AMERCOAT® 450 S

DESCRIPTION

Two-component, aliphatic acrylic polyurethane finish

PRINCIPAL CHARACTERISTICS

- Outstanding weather resistance with excellent color and gloss retention
- Resistant to a broad range of corrosive and marine atmospheres
- Resists soil pick up - easily cleanable
- Hard, tough, flexible, and abrasion resistant
- Cures through a wide temperature range

COLOR AND GLOSS LEVEL

- RAL and BS colors
- High-gloss

BASIC DATA AT 20°C (68°F)

Data for mixed product	
Number of components	Two
Mass density	1.4 kg/l (11.7 lb/US gal)
Volume solids	58 ± 2%
VOC (Supplied)	Directive 1999/13/EC, SED: max. 307.0 g/kg UK PG 6/23(92) Appendix 3: max. 386.0 g/l (approx. 3.2 lb/US gal)
Temperature resistance (Continuous)	To 120°C (250°F)
Temperature resistance (Intermittent)	To 150°C (300°F)
Recommended dry film thickness	35 - 50 µm (1.4 - 2.0 mils) depending on system
Theoretical spreading rate	12.0 m^2/l for 50 µm (481 ft^2/US gal for 2.0 mils)
Dry to touch	1 hour
Overcoating Interval	Minimum: 4 hours Maximum: Unlimited
Full cure after	7 days
Shelf life	Base: at least 36 months when stored cool and dry Hardener: at least 24 months when stored cool and dry

Notes:
- See ADDITIONAL DATA – Overcoating intervals
- See ADDITIONAL DATA – Curing time

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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 0°C (32°F) and 50°C (122°F)
- Surface temperature during application should be at least 3°C (5°F) above dew point
- Ambient temperature during application and curing should be between 0°C (32°F) and 50°C (122°F)
- Relative humidity during application should not exceed 85%

INSTRUCTIONS FOR USE

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

- Add hardener to base and continue stirring until homogeneous
- 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
- The thinner should be added after mixing the two components
- Adding too much thinner results in reduced sag resistance

Induction time

None

Pot life

6 hours at 20°C (68°F)

Note: See ADDITIONAL DATA – Pot life

Air spray

Recommended thinner
THINNER 60-15 or THINNER 21-06

Volume of thinner
0 - 10%, 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.)

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Airless spray

Recommended thinner
THINNER 60-15 or THINNER 21-06

Volume of thinner
0 - 10%, depending on required thickness and application conditions

Nozzle orifice
Approx. 0.28 – 0.43 mm (0.011 – 0.017 in)

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

Brush/roller

Recommended thinner
THINNER 60-15 or THINNER 21-06

Volume of thinner
0 – 10%

Cleaning solvent
THINNER 90-53 or THINNER 90-58

ADDITIONAL DATA

Overcoating interval for DFT up to 50 µm (2.0 mils) itself						
Overcoating with...	**Interval**	**5°C (41°F)**	**10°C (50°F)**	**20°C (68°F)**	**30°C (86°F)**	**40°C (104°F)**
itself	Minimum Maximum	16 hours Unlimited	8 hours Unlimited	4 hours Unlimited	2 hours Unlimited	1 hour Unlimited

Note: This product has an unlimited overcoating interval provided the surface is free from chalking and other contaminations

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Curing time for DFT up to 50 µm (2.0 mils)			
Substrate temperature	**Dry to touch**	**Dry to handle**	**Full cure**
5°C (41°F)	4 hours	16 hours	28 days
10°C (50°F)	2 hours	8 hours	14 days
20°C (68°F)	1 hour	4 hours	7 days
30°C (86°F)	45 minutes	3 hours	5 days
40°C (104°F)	30 minutes	2 hours	3 days

Notes:
- 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)	12 hours
20°C (68°F)	6 hours
30°C (86°F)	3 hours
40°C (104°F)	1 hour

SAFETY PRECAUTIONS

- 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

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