

# PPG PSX 700<sup>®</sup>



## Patented two-component epoxy polysiloxane

- Superior color and gloss retention
- Excellent corrosion and chemical resistance
- Outstanding abrasion resistance
- Supreme adhesive strength
- Limited accumulation of dirt and mildew
- Unlimited topcoat window
- Lower application costs
- Lower application time & downtime
- Easy maintenance: clean-dry-recoat
- Reduced waste management costs
- Isocyanate-free
- Low VOC emissions

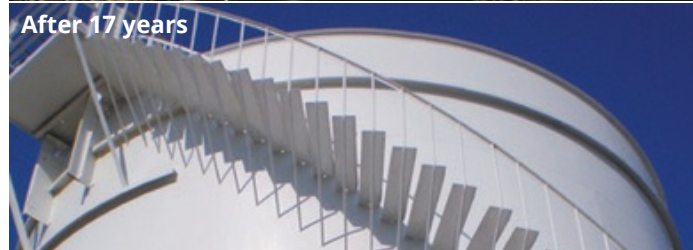


# More than two decades of proven performance

PSX 700 protective siloxane-epoxy coating maximizes performance, cost-savings and environmental responsibility within a variety of markets, from infrastructure to petrochemical and offshore to marine industries.



**Peace Bridge**  
The Peace Bridge, connecting Buffalo, New York and Canada, was coated with PSX 700 more than two decades ago. Despite brutal winter and humid summer conditions, the bridge has retained the gloss and color of the initial application.



**Calumet oil storage tanks**  
PSX 700 continues to protect the Calumet oil storage tanks located in Shreveport, Louisiana. The 9,000 square feet of carbon steel contains no mold or dirt stripes because PSX 700 reduced low surface energy to shield away dirt and chemicals. The PSX system extended the service life of the tank, which translated to less repaint frequency.



**Oshkosh water tower**  
PSX 700 was used to coat a water tower in Oshkosh, Wisconsin. Despite being situated directly next to Lake Michigan's moisture-abundant atmosphere, the tower still remains free of corrosion and mildew. It has also retained vibrant color and gloss, despite temperatures falling to minus 40°F during some winter months.

## PSX® 700 factor: 1+1=3

PSX 700 replaces traditional three-coat protective systems

Just one coat of PSX 700 can offer a longer service life than the traditional epoxy and aliphatic polyurethane system. When combined with an inorganic zinc primer (such as PPG's DIMETCOTE® Series inorganic zinc), the two-coat system can significantly outlast the best three-coat system on the market. PSX 700 offers easy maintenance, lower application time and reduced management costs, while providing superior color and gloss retention, corrosion and chemical resistance, and adhesive strength.

### What is the PSX® 700 factor: 1+1=3

PSX 700 can be directly applied over inorganic zincs. Compared with traditional three-coat systems, PSX 700 saves your costs on labor and a layer of epoxy coating.

### Service life projections

Plus, the PSX system outperforms the best three-coat system on the market.

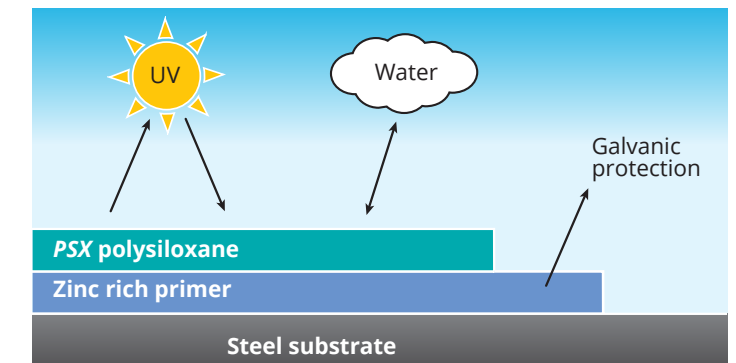
System	Number of coats	Years of service†	Conditions*
		SP-5	
PSX 700**	1	7.5-13	Moderate
		5-10	
		6-10	Severe
Epoxy/urethane	2	4-8	Moderate
			Severe

\* Moderate = General industrial, no heavy fumes or fallout, 3mils/year corrosion of steel. Severe = Heavy industrial, heavy fumes and fallout, 3-6 mils/year corrosion of steel.

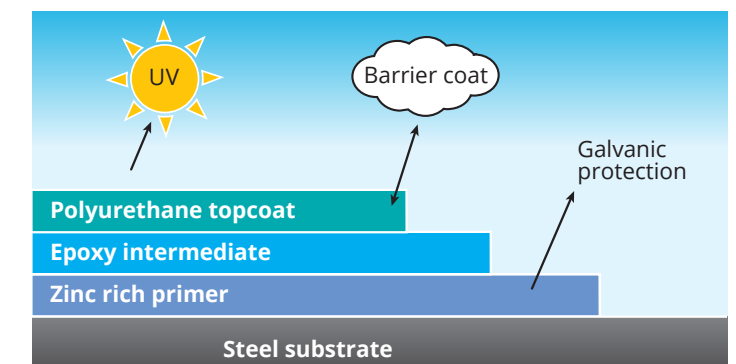
\*\* Assumes, conservatively, a 30% improvement in performance.

