



PSX 700

Engineered Siloxane Coating

U.S. patent nos. 5,618,860 and 5,275,645
international patents pending

Product Data/ Application Instructions

- **Unique, high-gloss, engineered siloxane**
- **Can be applied directly over inorganic zinc**
- **Gloss and appearance retention exceeding the best polyurethane**
- **Significantly lower applied costs**
- **Excellent corrosion resistance**
- **High solids, VOC compliant**
- **Applied by brush, roller or spray, without thinnin**

Characteristics

PSX Advantage: PSX 700 is a patented engineered siloxane coating and embodies the properties of both a high performance epoxy and a polyurethane in one coat. This general purpose coating offers "breakthrough" weather resistance and corrosion control.

Typical Uses

PSX 700 adheres strongly to 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. Typical areas of use include:

- Structural steel;
- Industrial plants: chemical, petrochemical;
- Power plants: conventional, nuclear;
- Offshore industry: superstructures;
- Wastewater treatment plants;
- Pulp and paper industry;
- Marine: decks, topsides and boottops on ships and barges;
- Concrete walls and floors;
- Transportation: rail car exteriors, vehicle equipment, buses, trucks;

Physical Data

Finish	gloss
Colour	RAL and BS colours*
Components	2
Mixing ratio (by volume)	
resin	4 parts
cure	1 part
Curing mechanism	chemical reaction
Volume solids	90% (ASTM D2697, modified)**
VOC	8% by weight / 120 g/l
Dry film thickness***	75 - 175 µm per coat
Number of coats	1 or 2 ***
Calculated coverage	7.2 m ² /l at 125 µm
Allow for application losses, surface irregularities, etc.	
Specific gravity	1.36 kg/l (mixed product)
Flash points (Closed Cup).....	°C °F
resin	97 207
cure	96 205
Amercoat 911	27 81
Amercoat 900	-5 23
Amercoat 12	24 75

*colours with reduced hiding power (e.g. bright oranges and yellows) must be applied over a white substrate. Appearance will vary depending on substrate and application method. Use two coats of PSX 700 over bare concrete.

**Volume solids is measured in accordance with ASTM-D2697 modified. Slight variations ±3% may occur due to colour and testing variances.

*** When applying more than 1 coat it is recommended that the total dry film thickness does not exceed 250 microns

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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

E=Excellent

Approvals and Certificates

As topcoat on suitable primer (with and without tiecoat) complies to the following standards:

- NORSOK M-CR-501 (coating system 1)
- ISO 12944 (class C5M)
- Shell specification ES/011 Vol. 2 Rev. 7
- ACQPA, France.

Class 1 – flame spread in accordance with BS 476, part 7.

“0” class fire rating in accordance with UK Building Regulations, based on testing according to BS 476 parts 6 and 7 (fire propagation).

Approved by the US Department of Agriculture for incidental food contact with meat or poultry food.

Complies with COT 46.25 and COT 47.10 (topcoats specifications).

Nuclear Testing:

Radiation tolerance test: no defects after irradiation to an integrated dose of 5000 megarad (5 x 10⁹ rad).

Netherlands Energy Research Foundation ECN.

Excellent decontamination properties according to BS 4247 with Amercoat 68 as primer.

Application Data Summary

Like all high-performance coatings, PSX 700 must be applied as recommended to obtain the maximum protection for which this coating is formulated.

Surface Preparation

STEEL/CONCRETE - Prepare surface in accordance with application instructions for the specific primer used. Be sure primer is clean and dry when PSX 700 is applied.

EXISTING COATINGS - PSX 700 may be used over many types of properly cleaned, tightly adhering coatings. Consult your Ameron representative for specific recommendations.

Repair

Prepare damaged areas to original surface preparation specifications, feathering edges of intact coating. Thoroughly remove dust or abrasive residue before touch up.

Application Data

Substrate primed steel, concrete

Application methods conventional or airless spray, brush, roller.*

Potlife
 °C/°F 30/86 20/68 10/50
 1½ 4 6½ hours

Potlife is dependent on temperature and quantities mixed.

