AMERON
INTERNATIONAL
Performance Coatings & Finishes

Amercoat® 428PC

100% solids epoxy

Product Data/ Application Instructions

- High build, single coat protection
- High performance coating for new and existing equipment.
- High gloss, easily cleaned
- Good chemical and corrosion resistance
- Low odor cure available for food contact applications.
- Meets VOC requirements
- More flexible and abrasion resistant than conventional epoxy coatings

The 100% solids characteristic of Amercoat 428PC and 428PC low odor reduces the chances of pinholing and solvent entrapment at the substrate coating interface, often a major cause of coating failure with conventional epoxies and lower solids systems.

Both 428PC and 428PC with low odor cure meet the requirements of FDA 21CFR175.300 for food contact. Contact your Ameron representative for cargo compatibility and force curing recommendations.

Typical Uses

- Lining for hopper cars and barges carrying dry bulk chemicals, plastic pellets* and dry bulk edibles
- Immersion lining for selected food-grade cargos
- Exterior coating for tank and hopper cars
- Marine and offshore exposures
- Waste water treatment facilities, piping, roofs, oil tanks
- Good resistance to fumes and splash/spillage of many chemicals. Contact your Ameron representative for specific information

** Plastic pellets can be somewhat variable in composition. It is recommended that they be tested prior to use of this coating. Do not load hot plastic pellets (above 120˚F) into tanks lined with 428PC.*

Chemical Resistance Guide for Amercoat 428PC/428PC low odor

Environment	Splash and Spillage	Fumes and Weather
Acidic	F	G
Alkaline	E	E
Solvents	G	E
Salt Water	E	E
Water	E	E
F-Fair	G-Good	E-Excellent

Physical Data

Finish	Gloss	
Color	White, pearl gray, railcar blue.	
Components	2	
Curing mechanism	Chemical reaction between components	
Volume solids (calculated)	100%	
Dry film thickness per coat	6 to 12 mils (150-300 microns)	
Coats	1 or 2	
Theoretical coverage	ft^2/gal	m^2/gal
1 mil (25 microns)	1604	39.4
12 mils (300 microns)	133.7	3.3
VOC mixed	0.0 lb/gal	0.0 g/L
Temperature resistance	Dry	
	°F	°C
continuous	200	93
intermittent	250	121
Flash point (SETA)	°F	°C
428PC resin	>212	>100
428PC cure	>212	>100
428P low odor cure	>212	>100
Amercoat 12	2	-17
Amercoat 65	78	25

Formerly Amercoat 3208PC

Systems Using Amercoat 428PC or 428PC Low Odor

Maximum topcoat time limitation @ 70°F (21°C)

1st Coat	2nd Coat	Max. Topcoat Time
428PC	None	–
428PC	Amershield™	7 days
428PC	450HS	3 days
428PC	428PC	7 days

Adhere to all instructions, precautions, conditions and limitations to obtain maximum performance. For conditions outside the requirements or limitations described, contact your Ameron representative.

Surface Preparation

Coating performance is proportional to the degree of surface preparation. Abrasive blasting is usually the most effective and economical method. When this is impossible or impractical, Amercoat 428PC can be applied over mechanically cleaned surfaces.

Steel – New steel without pits or depressions, SSPC-SP6. Previously painted or uncoated pitted steel, SSPC-SP10. Remove all loose rust, dirt, moisture, grease or other contaminants from surface.

Aluminum – Remove oil, grease or soap film with neutral detergent or emulsion cleaner; treat with Alodine® 1200, Alumiprep® or equivalent or blast lightly with fine abrasive.

Galvanizing – Remove oil or soap film with detergent or emulsion cleaner, then use zinc treatment such as Galvaprep® or equivalent or blast lightly with fine abrasive.

Concrete – Acid etching (ASTM D4260) or abrasive blast (ASTM D4259) new concrete. Fill small holes in cast concrete wall or overhead surfaces with Nu-Klad 114A before applying Amercoat 428PC. Apply Amercoat 428PC within 7 days after application of Nu-Klad 114A.

Application Equipment

The following is a guide; suitable equipment from other manufacturers may be used. Changes in pressure and tip size may be needed for proper spray characteristics.

Plural component heated airless spray – Heated airless spray 1:1 plural component. Equipment and material temperatures that are generally used follows:

a. 130-165°F using in-line heaters
b. 5:1 or 10:1 Transfer Pumps
c. 12" x ⅜" 24 element Static Mixer
d. 50' of ⅜" Fluid Line
e. Graco King 45:1 at 4000 psi
f. Fluid tip with a 0.015- to 0.019-inch orifice

Power mixer – Jiffy mixer

Environmental Conditions

Temperature	°F	°C
air and surface	40 to 120	4 to 49
material	130 to 165	54 to 74

Surface temperatures must be at least 5°F (3°C) above dew point to prevent condensation.

Cure at 50°F minimum – may be exposed to temperature below 50°F during cure, but cure time will be extended.

Application Data

Applied over	Steel, concrete, aluminum
Surface preparation	Abrasive blast
Method	Plural component heated airless spray
Mixing ratio (by volume)	1 part resin to 1 part cure

Pot life (hours)

°F/°C		
90/32	70/21	50/10
¼	½	1

Environmental conditions

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air and surface	40 to 120	4 to 49
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Cure at 50°F minimum – may be exposed to temperature below 50°F during cure, but cure time will be extended.

