



# AMERSHIELD

## Aliphatic Polyurethane Coating

**Data Sheet: 1**

Supersedes: 09/07

Date: 03/08

<b>Composition</b>	Two pack high performance self priming Polyurethane Coating. High solids and high build polyurethane coating with exceptional durability and suitable for roller application.			
<b>Uses and Properties</b>	A polyurethane enamel for application direct to metal as a single-coat system at reduced application cost. It is compatible over prepared, smooth cold-rolled steel and abrasive blasted structural steel. AMERSHIELD has excellent adhesion to concrete, providing a durable, glossy, easy-to-clean flooring system. May be applied over epoxy coatings and metallic zinc epoxy coatings to provide a durable, weather-resistant topcoat for extra heavy-duty service. Properties include:			
<b>Typical Applications</b>	<ul style="list-style-type: none"> <li>◆ Unique, high-solids, high-build, multifunctional coating</li> <li>◆ High-gloss, self-priming coating</li> <li>◆ Exceptional colour and gloss retention</li> <li>◆ Direct to metal and concrete</li> <li>◆ Outstanding abrasion, reverse and direct impact resistance</li> <li>◆ Good chemical and stain resistance</li> <li>◆ Tough and flexible coating</li> <li>◆ Suitable as anti-graffiti coating</li> <li>◆ USDA – Incidental food contact</li> </ul> <p>Structural steel – Bridges - Marine – Tanks – Piping – Power, wastewater treatment, pulp and paper, chemical and petrochemical, food and beverage plants – Concrete walls and floors.</p>			
<b>Typical Systems</b>	<b>Substrate</b>	<b>Surface Preparation</b>	<b>Typical Application</b>	<b>dft µm</b>
	Structural Steel (severe conditions)	Abrasive blast clean to AS1627.4 Class 2½ min.	1 <sup>st</sup> Coat: AMERCOAT 68K ❶ 2 <sup>nd</sup> Coat: AMERLOCK 2K 3 <sup>rd</sup> Coat: AMERSHIELD	60-75 100-150 100-150
	Refresher Coat existing systems ❸ ( in good condition)	Thoroughly degrease to remove all oil, grease contamination and HPWW 2000 psi.	1 <sup>st</sup> Coat: AMERSHIELD ❷	100-150
	Maintenance intact coated surfaces ❸	Hand or power tool clean to remove all loose paint and corrosion. HPWW 2000 psi.	1 <sup>st</sup> Coat: AMERLOCK 2K 2 <sup>nd</sup> Coat: AMERSHIELD	100-150 75 - 125
	Galvanised steel	Degrease, whip blast or acid etch.	1 <sup>st</sup> Coat: AMERSHIELD ❷	100-150
	Concrete Floor Lockshield System	Whip blast or acid etch	1 <sup>st</sup> Coat: AMERLOCK 2K (thin 20%) 2 <sup>nd</sup> Coat: AMERLOCK 2K 3 <sup>rd</sup> Coat: AMERSHIELD	100-150 100-150 100-150
	Aluminium	Degrease, whip blast or acid etch or chromate conversion coating.	1 <sup>st</sup> Coat: AMERSHIELD ❷	100-150
<p>❶ Other primers such as AMERCOAT 307, AMERCOAT 471, AMERCOAT 385P, AMERCOAT 182ZPK, may be used depending on application and exposure conditions.</p> <p>❷ For increased performance epoxy coatings such as AMERCOAT 385P, AMERCOAT 385, AMERLOCK 400, AMERLOCK 2K, AMERCOAT 182 ZPK may be applied prior to application of AMERSHIELD.</p> <p>❸ It is recommended that a test patch be done over existing coatings or consult PPG PMC representative.</p>				

