D1822/ISO6272</td>
<td>Excellent</td>
<td>Excellent</td>
</tr>
<tr>
<td>Vicat Softening Point</td>
<td>ASTM D1525/ISO306</td>
<td>77°C</td>
<td>63°C</td>
</tr>
</tbody>
</table>

**Chemical Resistance**

- **U = not resistant**
- **X = excellent resistance**
- **V = very good resistance**
- **G = good resistance**
- **F = fair resistance**
- **F0 = fair resistance to limited wetting**
- **F1 = fair resistance to limited penetration**
- **0 = no data**
- **R = no data**

**Positive List for Food Contact (clear & white)**

- FDA
- EU

**KULORTHENE THERMOPLASTIC POWDER COATINGS PRODUCT GUIDE**

**CASE HISTORIES**

**RIVET TIGHTENING**

- A reliably effective, user-friendly, one component, two part adhesive providing a higher total chemical and mechanical bond strength.

**JOINING TECHNIQUES**

- Thermo-shear and internal heat bond to metal and plastic, the use of a hot plate and a cold bolt.

**APPLICATION MACHINES**

- A bench model (Siemens) and a larger plant version (Siemens).

**HIGH BOUNDARY THERMAL PROTECTION**

Dulux Thermo ceramic are superior ceramics in resistance to thermal shock and would always be the recommended choice.

**FIRE ESCAPE**

- The escape route is concealed by marine and abrasion resistant Abcite® coated stainless steel sheeting with a smooth waxed finish.

**WINE JARS**

- Double-walled glass wine jars also allowing for glass lightweighting where required.

**GLASS CONTAINERS**

- Should the glass container break the Abcite® coated jar is a specialist coating that has been designed for various application techniques eg; flame spraying.

**SPRAY PASTES**

- Adhesive spray pastes are sprayed onto metal in a modified plastic paste system.

**Painting Equipment**

- Dulux® standard equipment in standard spray heads.

**Painting Application**

- Painting equipment to a soft clave finish - a finish with a high spreading pressure to 50 and thermal curls.

**CASE STUDIES**

**WIRE & FLEXIBLE PIPE**

- Dulux® Thermoset coatings are particularly suitable for use on flexible pipe and underground systems in corrosive environments.

**BOUNDARY WALLS**

- Dulux® Thermoset coatings are particularly suitable for use in corrosive environments with high chloride exposure.
**Kulorthene Series**

**ABCITE® THERMOPLASTIC POWDER COATINGS**

**SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Property</th>
<th>ABCITE X60</th>
<th>ABCITE X70</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heat Resistance</td>
<td>200°C</td>
<td>200°C</td>
</tr>
<tr>
<td>Impact Resistance</td>
<td>Excellent</td>
<td>Excellent</td>
</tr>
<tr>
<td>UV Resistance (2000 hr UVB)</td>
<td>Excellent</td>
<td>Excellent</td>
</tr>
<tr>
<td>Chemical Resistance</td>
<td>Excellent</td>
<td>Excellent</td>
</tr>
<tr>
<td>Maximum Service Temp</td>
<td>90°C</td>
<td>85°C</td>
</tr>
<tr>
<td>Long Term Corrosion Resistance</td>
<td>Excellent</td>
<td>Excellent</td>
</tr>
<tr>
<td>Cathodic Disbondment (RAL5017 blue)</td>
<td>PASS</td>
<td>PASS</td>
</tr>
</tbody>
</table>

**What’s the difference between Kulorthene Series ABCITE® and traditional (thermoset) powder coatings**

ABCITE® is a thermoplastic powder coating which melts and flows to form a tough outer skin. Traditional powder coatings cure when they cross-link to develop their physical properties and adhesion.

**Blister Resistance**

<table>
<thead>
<tr>
<th>Environment</th>
<th>X60 Blister Test</th>
<th>X70 Blister Test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dry Heat</td>
<td>PASS</td>
<td>PASS</td>
</tr>
<tr>
<td>Water Soak</td>
<td>PASS</td>
<td>PASS</td>
</tr>
<tr>
<td>Salt Spray</td>
<td>PASS</td>
<td>PASS</td>
</tr>
<tr>
<td>Immersion Corrosion</td>
<td>PASS</td>
<td>PASS</td>
</tr>
<tr>
<td>Immersion Chloride</td>
<td>PASS</td>
<td>PASS</td>
</tr>
</tbody>
</table>

