AMERCOAT®

Protective Coatings

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 application costs**
- **Excellent corrosion resistance**
- **High solids, VOC compliant**
- **Applied by brush, roller or spray, without thinning**

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 weather ability. 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)		
PSX 700 resin	4 parts	
PSX 700 FD cure	1 part	
Curing mechanism	chemical reaction	
Volume solids	90% (ISO 3233)**	
VOC***		
EC SED 1999/13/EC	119 g/kg	(164 g/l)
EPA Method 24	84 g/l	(0.7 lbs/gal)
UK PG6/23(92) Appendix 3	120 g/l	(1.0 lbs/gal)
Dry film thickness***	75 - 175 µm per coat	
Number of coats	1 or 2 ****	
Calculated coverage	7.2 m²/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
PSX 700 resin	97	207
PSX 700 FD cure	96	205
Thinner 60-12	27	81
Thinner 21-06	27	81
Thinner 90-58	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 ISO 3233. Slight variations ±3% may occur due to colour and testing variances.

*** The mixed and applied coating cure reaction will produce VOC of mixed alcohols. VOC figures are quoted according to the EC directive 1999/13/EC which are theoretically calculated figures. The USA Environmental Protection Agency guidelines method 24 and the UK PG6/23(92) Appendix 3 are practically determined figures.

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

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 -501 (coating system 1)
ISO 12944 (class C5M)
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 mega rad (5 x 109 rad)..
Excellent decontamination properties according to BS 4247 with Amercoat 68G 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 PPG 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, non ferrous metals

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 32 – 122°F
Surface temperature: ..... 0 - 65°C 32 – 149°F
Material temperature: ..... 5 - 40°C 41 – 104°F
Relative humidity:
Maintain RH 40% for optimal curing, properties.
Below RH 40% curing will continue, but time will be extended.

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 at RH 40% or above

	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 ..... Thinner 60-12 or 21-06

Cleaner Thinner 90-58

- Brush or roller application may require additional coats in order to achieve the specified dft.

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 with a 015 to 0.021 (mm) fluid tip or larger.
CONVENTIONAL SPRAY - Industrial equipment Having a. 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°C140ºF.

Application Procedure

1. Flush equipment with thinner or cleaner 90-58 before use.
2. Mix to a uniform consistency.
3. Add PSX 700 FD cure to PSX 700 resin. Mix thoroughly until uniformly blended.
4. If needed for workability, thin with recommended thinner 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 may require more than one 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 Dimetcote, a mist coat/full coat technique may be required to minimize bubbling. Thin PSX 700 with recommended thinner 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 90-58 cleaner immediately after use

Shipping Data

Packaging	
PSX 700 resin	16 l in a 20 l can
PSX 700 FD cure	4 l in a 5 l can
Shipping weight	
PSX 700 resin	approx. 25.5 kg
PSX 700 FD 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).

Safety
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
PPG warrants its products to be free from defects in material and workmanship. PPG's sole obligations and Buyer's exclusive remedy in connection with the products shall be limited, at PPG'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 PPG 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 PPG of such non-conformance as required herein shall bar Buyer from recovery under this warranty.

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

Any recommendations or suggestion relating to the use of the products made by PPG, whether in its technical literature, or response to specific enquiry, or otherwise, is based on data believed to be reliable; however, the products and information are intended for use by Buyer's having requisite skill and know-how in the industry, and therefore it is 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, as its sole discretion and risk. Variation in environment, changes in procedures of use, or extrapolation of data may cause unsatisfactory results.

Limitation of Liability
PPG's liability on any claim of any kind, including claims based upon PPG'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 PPG be liable for consequential or incidental damages.

Due to PPG's policy of continuous product improvement, the information contained in this Product Data/Application Instructions sheet is subject to change without notice. It is the Buyer's responsibility to check that this issue is current prior to using the product. For the most up-to-date Product Data/Application Instructions always refer to the PPG Protective & Marine Coatings website at www.ppgpmc.com

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.

Condition of Sale
All our transactions are subject to our Terms and Conditions of Sale.