Environmental Conditions (during application and drying)

Air temperature: 0 - 50°C 41 - 122°F

Surface temperature: 0 - 65°C 41 - 149°F

Material temperature: 5 - 40°C 41 - 104°F

Relative humidity: 40% minimum

To prevent moisture condensation during application, surface temperature must be at least 3°C/5°F above dew point. Never apply coatings under adverse environmental conditions. Ensure good ventilation when applied in confined areas to assist evaporation and eliminations of solvents.

Drying times in hours (ASTM D1640), °C/°F	30/86	20/68	10/50	5/41
dry to touch	1	2	4½	7
dry through.....	3	4½	8½	16
dry to recoat or topcoat (minimum).....	2	3	7	12

Induction time (at 20°C/68°F) not required

Thinner Amercoat 911 or Amercoat 900

Cleaner Amercoat 12

* Brush or roller application may require additional coats.

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Application Equipment

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

AIRLESS SPRAY - Standard equipment such as Graco Bulldog Hydra-Spray with a ratio of 44:1 or larger with a 0.013 inch. (0.33 mm) fluid tip or larger.

CONVENTIONAL SPRAY - Industrial equipment such as DeVilbiss MBC or JGA gun with 78 or 765 air cap and "E" fluid tip and heavy mastic spring or Binks No. 18 or 62 with a 66 x 63 PB nozzle setup. Separate air and fluid pressure regulators and a mechanical pot agitator are recommended.

A moisture and oil trap in the main air supply line is essential.

MIXER - Use power mixer powered by an air motor or an explosion-proof electric motor.

BRUSH - Natural bristle. Maintain a wet edge.

ROLLER - Use industrial roller. Level any air bubbles with bristle brush.

Heat Curing

Allow PSX 700 to dry to touch before exposing to curing temperatures above 60°C/140°F.

Application Procedure

1. Flush equipment with thinner or Amercoat 12 before use.
2. Mix to a uniform consistency.
3. Add PSX 700 cure to PSX 700 resin. Mix thoroughly until uniformly blended.
4. If needed for workability, thin with Amercoat 911 up to 10% by volume.
5. Apply a wet coat in even, parallel passes, overlap each pass 50 percent to avoid holidays, bare areas and pinholes. If required, follow with a cross spray at right angles to first pass.
6. Brush and/or roll applications will require 2 coats to achieve a 175 µm dft. There will be some surface texture, which is typical for brush and roll applications.
7. When applying PSX 700 directly over Dimetecote, a mist coat/full coat technique may be required to minimize bubbling. Thin PSX 700 with Amercoat 900 up to 10% by volume to assist in film thickness control and to minimize bubbling. This will depend on the age of the coating, surface roughness and conditions during curing.
8. Clean all equipment with thinner or Amercoat 12 cleaner immediately after use.

Shipping Data

Packaging	
resin	16 l in a 20 l can
cure	4 l in a 5 l can
Shipping weight	
resin	approx. 25.5 kg
cure	approx. 4.4 kg
Shelf life	1 year from shipment date when stored indoors in unopened, original containers at 5 - 40°C (41-104°F).

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Caution

Keep away from heat and open flame. Keep container closed. Use with adequate ventilation. Avoid prolonged and repeated contact with skin. If used in confined areas, observe the following precautions to prevent hazards of fire or explosion or damage to health:

1. circulate adequate fresh air continuously during application and drying;
2. use fresh air masks and explosion proof equipment;
3. prohibit all flames, sparks, welding and smoking.

Do not empty into drains. Take precautionary measures against static discharges. For specific information on hazardous ingredients, required ventilation, possible consequences of contact, exposure and safety measures see Safety Data Sheet.

Safety

Since improper use and handling can be hazardous to health and cause of fire or explosion, safety precautions included with application instructions must be observed during all storage, handling, use and drying periods.

To avoid any confusion that may arise through translation into other languages, the English version of the Product Data/Application Instructions will be the governing literature and must be referred to in case of deviations with product literature in other languages.

Warranty

Ameron warrants its products to be free from defects in material and workmanship. Ameron's sole obligations and Buyer's exclusive remedy in connection with the products shall be limited, at Ameron's option, to either replacement of products not conforming this warranty or credit to Buyer's account in the invoiced amount of the non-conforming 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 non-conformance as required herein shall bar Buyer from recovery under this warranty.

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