

# AMERCOAT® 90HS

April 2012  
Revision of February 2012

<b>DESCRIPTION</b>	Epoxy Phenolic Tank Lining
<b>PRINCIPAL CHARACTERISTICS</b>	<ul style="list-style-type: none"> <li>– Economical Tank lining; requires only two coats</li> <li>– Withstands continuous water immersion to 140°F (60°C)</li> <li>– Recommended for use under insulation for up to 400°F (204°C)</li> <li>– Suitable for demineralized water to 140°F (60°C)</li> </ul>
<b>COLOR AND GLOSS</b>	Flat White, Ivory, Pearl Gray
<b>BASIC DATA</b>	
Volume solids	64% ± 3%
VOC	2.7 lbs/gal (323 g/L)
Recommended Dry film thickness (per coat)	4 – 6 mils (100 – 150 microns) 2-3 coats <i>* Limit total system film thickness to 10 mils for service temperatures above 250°F</i>
Theoretical Spread Rate	@ 1 mils dft    1026 ft <sup>2</sup> /gal @ 5 mils dft    205 ft <sup>2</sup> /gal
Components	2
Shelf Life	2 years from date of manufacture
<b>SURFACE PREPARATION</b>	
Steel	<ul style="list-style-type: none"> <li>– Remove weld spatter, protrusions, and laminations in steel. Grind welds smooth in accordance with NACE RP-0178. Remove all surface contaminants, oil and grease in accordance with SSPC SP-1. Abrasive blast with an angular abrasive to an SSPC SP-10 cleanliness or higher. Achieve a surface profile of 1.0-3.0 mils. <i>Amercoat 114A</i> may be used as a pit filler for certain applications. Check with PPG Technical Service for guidance on chemical resistance. Check with PPG technical service for the maximum allowable soluble salt level for water immersion service. This will vary based on the water chemistry and service temperatures.</li> </ul>
Concrete	<ul style="list-style-type: none"> <li>– Prepare / clean surface in accordance with SSPC SP-13 guidelines. Abrade surface per ASTM D-4259 to remove all efflorescence and laitance, to expose sub-surface voids, and to provide a surface roughness equivalent of 60 grit sandpaper or coarser. Test for moisture by conducting a plastic sheet test in accordance with ASTM D4263. Fill voids as necessary with <i>Amercoat 114A</i> epoxy filler.</li> </ul>
Galvanized Steel	<ul style="list-style-type: none"> <li>– Remove oil or soap film with detergent or emulsion cleaner. Lightly abrasive blast with a fine abrasive in accordance with SSPC SP-16 guidelines to achieve a profile of 1.5-3.0 mils. When light abrasive blasting is not possible, galvanizing can be treated with a suitable zinc phosphate conversion coating. Galvanizing that has at least 12 months of exterior weathering and has a rough surface with white rust present may be over-coated after power washing and cleaning to remove white rust and other contaminants. The surface must have a measurable profile. A test patch is recommended to confirm adhesion. Not recommended over chromate sealed galvanizing without blasting to thoroughly remove chromates. Adhesion problems may occur.</li> </ul>
Non-Ferrous Metals and Stainless Steel	<ul style="list-style-type: none"> <li>– Abrasive blast in accordance with SSPC SP-16 guidelines to achieve a uniform and dense 1.5-4.0 mil anchor profile. Size and hardness of abrasive should be adjusted as necessary based on the hardness of the substrate. Aluminum may be treated with a surface treatment compliant with Mil-DTL-5541 or equivalent (non-immersion applications only).</li> </ul>

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### ENVIRONMENTAL CONDITIONS

Ambient temperatures*	50°F to 122°F (10°C to 50°C)
Material temperatures	50°F to 90°F (10°C to 32°C)
Relative humidity	0-85% (0-50% using dehumidification for chemical / cargo tank linings)
Surface temperature	50°F to 122°F (10°C to 50°C)
General air quality	Area should be sheltered from airborne particulates and pollutants. Avoid combustion gases or other sources of carbon dioxide that may promote amine blush. Ensure good ventilation during application and curing. Provide shelter to prevent wind from affecting spray patterns.

