

AMERSHIELD™

DESCRIPTION

Two-component, polyester-acrylic aliphatic polyurethane topcoat

PRINCIPAL CHARACTERISTICS

- Outstanding weather resistance with excellent color and gloss retention
- High solids, low VOC
- Tough, flexible and abrasion resistant
- Resistant to splash of mineral and vegetable oils, paraffins, aliphatic petroleum products and mild chemicals
- Direct-to-metal or concrete for ISO 12944 C1 and C2 environments
- Meets SSPC Paint 36 Level 3

COLOR AND GLOSS LEVEL

- Standard and custom colors
- Gloss

Notes:

- Certain colors, especially red, orange, and yellow may require additional coats for adequate hiding, especially if applied over primers with a significant color contrast
- Yellow, red, and orange colors will fade faster than other colors due to the replacement of lead-based pigments with lead free pigments in these colors

BASIC DATA AT 20°C (68°F)

Data for mixed product	
Number of components	Two
Mass density	1.3 kg/l (10.8 lb/US gal)
Volume solids	73 ± 2%
VOC (Supplied)	Directive 1999/13/EC, SED: max. 207.0 g/kg UK PG 6/23(92) Appendix 3: max. 185.0 g/l (approx. 1.5 lb/US gal) EPA Method 24: 264.0 g/ltr (2.2 lb/USgal)
Temperature resistance (Continuous)	To 94°C (200°F)
Temperature resistance (Intermittent)	To 121°C (250°F)
Recommended dry film thickness	75 - 150 µm (3.0 - 6.0 mils) depending on system
Theoretical spreading rate	7.3 m ² /l for 100 µm (293 ft ² /US gal for 4.0 mils)
Dry to touch	2.5 hours
Overcoating Interval	Minimum: 8 hours Maximum: 7 days
Full cure after	4 days



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Data for mixed product

Shelf life	Base: at least 36 months when stored cool and dry Hardener: at least 24 months when stored cool and dry
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Notes:

- See ADDITIONAL DATA – Spreading rate and film thickness
- See ADDITIONAL DATA – Overcoating intervals
- See ADDITIONAL DATA – Curing time
- For compliance with regulations which require VOC less than 100 g/L, AMERSHIELD VOC can be specified interchangeably
- AMERSHIELD VOC is available only in US and Canada

RECOMMENDED SUBSTRATE CONDITIONS AND TEMPERATURES

- Coating performance is proportional to the degree of surface preparation. Refer to the application instructions for specific primers and intermediate coats for application and curing procedure. All previous coats must dry and free of contaminants. Adhere to all minimum and maximum topcoat times for specific primers and intermediate coats

Substrate conditions

- Steel; blast cleaned to ISO-Sa2½ or minimum SSPC SP-6, blasting profile 30 – 75 µm (1.2 – 3.0 mils)
- Aluminum; lightly abrasive blast with a fine abrasive
- Concrete / Masonry; see specific primer
- Previous coat (epoxy or polyurethane) must be dry and free from any contamination

Substrate temperature and application conditions

- Substrate temperature during application and curing down to -5°C (23°F) is acceptable
- Substrate temperature during application and curing should be at least 3°C (5°F) above dew point
- Relative humidity during application and curing should not exceed 85%
- Premature exposure to early condensation and rain may cause color and gloss change

SYSTEM SPECIFICATION

- Primers: Direct to substrate, AMERCOAT 68 Series, SIGMAZINC Series, AMERLOCK Series, AMERCOAT Epoxies & SIGMA Epoxies
- For products not listed above, contact your PPG representative

INSTRUCTIONS FOR USE

Mixing ratio by volume: base to hardener 80:20 (4:1)

- 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 2-3 minutes until completely dispersed
- The temperature of the mixed base and hardener should be above 10°C (50°F), otherwise extra thinner may be required to obtain application viscosity
- Thinner should be added after mixing the components
- Adding too much thinner results in reduced sag resistance



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Induction time

None

Pot life

2.5 hours at 20°C (68°F)

Note: See ADDITIONAL DATA – Pot life

Air spray**Recommended thinner**

Global standard : THINNER 60-15, US and Canada Only : THINNER 50-48 (AMERCOAT 923), THINNER 21-06 (AMERCOAT 65), THINNER 60-12 (AMERCOAT 911) and THINNER 21-25 (AMERCOAT 101) (recommended for > 90 °F (32°C))

Volume of thinner

5 - 15%, depending on required thickness and application conditions

Nozzle orifice

1.0 - 1.5 mm (approx. 0.040 - 0.060 in)

Nozzle pressure

0.3 - 0.4 MPa (approx. 3 - 4 bar; 44 - 58 p.s.i.)

