Amercoat 4187
Urethane epoxy pitch
(formerly Steelguard 3213)

Product Data/ Application Instructions

- Two pack high build urethane epoxy pitch coating
- Excellent resistance to water immersion
- Excellent abrasion and impact resistance
- Fast drying and quick return to service
- Rapid low temperature cure down to 0°C/32°F
- Extensive track record

Typical Uses
Heavy duty protective coating for offshore immersed areas and splash zones, effluent and sewage treatment, pipes, crude oil tank internals, gas bells and sump tanks. Due to the fast cure and early resistance to water of Amercoat 4187, it is an ideal coating for the maintenance painting of jetties, pontoons, dock walls and gates during intermittent tidal immersion. Also suitable for buried structures such as underground pipe and tank externals. Amercoat 4187 can be used to protect both steel and concrete structures.

Mixing
Stir the resin component thoroughly, then add the cure and continue to stir until the product is uniform throughout. A powerful mixer should be used.

Overcoating
Can be overcoated with itself to increase the coating thickness. Surface must be abraded if overcoating after maximum overcoating time has elapsed.

Physical Data

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance when dry</td>
<td>semi gloss</td>
</tr>
<tr>
<td>Colour</td>
<td>black and brown</td>
</tr>
<tr>
<td>Components</td>
<td>2</td>
</tr>
<tr>
<td>Mixing ratio by volume</td>
<td>Resin: 5.25 parts, Cure: 1 part</td>
</tr>
<tr>
<td>Volume solids</td>
<td>65±3%</td>
</tr>
<tr>
<td>VOC</td>
<td>340 g/l</td>
</tr>
<tr>
<td>Curing mechanism</td>
<td>solvent release and chemical reaction between components</td>
</tr>
<tr>
<td>Dry film thickness (µm)</td>
<td>150 125 400</td>
</tr>
<tr>
<td>Wet film thickness (µm)</td>
<td>231 192 615</td>
</tr>
<tr>
<td>Theoretical coverage</td>
<td>4.3 m²/l (at typical dft)</td>
</tr>
<tr>
<td>Specific gravity</td>
<td>1.3 kg/l (mixed product)</td>
</tr>
<tr>
<td>Flashpoint (closed cup)</td>
<td>°C °F</td>
</tr>
<tr>
<td>Resin</td>
<td>2 36</td>
</tr>
<tr>
<td>Cure</td>
<td>-2 28</td>
</tr>
<tr>
<td>Amercoat 12</td>
<td>24 75</td>
</tr>
</tbody>
</table>
Surface Preparation
All surfaces must be dry and free of dust, salts, grease and other contaminants immediately before coating. Reference should be made to the relevant product data sheets of any recommended primers.
STEEL: - Normally applied over a suitable anti-corrosive primer such as Amercoat 139 or Amercoat 71. For service in water immersion a primer may not be necessary. In this situation the substrate should be abrasive blast cleaned to ISO 8501-1 Sa2 1/2. The blast profile achieved should be approximately 50 to 100 microns and be angular as produced by grit. Coating should occur before degradation of the surface takes place. If oxidation occurs then the steel should be re-prepared.
CONCRETE: - Any surface laitance must be removed by sweep blasting and any dust and debris cleaned away. Any exposed blow holes should be filled with a suitable epoxy mortar prior to application of the Amercoat 4187.

Application Methods
AIRLESS SPRAY - Tip size 21-25 thou’ (0.53-0.63mm). Minimum pressure at tip 2800 psi (200kg/square centimetre).
BRUSH OR ROLLER - small areas only.

Application Data
Substrate ......................... steel, concrete
Application methods .......... airless spray
Potlife (at 20°C/68°F) .......... 2 hours

Environmental Conditions
Amercoat 4187 should only be applied within the limits of temperature and humidity set out below.
Relative humidity: .............. up to 90%
Surface temperature: .......... minimum 1°C/34°F
............................................. maximum 40°C/104°F
The surface temperature must also be at least 3°C/5°F above dew point.