### INSTRUCTIONS FOR USE

Mixing ratio by volume	4 parts base to 1 part hardener Pre-mix base component with a pneumatic air mixing at moderate speeds to homogenize the container. Add hardener to base and agitate with a power mixer for 1-2 minutes until completely dispersed. Hardener component may crystallize (haze) and thicken when exposed to low temperature. Warm the product at room temperature until it returns to a clear state prior to use.
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Pot life		50°F	70°F	90°F
	90HS	6 hours	4 hours	2 hours

Induction time	50-70°F – 15 minutes 71°F + – none
Airless spray	45:1 pump or larger, 0.015 - 0.017 fluid tip
Air spray	Thin up to 20%, standard conventional equipment, 0.070" fluid orifice
Brush & roll	Use a high quality natural bristle brush and / or solvent resistant, 3/8" nap roller. Ensure brush / roller is well loaded to avoid air entrainment. Multiple coats may be necessary to achieve adequate film build.  Spray application is required for tank linings with the exception of stripe coating and application for small repair areas.
Thinner	<i>Amercoat 65, Amercoat 101</i>
Cleaning solvent	<i>Amercoat 12 Cleaner or Amercoat 65 thinner (xylene)</i>
Primers	Direct to substrate, <i>Dimetcote 9-series primers</i>
Safety precautions	For paint and recommended thinners see safety sheet 1430, 1431 and relevant material safety data sheets  This is a solvent borne paint and care should be taken to avoid inhalation of spray mist or vapor as well as contact between the wet paint and exposed skin or eyes.

### DRY/CURE TIMES\*

*Amercoat 90HS@ 5 mils dft*

	50°F	70°F	90°F
Dry to touch	6 hours	3 hours	1.5 hours
Dry through	24 hours	12 hours	8 hours
Dry to recoat / topcoat	12 hours	8 hours	4 hours
Max recoat, self	12 days	7 days	5 days
Max topcoat, urethanes, PSX	72 hours	48 hours	24 hours
Cure to immersion	14 days	7 days	4 days

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### Heat Cure Procedures

1. Allow the final coat of the lining to achieve a dry hard condition prior to heating above 120°F .
2. Do not heat cure until after holiday detection has been accomplished (when specified).
3. Ramp heat at a rate of no greater than 2°F / minute to the target temperature.
4. Surface temperatures must be measured at various elevations from top to bottom and in each cardinal direction. The lowest surface temperature must meet the minimum time/temperature requirements of the heat cure schedule. Record all temperatures.
5. All adjacent tanks must be empty.

Temperature °F/°C	110 / 43	120 / 49	130 / 54	140 / 60	150 / 65	160 / 71
Cure to service (hrs)	60	48	36	24	18	12

*\* Dry times are dependent on air and surface temperatures as well as film thickness, ventilation, and relative humidity. Maximum recoating time is highly dependent upon actual surface temperatures – not simply air temperatures. Surface temperatures should be monitored, especially with sun-exposed or otherwise heated surfaces. Higher surface temperatures shorten the maximum recoat window.  
Surface must be clean and dry. Any contamination must be identified and removed. Particular attention must be paid to surfaces exposed to sunlight where chalking may be present. In those situations, a further degree of cleaning may be required. PPG Technical Service can advise on suitable cleaning methods. If maximum recoat/topcoat time is exceeded, then roughen surface.*

### PRODUCT QUALIFICATIONS

- Compliant with USDA Incidental Food Contact Requirements
- NFPA Class A for Flame Spread and Smoke Development
- Nuclear Service Level 2 (ANSI N 5.12, ANSI N 101.2)

### AVAILABILITY

Packaging

Available in 1-gallon and 5-gallon kits

Product codes

AT90H-23 Pearl Gray  
 AT90H-3 White  
 AT90H-8 Ivory  
 AT90H-B Hardener

Worldwide statement

While it is always the aim of PPG Protective & Marine Coatings to supply the same product on a worldwide basis, slight modification of the product is sometimes necessary to comply with local or national rules/circumstances. Under these circumstances an alternative product data sheet is used.

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