Airless spray**Recommended thinner**

Global standard : THINNER 60-15, US and Canada Only : THINNER 50-48 (AMERCOAT 923), THINNER 21-06 (AMERCOAT 65), THINNER 60-12 (AMERCOAT 911) and THINNER 21-25 (AMERCOAT 101) (recommended for > 90 °F (32°C))

Volume of thinner

3 - 5%, depending on required thickness and application conditions

Nozzle orifice

Approx. 0.43 - 0.48 mm (0.017 - 0.019 in)

Nozzle pressure

20.0 MPa (approx. 200 bar; 2901 p.s.i.)



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Brush/roller

- Use a high-quality, well-loaded, solvent-resistant, low-nap (0.25 in – 0.375 in/ 64 mm – 95 mm) roller. AMERCOAT 851 flow control additive may be used to enhance flow and leveling of brush strokes and roller stipple
- Multiple coats may be required to achieve proper film build and hiding with roller application

Recommended thinner

Global standard : THINNER 60-15, US and Canada Only : THINNER 50-48 (AMERCOAT 923), THINNER 21-06 (AMERCOAT 65), THINNER 60-12 (AMERCOAT 911) and THINNER 21-25 (AMERCOAT 101) (recommended for > 90 °F (32°C))

Volume of thinner

0 – 5%

Cleaning solvent

THINNER 90-53, THINNER 90-58 (AMERCOAT 12) OR THINNER 21-06 (AMERCOAT 65)

ADDITIONAL DATA

Spreading rate and film thickness	
DFT	Theoretical spreading rate
75 µm (3.0 mils)	9.7 m ² /l (390 ft ² /US gal)
100 µm (4.0 mils)	7.3 m ² /l (293 ft ² /US gal)
125 µm (5.0 mils)	5.8 m ² /l (234 ft ² /US gal)
150 µm (6.0 mils)	4.9 m ² /l (195 ft ² /US gal)

Overcoating interval for DFT up to 150 µm (6.0 mils)						
Overcoating with...	Interval	-5°C (23°F)	0°C (32°F)	10°C (50°F)	20°C (68°F)	30°C (86°F)
itself	Minimum	N/A	N/A	48 hours	8 hours	4 hours
	Maximum	N/A	N/A	7 days	4 days	12 hours
itself + PPG 866M(AMERCOAT 866M) accelerator	Minimum	16 hours	8 hours	4 hours	2 hours	1.5 hours
	Maximum	4 days	48 hours	24 hours	12 hours	6 hours

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Curing time for DFT up to 150 μ m (6.0 mils)		
Substrate temperature	Dry to touch	Dry to handle
-5°C (23°F)	8 hours	16 hours
0°C (32°F)	4 hours	10 hours
10°C (50°F)	1.5 hours - 4 hours	6 hours - 36 hours
20°C (68°F)	45 minutes - 2.5 hours	3 hours - 10 hours
30°C (86°F)	25 minutes - 1 hour	2 hours - 5 hours

Notes:

- Range indicates drying time without and with PPG 866M(Amercoat 866M) accelerator, respectively
- -5°C and 0°C data is only with PPG 866M (AMERCOAT 866M) accelerator
- Adequate ventilation must be maintained during application and curing
- Premature exposure to early condensation and rain may cause color and gloss change

Pot life (at application viscosity)	
Mixed product temperature	Pot life
10°C (50°F)	4 hours
20°C (68°F)	2.5 hours
30°C (86°F)	1 hour

Notes:

- Times are proportionally shorter at higher temperature and longer at lower temperatures
- PPG 866M (AMERCOAT 866M) accelerator will reduce pot life to half

Product Qualifications

- Compliant with USDA Incidental Food Contact Requirements
- Nuclear Service Level 2 (partial)
- NFPA Class A Flame Spread

SAFETY PRECAUTIONS

- For paint and recommended thinners see INFORMATION SHEETS 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
- Contains a toxic polyisocyanate curing agent
- Avoid at all times inhalation of aerosol spray mist

WORLDWIDE AVAILABILITY

It is always the aim of PPG Protective and Marine Coatings to supply the same product on a worldwide basis. However, 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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REFERENCES

• CONVERSION TABLES	INFORMATION SHEET	1410
• EXPLANATION TO PRODUCT DATA SHEETS	INFORMATION SHEET	1411
• SAFETY INDICATIONS	INFORMATION SHEET	1430
• SAFETY IN CONFINED SPACES AND HEALTH SAFETY, EXPLOSION HAZARD – TOXIC HAZARD	INFORMATION SHEET	1431
• SAFE WORKING IN CONFINED SPACES	INFORMATION SHEET	1433
• DIRECTIVES FOR VENTILATION PRACTICE	INFORMATION SHEET	1434
• CLEANING OF STEEL AND REMOVAL OF RUST	INFORMATION SHEET	1490
• SPECIFICATION FOR MINERAL ABRASIVES	INFORMATION SHEET	1491
• RELATIVE HUMIDITY – SUBSTRATE TEMPERATURE – AIR TEMPERATURE	INFORMATION SHEET	1650

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