**Physical Properties**

<table>
<thead>
<tr>
<th>Property</th>
<th>X60</th>
<th>X70</th>
</tr>
</thead>
<tbody>
<tr>
<td>Melting Point (°C)</td>
<td>95°C</td>
<td>90°C</td>
</tr>
<tr>
<td>Hardness - Shore D</td>
<td>50</td>
<td>60</td>
</tr>
<tr>
<td>Impact Resistance</td>
<td>Excellent</td>
<td>Excellent</td>
</tr>
<tr>
<td>UV Resistance (2000 hr UVB)</td>
<td>Excellent</td>
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</tr>
<tr>
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<td>Cathodic Disbondment (RAL5017 blue)</td>
<td>PASS</td>
<td>PASS</td>
</tr>
</tbody>
</table>

**Environmentally Friendly**

- 100% recyclable
- No VOC's
- No solvent
- No heavy metals
- Safe disposal
- No negative impact on soil and water
- Suitable for food bowl coating
- No 1 product solves all problems

**Case Histories**

<table>
<thead>
<tr>
<th>Case Study</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Building X</td>
<td>Used for exterior applications due to its high impact strength and good weathering capability.</td>
</tr>
<tr>
<td>Recreation Centre</td>
<td>Abcite® resists acids even at sub zero temperatures.</td>
</tr>
<tr>
<td>Industrial Area</td>
<td>Maximum protection against corrosion.</td>
</tr>
</tbody>
</table>

**USA and International Trade**

- DuluxGroup (Australia) Pty Ltd (ABN 67 000 049 427). DuluxGroup owns the Dulux trade mark in Australia, New Zealand, PNG and Fiji.
- The Dulux Group owns the Dulux trade mark in Australia.
- DuluxGroup is not responsible for the accuracy and reliability of any advice, recommendation, information, assistance or service provided by DuluxGroup.
- DuluxGroup does not accept any liability or responsibility for any advice, recommendation, information or service provided by DuluxGroup or its related bodies corporate.

**Contact**

- Online: www.duluxpowders.com.au
- VIC 3175 (1st floor)
- PO Box 10, 1886 North Shore Mail Centre.
**Typical Applications**
- Furniture
- Playground equipment
- Light poles
- Street con
- Fan guards
- Cable support systems
- Outdoor street

Product Description
- Abcite® coatings provide superior substrate protection even in high humidity and aggressive industrial areas.
- They offer special healing properties, a "cushion feel", and crack resistance even at very low temperatures.
- Abrasion resistance is improved, reducing costs for steel piles.
- They contain antiseptic agents to prevent the growth of micro-organisms and bacteria.
- They provide enhanced slip resistance.
- Strong adhesion to existing coating systems.
- Excellent resistance to mechanical damage, weathering, UV, and chemicals.
- Easy repair on site.
- Coatings can be repaired in-situ using the same polymer system.
- Application is easy, with no need for primers.
- They are compatible with traditional (thermoset) powder coatings.
- Long-term corrosion resistance is provided by metal flake, ensuring long-term performance.

**Abcite® 5500 ES AM**
- Antimicrobial
- Suitable for a wide range of environments.
- Provides maximum protection against corrosion and provides long-term protection.
**SUPER**

Kulorthene Series ABCITE® thermoplastic powder coatings have been developed specifically for enhanced long term corrosion protection, high impact strength and excellent exterior weathering.

**DURABLE**

Kulorthene Series ABCITE® thermoplastic powder coatings have been developed specifically for enhanced long term corrosion protection, high impact strength and excellent exterior weathering.

**BENEFITS INCLUDE:**

- Exceptional resistance against salt spray, humidity, most common chemicals, acids, and alkalis. Abcite® coatings have high elongation properties, excellent mechanical resistance, are solvent free, have excellent substrate adhesion without the need for primers, superior chip resistance, and will provide superior substrate protection even to sub-zero temperatures.

- Abcite® coating materials are flexible with no objectionable odor or burning despite a high melting point.

- Abcite® high build, slip resistant, coatings have excellent thermal and electrical insulation properties.

- Abcite® is extremely flexible even down to -78°C.

- Abcite® is classified as non-hazardous.

- Abcite® will not chip or flake-off under extreme conditions.

- Abcite® gives extra protection to threat areas for children.

- Abcite® is extremely flexible and can be applied to hard to reach areas.

- Abcite® is ranked as the most chip and abrasion resistant product in the Abcite® range.

- Abcite® is extremely flexible down to -78°C.

- Abcite® maintains its high shatter proof resistance and excellent physical insulation properties.

- Abcite® is an extremely flexible and durable coating system.

**What’s the difference between Kulorthene Series Abcite® and traditional thermoplastic powder coatings?**

- Abcite® is a thermoplastic powder coating which melts and flows to form a very hard, flexible and impervious coating.
- Traditional powder coatings are metallic and hard and can chip off. They are more vulnerable to external agents such as sunlight, wind, rain, etc.