Drying Characteristics

<table>
<thead>
<tr>
<th>Temperature</th>
<th>0/32</th>
<th>10/50</th>
<th>20/68</th>
<th>30/86</th>
</tr>
</thead>
<tbody>
<tr>
<td>Touch dry</td>
<td>2 hours</td>
<td>1 hour</td>
<td>30 minutes</td>
<td>15 minutes</td>
</tr>
<tr>
<td>Hard dry</td>
<td>8 hours</td>
<td>4 hours</td>
<td>2 hours</td>
<td>1 hour</td>
</tr>
<tr>
<td>Overcoating (minimum)</td>
<td>2 hours</td>
<td>1 hour</td>
<td>30 minutes</td>
<td>15 minutes</td>
</tr>
<tr>
<td>Overcoating (maximum)</td>
<td>21 days</td>
<td>12 days</td>
<td>7 days</td>
<td>4 days</td>
</tr>
</tbody>
</table>

NOTE: drying and curing times are dependent on air and steel temperature, applied film thickness, ventilation and other environmental conditions. Times are shorter at higher temperatures and longer at lower temperatures.

Thinner .......................... normally not necessary.
Cleaner .......................... Amercoat 12
Application Procedure:
1. Flush equipment with recommended cleaner before use.
2. Stir resin (in the larger container) to an even consistency with a power mixer.
3. Add cure to resin and continue stirring for 5 minutes. NOTE: Since the potlife is limited and shortened by high temperatures, do not mix more material than will be used within the potlife period.
4. Thinning is normally not required.
5. Stir during application to maintain uniformity of material. Apply a wet even coat in parallel passes. Overlap each pass 50% to avoid bare areas, pinholes or holidays.
6. Double coat all welds, rough spots, sharp edges and corners, rivets, bolts, etc.
7. Application at 231 µm wet film thickness will normally provide 150 µm dry film.
8. Check thickness of dry coating with a non-destructive dry film thickness gauge, such as Mikrotest or Elcometer. If less than specified thickness, apply additional material as needed.
9. Small damaged or bare areas and random pinholes or holidays can be touched up by brush. Repair larger areas by spray.
10. In confined areas ventilate with clean air during application and drying until all solvents are removed. Temperature and humidity of ventilating air must be such that moisture condensation will not form on surface.
11. Clean all equipment with recommended cleaner immediately after use or at least at the end of each working day or shift. When left in spray equipment, the product will cure and cause clogging.

Before using the product, read the label on the can and consult the material safety data sheet.

Shipping Data
Pack size ......................... 20 litres in two part units
Shipping weight
Resin .............................. approx. 24 kg
Cure ................................ approx. 5 kg
Shelf life ......................... 1 year from shipment date or as indicated on label when stored indoors in unopened, original containers at 5 to 40°C (41 to 104°F)
(The cure is moisture sensitive and will deteriorate if exposed to the atmosphere)
Safety
Since improper use and handling can be hazardous to health and cause of fire or explosion, safety precautions included with Product Data/Application Instruction and Material Safety Data Sheet must be observed during all storage, handling, use and drying periods.

Warranty
Ameron warrants its products to be free from defects in material and workmanship. Ameron’s sole obligations and Buyer’s exclusive remedy in connection with the products shall be limited, at Ameron’s option, to either replacement of products not conforming this warranty or credit to Buyer’s account in the invoiced amount of the non-conforming products. Any claim under this warranty must be made by Buyer to Ameron in writing within five (5) days of Buyer’s discovery of the claimed defect, but in no event later than the expiration of the applicable shelf life, or one year from the delivery date, whichever is earlier. Buyer’s failure to notify Ameron of such non-conformance as required herein shall bar Buyer from recovery under this warranty.

Any recommendations or suggestion relating to the use of the products made by Ameron, whether in its technical literature, or response to specific enquiry, or otherwise, is based on data believed to be reliable; however, the products and information are intended for use by Buyer’s having requisite skill and knowledge in the industry, and therefore it is Buyer to satisfy itself of the suitability of the products for its own particular use and it shall be deemed that Buyer has done so, as its sole discretion and risk. Variation in environment, changes in procedures of use, or extrapolation of data may cause unsatisfactory results.

Limitation of Liability
Ameron’s liability on any claim of any kind, including claims based upon Ameron’s negligence or strict liability, for any loss or damage arising out of, connected with, or resulting from the use of the products, shall in no case exceed the purchase price allocable to the products or part thereof which give rise to the claim.

In no event shall Ameron be liable for consequential or incidental damages.

Due to Ameron’s policy of continuous product improvement, the information contained in this Product Data/Application Instructions sheet is subject to change without notice. It is the Buyer’s responsibility to check that this issue is current prior to using the product. For the most up-to-date Product Data/Application Instructions always refer to the Ameron Performance Coatings & Finishes website at www.ameroncoatings.com

To avoid any confusion that may arise through translation into other languages, the English version of the Product Data/Application Instructions will be the governing literature and must be referred to in case of deviations with product literature in other languages.

Condition of Sale
All our transactions are subject to our Terms and Conditions of Sale.