Drying time (ASTM D1640) (hours)

	°F/°C			
	120/49	90/32	70/21	50/10
touch	1	3	4	6
through/ to stencil	4	7	9	20
Recoat time				
minimum	2	4	6	12
maximum (days)	1	3	7	14

Roughen surface if maximum recoat time is exceeded

Equipment cleaner — Amercoat 12 or thinner

Application Procedure

1. Flush equipment with Amercoat 12 or 928* cleaner before use.
2. Mix each component thoroughly, to a workable consistency.
3. Apply a wet coat in even, parallel passes. Overlap each pass 50 percent to avoid bare areas, pinholes or holidays. Cross spray at right angles if necessary.

Pot life (hours)

°F/°C		
90/32	70/21	50/10
¼	½	1

4. Material temperature must be between 130 and 165°F.
5. Ventilate with clean air during application, between coats and curing. Maintain air temperature to prevent condensation on coating surface.
6. Check film thickness using a wet film thickness gauge. If film is less than specified, apply additional material.

Drying time (ASTM D1640) (hours)

	°F/°C			
	120/49	90/32	70/21	50/10
touch	1	3	4	6
through/ to stencil	4	7	9	20
Recoat time				
minimum (hours)	2	4	6	12
maximum (days)	1	3	7	14

Roughen surface if maximum recoat time is exceeded

7. Clean equipment with Amercoat 12 or 928 immediately after use.

Repair

1. Remove all rust, loose paint, grease or other contaminants preferably by spot abrasive blast from damaged areas abraded to bare steel.
2. Remove contaminants from thin area and roughen surface if recoat time is exceeded. Apply Amercoat 428PC as soon as possible after surface is cleaned to avoid contaminants on the surface.

Safety Precautions

Read each component's material safety data sheet before use. Mixed material has hazards of each component. Safety precautions must be strictly followed during storage, handling and use.

CAUTION – Improper use and handling of this product can be hazardous to health and cause fire or explosion.

Do not use this product without first taking all appropriate safety measures to prevent property damage and injuries. These measures may include, without limitation: implementation of proper ventilation, use of proper lamps, wearing of proper protective clothing and masks, tenting and proper separation of application areas. Consult your supervisor. Proper ventilation and protective measures must be provided during application and drying to keep spray mists and vapor concentrations within safe limits and to protect against toxic hazards. Necessary safety equipment must be used and ventilation requirements carefully observed, especially in confined or enclosed spaces, such as tank interiors and buildings.

This product is to be used by those knowledgeable about proper application methods. Ameron makes no recommendation about the types of safety measures that may need to be adopted because these depend on application environment and space, of which Ameron is unaware and over which it has no control.

If you do not fully understand these warnings and instructions or if you cannot strictly comply with them, do not use the product.

Note: Consult Code of Federal Regulations Title 29, Labor, parts 1910 and 1915 concerning occupational safety and health standards and regulations, as well as any other applicable federal, state and local regulations on safe practices in coating operations.

This product is for professional use only. Not for residential use.

Warranty

Ameron warrants its products to be free from defects in material and workmanship. Ameron's sole obligation and Buyer's exclusive remedy in connection with the products shall be limited, at Ameron's option, to either replacement of products not conforming to this Warranty or credit to Buyer's account in the invoiced amount of the nonconforming products. Any claim under this Warranty must be made by Buyer to Ameron in writing within five (5) days of Buyer's discovery of the claimed defect, but in no event later than the expiration of the applicable shelf life, or one year from the delivery date, whichever is earlier. Buyer's failure to notify Ameron of such nonconformance as required herein shall bar Buyer from recovery under this Warranty.

Ameron makes no other warranties concerning the product. No other warranties, whether express, implied, or statutory, such as warranties of merchantability or fitness for a particular purpose, shall apply. In no event shall Ameron be liable for consequential or incidental damages.

Any recommendation or suggestion relating to the use of the products made by Ameron, whether in its technical literature, or in response to specific inquiry, or otherwise, is based on data believed to be reliable; however, the products and information are intended for use by Buyers having requisite skill and know-how in the industry, and therefore it is for Buyer to satisfy itself of the suitability of the products for its own particular use and it shall be deemed that Buyer has done so, at its sole discretion and risk. Variation in environment, changes in procedures of use, or extrapolation of data may cause unsatisfactory results.

Limitation of Liability

Ameron's liability on any claim of any kind, including claims based upon Ameron's negligence or strict liability, for any loss or damage arising out of, connected with, or resulting from the use of the products, shall in no case exceed the purchase price allocable to the products or part thereof which give rise to the claim. **In no event shall Ameron be liable for consequential or incidental damages.**

Shipping Data

Packaging units	10 gal	100 gal
428PC resin	5 gal in 5-gal can	50 gal in 55-gal drum
428PC cure	5 gal in 5-gal can	50 gal in 55-gal drum
428PC low odor cure	5 gal in 5-gal can	50 gal in 55-gal drum
Shipping weight (approx)	lb	kg
10-gal unit		
428PC resin	58.3	26.5
428PC cure	61.2	27.8
428PC low odor cure	60.0	27.3
100-gal unit		
428PC resin	574.0	260.9
428PC cure	602.0	273.6
428PC low odor cure	626.0	284.5

Shelf life when stored indoors at 40 to 100°F (4 to 38°C)

cure and resin	1year from shipment date

Numerical values are subject to normal manufacturing tolerances, color and testing variances. Allow for application losses and surface irregularities.

Mixed product is nonphotochemically reactive as defined by South Coast Air Quality Management District's Rule 102 or equivalent regulations.

AMERON INTERNATIONAL

Ameron U.S.A. • 13010 Morris Road, Suite 400, Alpharetta, GA 30004 • (678) 393-0653
Ameron B.V. • J. F. Kennedylaan 7, 4191 MZ Geldermalsen, The Netherlands • (31) 345-587-587