- Abcite® is extremely flexible even down to -78°C. Traditional powder coatings are rigid and hard and can chip or flake off. They are more vulnerable to external agents such as sunlight, wind, rain, etc.

- Abcite® is classified as non-hazardous. Traditional powder coatings are metallic and hard and can chip or flake off. They are more vulnerable to external agents such as sunlight, wind, rain, etc.

- Abcite® is extremely flexible and can be applied to hard to reach areas. Traditional powder coatings are metallic and hard and can chip or flake off. They are more vulnerable to external agents such as sunlight, wind, rain, etc.

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- Abcite® is an extremely flexible and durable coating system. Traditional powder coatings are metallic and hard and can chip or flake off. They are more vulnerable to external agents such as sunlight, wind, rain, etc.

- Abcite® is extremely flexible down to -78°C. Traditional powder coatings are metallic and hard and can chip or flake off. They are more vulnerable to external agents such as sunlight, wind, rain, etc.

**Abcite® X60**

- Abcite® X60 is a high build thermoplastic powder that is extremely flexible even down to -78°C.
- Abcite® X60 provides outstanding impact resistance, with a high build, slip resistant, coatings have excellent thermal and electrical insulation properties.
- Abcite® X60 is classified as non-hazardous.
- Abcite® X60 will not chip or flake-off under extreme conditions.
- Abcite® X60 gives extra protection to threat areas for children.
- Abcite® X60 is an extremely flexible and durable coating system.
- Abcite® X60 is extremely flexible and can be applied to hard to reach areas.

**Abcite® X70**

- Abcite® X70 is a medium build thermoplastic powder that is extremely flexible even down to -78°C.
- Abcite® X70 provides outstanding impact resistance, with a high build, slip resistant, coatings have excellent thermal and electrical insulation properties.
- Abcite® X70 is classified as non-hazardous.
- Abcite® X70 will not chip or flake-off under extreme conditions.
- Abcite® X70 gives extra protection to threat areas for children.
- Abcite® X70 is an extremely flexible and durable coating system.
- Abcite® X70 is extremely flexible and can be applied to hard to reach areas.

**Abcite® 500 ES**

- Abcite® 500 ES providing outstanding impact resistance.
- Abcite® 500 ES has an excellent resistance to chemical attacks by both acids and alkalis, however it has very good edge coverage and substrate adhesion.
- Abcite® 500 ES is an extremely flexible and durable coating system.
- Abcite® 500 ES is extremely flexible and can be applied to hard to reach areas.

**Abcite® 5500 ES AM**

- Abcite® 5500 ES AM has an excellent resistance to chemical attacks by both acids and alkalis, however it has very good edge coverage and substrate adhesion.
- Abcite® 5500 ES AM is an extremely flexible and durable coating system.
- Abcite® 5500 ES AM is extremely flexible and can be applied to hard to reach areas.

**Abcite® 3150**

- Abcite® 3150 is an extremely flexible and durable coating system.
- Abcite® 3150 gives extra protection to threat areas for children.
- Abcite® 3150 is extremely flexible and can be applied to hard to reach areas.

**Abcite® 585**

- Abcite® 585 is an extremely flexible and durable coating system.
- Abcite® 585 gives extra protection to threat areas for children.
- Abcite® 585 is extremely flexible and can be applied to hard to reach areas.

**Abcite® 760**

- Abcite® 760 is an extremely flexible and durable coating system.
- Abcite® 760 gives extra protection to threat areas for children.
- Abcite® 760 is extremely flexible and can be applied to hard to reach areas.

**Abcite® 800**

- Abcite® 800 is an extremely flexible and durable coating system.
- Abcite® 800 gives extra protection to threat areas for children.
- Abcite® 800 is extremely flexible and can be applied to hard to reach areas.

**Abcite® 850**

- Abcite® 850 is an extremely flexible and durable coating system.
- Abcite® 850 gives extra protection to threat areas for children.
- Abcite® 850 is extremely flexible and can be applied to hard to reach areas.

**Abcite® 900**

- Abcite® 900 is an extremely flexible and durable coating system.
- Abcite® 900 gives extra protection to threat areas for children.
- Abcite® 900 is extremely flexible and can be applied to hard to reach areas.

**Abcite® 950**

- Abcite® 950 is an extremely flexible and durable coating system.
- Abcite® 950 gives extra protection to threat areas for children.
- Abcite® 950 is extremely flexible and can be applied to hard to reach areas.