AMERCOAT® 450 H

DESCRIPTION

Gloss aliphatic polyurethane topcoat (450 Series)

PRINCIPAL CHARACTERISTICS

- High gloss topcoat with unlimited recoatability
- Outstanding weather resistance with excellent color and gloss retention
- VOC compliant
- Tough, flexible and abrasion resistant
- Cures through a wide temperature range

COLOR AND GLOSS LEVEL

- Standard Color Offering, Safety Colors, Custom Colors
- Gloss

BASIC DATA AT 20°C (68°F)

Data for mixed product	
Number of components	Two
Mass density	1.1 - 1.5 g/cm^3, (8.8 - 12.1 lb/US gal), depending on color
Volume solids	67 ± 2%
VOC (Supplied)	EPA Method 24: 2.6 lb/US gal (311.5 g/l)
Temperature resistance (Continuous)	To 200°F (93°C)
Temperature resistance (Intermittent)	To 250°F (121°C)
Recommended dry film thickness	2.0 - 3.0 mils (50 - 75 µm) depending on system
Theoretical spreading rate	537 ft^2/US gal for 2.0 mils (13.4 m^2/l for 50 µm)
Shelf life	Base: at least 36 months when stored cool and dry Hardener: at least 36 months when stored cool and dry

Notes:

- See ADDITIONAL DATA – Overcoating intervals
- See ADDITIONAL DATA – Curing time
- Color will drift at elevated temperatures
- Intermittent temperature resistance should be less than 5% of the time, and maximum 24 hours
- Product is acceptable at higher film builds and may be applied up to 5 mils (127 µm) dry film thickness using multiple wet passes. A flash off time may be required in some circumstances

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RECOMMENDED SUBSTRATE CONDITIONS AND TEMPERATURES

- Coating performance is proportional to the degree of surface preparation. Refer to the application instructions for specifc primers and intermediate coats for application and curing procedures. Ensure epoxies are free from amine blush prior to overcoating. All previous coats must dry and free of contaminants. Adhere to all minimum and maximum topcoat times for specific primers and intermediate coats. Aged epoxy coatings require abrading prior to applying the product. A test patch over unknown coatings is recommended.

Substrate temperature and application conditions

- Surface temperature during application should be between 20°F (-7°C) and 120°F (49°C)
- Surface temperature during application should be at least 5°F (3°C) above dew point
- Ambient temperature during application and curing should be between 20°F (-7°C) and 120°F (49°C)
- Relative humidity during application and curing should not exceed 85%

SYSTEM SPECIFICATION

- Primers: AMERCOAT 68HS, AMERCOAT 68MCZ, AMERCOAT 370, AMERCOAT 385, AMERCOAT 399, AMERLOCK 2/400, PITTGUARD Epoxies

INSTRUCTIONS FOR USE

Mixing ratio by volume: base to hardener 4:1

- Pre-mix base component with a pneumatic air mixer at moderate speeds to homogenize the container. Add hardener to base and agitate with a power mixer for 1–2 minutes until completely dispersed

Application

- Area should be sheltered from airborne particulates and pollutants
- Ensure good ventilation during application and curing
- Provide shelter to prevent wind from affecting spray patterns

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Air spray

- A moisture and oil trap in the main line is essential. Product is sensitive to moisture contamination
- Use standard conventional equipment

Recommended thinner

THINNER 21-06 (AMERCOAT 65) (xylene)), THINNER 21-25 (AMERCOAT 101) (recommended for > 90°F (32°C)), THINNER 50-48 (AMERCOAT 923)

Volume of thinner

0 - 20%

Nozzle orifice

Approx. 0.070 in (1.8 mm)

Airless spray

- 28:1 pump or larger
- Can be applied with plural component equipment

Recommended thinner

THINNER 50-48 (AMERCOAT 923), THINNER 21-06 (AMERCOAT 65) (xylene)), THINNER 21-25 (AMERCOAT 101) (recommended for > 90 °F (32°C)), THINNER 60-12 (AMERCOAT 911)