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<b>General Data</b>  <b>Weathering Finish</b> <b>Chemical Resistance</b> <b>Solvent Resistance</b> <b>Graffiti Resistance</b> <b>Abrasion Resistance</b> <b>Immersed Conditions</b> <b>Temperature Range</b> <b>Colour</b> <b>Top Coating</b> <b>Shelf Life</b>	<p>Excellent for exterior exposure.  Suitable for mild acidic and alkaline splashing. Not intended for prolonged exposure  Good.  Will withstand 100 cycles with AMERASE with no effect on gloss.  Excellent (Weight loss 61 mg CS17 wheel 1000 cycles 1 Kg load)  Not normally recommended for immersion.  Up to 93°C (dry).  White and standard colours.  Not normally topcoated.  12 months from date of shipment if stored indoors at 4°C to 38°C – Base and Hardener.</p>																																							
<b>Application Data</b> <b>Covering Capacity</b> <b>(Theoretical)</b>  <b>Volume Solids</b>  <b>Drying Time</b>   <b>Recoat (by itself)</b>   <b>Pot Life</b>   <b>Mixing Ratio</b>  <b>Note:</b>  <b>Thinner</b>  <b>Method</b>  <b>Safety Precautions</b>	<p>5.8 square metres per litre at 125 µm dry film thickness. (Wet film thickness 158 µm).  Material losses during mixing and application will vary and must be taken into consideration when estimating job requirements.  73% ± 3% depending upon colour.</p> <table border="1" data-bbox="527 667 1421 926"> <thead> <tr> <th></th> <th>0°C</th> <th>10°C</th> <th>20°C</th> <th>30°C</th> </tr> </thead> <tbody> <tr> <td>Tack Free With 866M</td> <td>- 2 ½ hrs</td> <td>4 hrs 1 hr</td> <td>2 ½ hrs ¾ hr</td> <td>1 hr ½ hr</td> </tr> <tr> <td>Through Dry With 866M</td> <td>- 10 hrs</td> <td>72 hrs 6 hrs</td> <td>10 hrs 3 hrs</td> <td>5 hrs 2 hrs</td> </tr> <tr> <td>Minimum With 866M</td> <td>- 8 hrs</td> <td>48 hrs 4 hrs</td> <td>8 hrs 2 hrs</td> <td>4 hrs 1 ½ hrs</td> </tr> <tr> <td>Maximum With 866M</td> <td>- 48 hrs</td> <td>168 hrs 24 hrs</td> <td>168 hrs 12 hrs</td> <td>12 hrs 6 hrs</td> </tr> </tbody> </table> <p>Sand surface if maximum recoat time is exceeded.</p> <table border="1" data-bbox="527 953 1421 1010"> <thead> <tr> <th></th> <th>0°C</th> <th>10°C</th> <th>20°C</th> <th>30°C</th> </tr> </thead> <tbody> <tr> <td>Minimum With 866M</td> <td>- 4 hrs</td> <td>5 hrs 2 hrs</td> <td>2 ½ hrs 1 hr</td> <td>1 ½ hrs 1 hr</td> </tr> </tbody> </table> <p><b>866M catalyst:</b> Add while stirring to mixed product at rate of 65 gm per 5 litre or 260 gm or ml per 20 litre. Do not exceed this amount.</p> <p>4 part Base to 1 part Hardener by volume.</p> <p>The figures quoted for pot life and drying/curing times after mixing the components are not definitive. They are dependent on job site conditions such as volume of mixed material, ambient and steel temperature variations, weather and ventilation, and influenced by the previous storage conditions.</p> <p>THINNER 300 for spray, roller / brush application and clean up. (THINNER 539 may be required for hot, windy conditions).</p> <p>Stir Base and Hardener thoroughly, then combine Base and Hardener and power stir to a uniform consistency. Application by conventional or airless spray, thinning up to 10% with THINNER 300. Apply by repeated wet on wet applications to required thickness. Clean equipment immediately after use.</p> <p>Recommended only for application by experienced industrial operators in industrial coating operations. Avoid contact with skin. Protective gloves are recommended. The Hardener and mixed paint contains free isocyanates. When applying by brush or roller, provide adequate ventilation. When applying by spray, users must comply with relevant spray painting regulations and wear appropriate respirator to avoid inhaling vapours and spray mist. A positive pressure air supplied respirator is recommended. The spray mist presents a hazard to other persons and therefore the spray area must be appropriately isolated. Material Safety Data Sheet is available and should be consulted.</p>						0°C	10°C	20°C	30°C	Tack Free With 866M	- 2 ½ hrs	4 hrs 1 hr	2 ½ hrs ¾ hr	1 hr ½ hr	Through Dry With 866M	- 10 hrs	72 hrs 6 hrs	10 hrs 3 hrs	5 hrs 2 hrs	Minimum With 866M	- 8 hrs	48 hrs 4 hrs	8 hrs 2 hrs	4 hrs 1 ½ hrs	Maximum With 866M	- 48 hrs	168 hrs 24 hrs	168 hrs 12 hrs	12 hrs 6 hrs		0°C	10°C	20°C	30°C	Minimum With 866M	- 4 hrs	5 hrs 2 hrs	2 ½ hrs 1 hr	1 ½ hrs 1 hr
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PPG INDUSTRIES PTY. LTD. McNaughton Road, Clayton VIC 3168 – 24 hr Emergency Telephone 1800 033111  
Telephone : (03) 9263 6000, Customer service: 1300 659 666