† Reference NACE Paper #335.

### PSX® 700 polysiloxane high performance system



### Traditional three-coat systems





Before

After

### Graffiti resistance

A water tower in Hartford, Connecticut was coated with PSX 700 when it fell subject to graffiti artists. The Metropolitan District Commission used PPG's AMERASE™ to erase the graffiti, without disturbing the tower's color and gloss.

## Unsurpassed performance

**Benefit 1: superior color and gloss retention** PSX 700 significantly outperforms the polyurethane system in color and gloss retention. A traditional polyurethane method begins to lose its color and gloss at an exponential rate after five years of application, whereas PSX 700 has been proven to retain them year after year.

**Benefit 2: excellent corrosion and chemical resistance** PSX 700 resists corrosion and chemicals far better than traditional epoxy coatings do. (Figure 1 and 2)

**Benefit 3: outstanding abrasion resistance** PSX 700's abrasion resistance is greater than or equal to that of the flexible aliphatic polyurethane and superior to that of ordinary epoxy. (Figure 3)

**Benefit 4: supreme adhesive strength** PSX 700 has an adhesive strength of 2700 psi (on steel, using ASTM D4541), more than double the strength of the 500-1000 psi offered by conventional epoxy coatings.

**Benefit 5: limited accumulation of dirt and mildew** The low surface energy of PSX 700 limits the accumulation of stains, graffiti and dirt, and enhances the ability of the surface to self-clean. For uncontrollable situations such as graffiti and defacement, the product is easy to clean and cleaning does not affect the original color and gloss. PSX 700's inorganic chemical makeup protects substrate surfaces from being micro-pitted, which prevents mildew from attaching to it. This avoids potential long-term corrosion problems.

**Benefit 6: unlimited topcoat window** PSX 700's unlimited topcoat window make it easy for you to perform field touch up and future maintenance.

## Significant cost savings

**Benefit 7: lower application costs** When compared to a conventional three-coat system, there is one less coat to apply, which significantly reduces initial application costs.

**Benefit 8: lower application time & downtime** Applying one less coat with PSX 700 saves project labor time and costs. Plus, PSX 700 saves project downtime by curing and drying to the touch in two hours at 70°F (21°C).

**Benefit 9: easy maintenance: clean-dry-recoat** For future maintenance, instead of blasting old coatings and repainting as with traditional aliphatic polyurethane, PSX simply requires that you clean, dry and recoat the area with another coat of PSX 700. The product reduces your operational shutdown time and cost for maintenance projects.

**Benefit 10: reduced waste management costs** PSX 700 features low volatile organic compound content, which reduces disposal costs.





# Performance profile

**Figure 1**  
Chemical resistance (24-hour exposure)  
(Splash/spill resistance of PSX® 700 compared to an epoxy mastic and an aliphatic polyurethane)

Chemical	PSX® 700	Epoxy mastic	Aliphatic polyurethane
Sodium hydroxide, 50%	10	10	10
Hcl, conc.	10	8	8
Sulfuric acid, 93%	6	6	0
Phenol	8	2	0
Phosphoric acid, conc.	10	2	8
Acetone	10	8	10
Ammonium hydroxide, conc.	10	10	10
Ethy alcohol	10	10	10

**Figure 2**  
Salt Fog Resistance

System	DFT	Hours	Surface prep	Blistering*	Face corrosion	Scribe*
SBS/PSX 700	7 mils	5500	SSPC-SP10	10	10	6
SBS/epoxy mastic	7 mils	3000	SSPC-SP10	10	10	6

SBS – Sand-blasted steel    RS – Rusted steel    \*10 = No change, 0 = Complete failure  
Salt fog resistance: At equivalent dry film thickness, PSX 700 has 1.8 times the corrosion resistance of epoxy mastic over blasted steel.  
1 mil = 25 microns

## Outstanding environmental characteristics

**Benefit 11: isocyanate-free**

PSX 700 contains no hazardous isocyanates, which promotes a healthier working environment and has less impact on the environment.

**Benefit 12: low voc emissions**

PSX 700 is formulated with high solids and extremely low volatile organic compounds and abides by stringent environmental requirements without compromising performance.

No other coating provides the protection of PSX 700. PSX 700 is the universal coating solution to maximize performance, cost-savings and environmental responsibility. The results are evident for customers who've used it for more than 20 years and would like to use PSX 700 again for their next project. Contact a local PPG sales representative for more information.

**Figure 3**  
Abrasion resistance

System	MG loss
PSX 700	53
Flexible aliphatic pu finish	60
Epoxy mastic	102

(1 kg load/1000 cycles, CS17 wheel)



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