Nozzle orifice

0.013 – 0.015 in (approx. 0.33 – 0.38 mm)

Brush/roller

- Use a high quality natural bristle brush and/or solvent resistant, 1/4" or 3/8" nap roller. Ensure brush/roller is well loaded to avoid air entrainment. Multiple coats may be necessary to achieve adequate film-build
- AMERCOAT 851 flow control additive can be used to for enhanced flow and leveling with brush and roll application

Recommended thinner

AMERCOAT 65 (Xylene)| AMERCOAT 101 (recommended for >90°F (32°C)), AMERCOAT 923

ADDITIONAL DATA

Overcoating interval for DFT up to 2.0 mils (50 µm)					
Overcoating with...	**Interval**	**32°F (0°C)**	**50°F (10°C)**	**70°F (21°C)**	**90°F (32°C)**
itself	Minimum	24 hours	12 hours	4 hours	2 hours
	Maximum	Unlimited	Unlimited	Unlimited	Unlimited

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Overcoating interval with PPG 866M (Amercoat 866M) accelerator at 2.0 mils (51 microns)						
Overcoating with...	**Interval**	**20°F (-7°C)**	**32°F (0°C)**	**50°F (10°C)**	**70°F (21°C)**	**90°F (32°C)**
itself	Minimum Maximum	32 hours Unlimited	16 hours Unlimited	4 hours Unlimited	1.5 hours Unlimited	1 hour Unlimited

Curing time with PPG 866M (Amercoat 866M) accelerator at 2.0 mils (50 µm)		
Substrate temperature	**Dry to touch**	**Dry to handle**
20°F (-7°C)	8 hours	3 days
32°F (0°C)	4 hours	36 hours
50°F (10°C)	75 minutes	8 hours
70°F (21°C)	25 minutes	2.5 hours
90°F (32°C)	10 minutes	105 minutes

Note:

- Note that pot life will be significantly reduced when using 866M accelerator

Curing time for DFT up to 2.0 mils (50 µm)		
Substrate temperature	**Dry to touch**	**Dry to handle**
32°F (0°C)	4 hours	3 days
50°F (10°C)	90 minutes	24 hours
70°F (21°C)	45 minutes	8 hours
90°F (32°C)	20 minutes	4 hours

Full cure times at 2.0 mils (50 µm) DFT	
Substrate temperature	**Full cure**
40°F (4°C)	21 days
50°F (10°C)	14 days
70°F (21°C)	7 days
90°F (32°C)	4 days

Note:

- Full cure indicates substantial cure for most service conditions. Coating will continue to increase in mechanical and chemical resistance after these times.

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Pot life (at application viscosity)	
Mixed product temperature	**Pot life**
50°F (10°C)	6 hours
70°F (21°C)	4 hours
90°F (32°C)	2 hours

Note:

- The pot life will be reduced by approximately half when using 866M accelerator

Product Qualifications

- Compliant with USDA Incidental Food Contact Requirements
- SSPC Paint 36 Level 3 Performance

SAFETY PRECAUTIONS

- 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
- Read all label and Safety Data Sheet (SDS) information prior to use

WORLDWIDE AVAILABILITY

It is always the aim of PPG Protective & 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.

REFERENCES

- Information sheet | Explanation of product data sheets

WARRANTY

LIMITATIONS OF LIABILITY

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AVAILABILITY OF PACKAGING

Packaging

- 1-gallon and 5-gallon kits

Depending on specific country of application the following versions are available:

Product	Color
AT45HT1	Deep Tint Base *
AT45H23	Pearl Gray Base
AT45H9	Black Base
AT45HT5	High Hiding Yellow Tint Base *
AT45HT4	Red Tint Base *
AT45HT3	Neutral Tint Base *
AT45H81	Safety Yellow Base
AT45H71	Safety Red Base
AT45H3	White
AT45HT2	Light Tint Base *
AT45H-B	Hardener

Note:

- * Tintable using UCD V-Line colorants only