AMERON INTERNATIONAL
Performance Coatings & Finishes

PSX® 700

Engineered Siloxane coating *Patent Nos. 5,618,860 and 5,275,645*

PSX Advantage: *PSX 700 is the world's first weatherable epoxy it embodies the properties of both a high-performance epoxy and an acrylic polyurethane in one coat. This multi-purpose coating offers "breakthrough" weather resistance and corrosion control.*

Product Data

- Unique, high-gloss, self-priming coating
- Can be applied directly over inorganic zinc
- Gloss and appearance retention exceeding the best polyurethane
- Significantly lower applied costs
- Excellent resistance to acid and corrosion
- High solids, low VOC
- Resists high humidity and moisture
- Applied by brush, roller or spray—without thinning
- Outstanding resistance to chemical splash and spill

Typical Uses

PSX 700 adheres strongly to bare steel, coated steel and inorganic zinc silicate coated surfaces on new construction, repair and field maintenance coating projects. It provides effective long-term corrosion control and weatherability.

- Structural steel
  - –Bridges
  - –Marine
- Tanks
- Piping
- Industrial power plants
  - –Power
  - –Wastewater treatment
  - –Pulp and paper
  - –Chemical and petrochemical
- Concrete walls and floors
- Transportation
  - –Rail car exterior
  - –Vehicle equipment–buses, trucks
- Marine
  - –Decks
  - –Topside and superstructures on ships
  - –Boottops
  - –Barges and offshore platforms

Typical Properties

Physical

Abrasion resistance (ASTM D4060)	
1 kg load/1000 cycles	weight loss
CS-17 wheel	53 mg
Adhesion, elcometer (ASTM D4541)	2700 psi
Elongation (ASTM D522)	14%

Physical Data

Finish	Gloss	
Color	See color card	
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.		
Components	2	
Curing mechanism	Chemical reaction	
Volume solids (calculated)		
PSX 700	90% ± 3%	
Dry film thickness per coat	3 – 7 mils (75 – 175 microns)	
Coats	1 or 2	
Theoretical coverage	ft^2/gal	m^2/L
1 mil (25 microns)	1444	35.5
3 mils (75 microns)	481	11.8
5 mils (125 microns)	289	7.1
7 mils (175 microns)	206	5.1
VOC*	lb/gal	g/L
700 (EPA method 24)	1.0	120
700 mixed/thinned (calculated) (1 pt/gal)	1.7	204
Temperature resistance, dry	°F	°C
continuous	200	93
intermittent	250	121
Flash point (SETA)	°F	°C
resin	207	97
cure	205	96
Amercoat 12	2	-17
Amercoat 911	81	27
Amercoat 101	145	63

Qualifications

NFPA – Class A
USDA – Incidental food contact

Application Data

Applied over**	Prepared or primed steel, primed concrete, prepared galvanizing or aluminum
Surface preparation	
steel	SSPC-SP5, 6 or 10
concrete	ASTM D4259 or 4260
galvanizing	Galvaprep or blast lightly
aluminum	Alumiprep or blast lightly
aged coatings	Contact your Ameron representative
Primers	Nu-Klad® 105A, Dimetcote® 9 Series, Dimetcote® 21-5, Amerlock® 400, Amerlock® 2, Amercoat 68HS, 351, 370, 385, 395FD

**The mixed and applied coating cure reaction will produce VOC of mixed alcohols.*

***Appearance will vary depending on substrate and application method. Use two coats of PSX 700 over bare concrete.*

Typical Properties

Performance

Salt spray (ASTM B117)	5500 hours
Face corrosion, blistering	None
Humidity (ASTM D2247)	5500 hours
Face corrosion, blistering	None
Gloss retention (ASTM G53) QUV-B bulb	
Greater than 50% gloss retention at 26 weeks	

Chemical Resistance Guide

Environment	Splash and Spillage	Fumes and Weather
Acidic	E	E
Alkaline	E	E
Salt solutions		
acidic	E	E
neutral	E	E
alkaline	E	E
Fresh water	E	E
Solvents	E	E
Petroleum products	E	E

F-Fair G-Good E-Excellent

This table is only a guide to show typical resistances of PSX 700. For specific recommendations, contact your Ameron representative for your particular corrosion protection needs.

Systems Using PSX 700

Substrate	Coats	DFT per coat
Steel (blasted)	1 or 2	5-7
Intact coating	1	3
Dimetcote†	1	4-6
Amercoat 68HS†, 370 or 385	1	3-5
Amerlock 400, Amerlock 2	1	3-5
Concrete††	2	5-7
Amercoat 385, Amerlock 400 or Amerlock 2	1	3-5
Masonry		
Amerlock 400BF	1	3-5
Nu-Klad 965	1	3-5

† Mist-coat/full-coat application may be required. See special thinning instructions.

†† Fill voids with Nu-Klad 114A prior to applying Amercoat 385, Amerlock 400 or Amerlock 2.

Surface Preparation

Coating performance is, in general, proportional to the degree of surface preparation. Refer to specifications for the specific primer being used. Prior to coating, primed surface must be clean, dry, undamaged and free of all contaminants including salt deposits. Round off all rough welds and remove all weld spatter.

Application Data (cont'd)

Method	Airless or conventional spray, brush or roller
Mixing ratio (by volume)	4 parts resin to 1 part cure

Pot life (hours)‡

	°F/°C		
	90/32	70/21	50/10
700	1½	4	6½

‡ Thinning material with ½ pt/gal after 3 hours will extend pot life to 5 hours at 70°F.

Environmental conditions

Temperature	°F	°C
air	40 to 120	4 to 49
surface	40 to 120	4 to 49
Relative humidity	40% minimum	

Surface temperatures must be at least 5°F (3°C) above dew point to prevent condensation during application and initial dry through. Relative humidity lower than 40% will extend dry times.

Heat curing

Allow 700 to dry to touch before exposing to curing temperatures above 140°F.

Drying time (ASTM D1640) (hours) @ 40% R.H. or above

	°F/°C			
	90/32	70/21	50/10	32/0
touch	1	2	4½	9
through	3	4½	8½	24

Recoat/topcoat time (hours) @ 40% R.H. or above

	°F/°C			
	90/32	70/21	50/10	32/0
minimum	2	3	7	18
maximum‡‡	None			

Thinner	Amercoat 900 or 911
Equipment cleaner	Thinner or Amercoat 12

‡‡See surface preparation for aged coatings.

Shipping Data

Packaging unit	1-gal	5-gal
cure	0.20 gal in 1-qt can	1 gal in 1-gal can
resin	0.80 gal in 1-gal can	4 gal in 5-gal can

Shipping weight (approx)	lb	kg
1-gal unit		
cure	2.0	0.9
resin	10.3	4.7
5-gal unit		
cure	9.0	4.1
resin	50	22.7

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

resin and cure 1 year from shipment date

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

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

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 industrial 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.

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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.**

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