

Innovative high-performance liquid polymers

Solvent based polyaspartic polyurea coating system, High Solids

#### Master Protective Coatings Inc.

### **Product Description**

MPC-290 is a solvent based, two component, VOC compliant, aliphatic polyaspartic polyurea coating system. It was specifically developed to be used a as UV stable topcoat finish where installation downtime is limited. It is recommended for areas where a high build top clear coat is desired over colored coatings or vinyl flake broadcast systems. MPC-290 provides superior abrasion, chemical, and UV resistance with a crystal clear glossy finish.

### **Benefits of using MPC-290**

- Easy workability with fast cure times
- Crystal clear, non-yellowing and good gloss retention
- o Excellent adhesion to a variety of substrates
- o Excellent chemical and abrasion resistance
- Easy to mix 1:1 Ratio by volume

## **Application Areas**

- o UV-stable top coats
- Protective residential flooring surfaces
- Industrial shop floors
- Maintenance facilities
- Marine protection for fiberglass, steel, concrete or wood surfaces
- Aircraft hangars
- o Offshore platforms, secondary containment, cooling towers, bridges
- Wastewater treatment applications

### Packaging and Recommended Thickness

MPC- 290 is offered in the following kit sizes:

- 2 gallon kit (3.78L resin (A) and 3.78L hardener (B))
- o Bulk packaging also available upon request

Product Coverage: Over primer: 200 ft²/gallon @ 8 mils Over vinyl flakes: 133-200 ft²/gallon @ 8 mils

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TECHNICAL DATA SHEET Solvent based polyaspartic polyurea coating system, High Solids Innovative high-performance liquid polymers

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### **Surface Preparation**

Remove dust, dirt, grease, oil and all other contaminants with proper cleaner/degreaser. Prepare the surface mechanically as per ICRI-CSP2 profile by diamond grinding to ensure removal of laitance, curing agents and sealers. The compressive strength of a newly poured concrete substrate must be at least 25 MPA (3635 psi) after 28 days cure and at least 1.5 MPA (218 psi) tensile strength. Be careful with condensation (within 10 degrees of the dew point).

### **Mixing Instructions**

Mix only the amount that you need at one time and pour the mixture within 5 minutes. Unused resin and hardener should be left in original containers. Mix exact amounts of both resin and hardener in separate mixing cups. Do not add more hardener than resin, as this will cause the finished coating to remain sticky.

### **Product Application**

Apply MPC-290 using a rubber squeegee and roll to obtain a uniform coating (using a fine quality 10mm roller).

Clean equipment with xylene. Once the product has hardened, it may only be removed mechanically.

### **Product Restrictions**

- Not recommended for application at temperatures below  $10^{\circ}$ C /  $50^{\circ}$ F or above  $30^{\circ}$ C /  $86^{\circ}$ F.
- Ambient humidity of the surroundings should not exceed 85% during application and during curing process.
- Substrate temperature must be  $3^{\circ}$ C (5.5°F) above measured dew point.
- Humidity content of substrate must be < 4% at time of application.
- Do not apply on porous surfaces where a transfer of humidity may occur during the application.
- Applying this product on a substrate without a moisture barrier may risk delamination due to hydrostatic pressure.
- Freshly applied product must be protected against moisture, condensation and water for at least 48 hours.

## Health and Safety

Components A and B contain toxic and corrosive ingredients. Consult the safety data sheet (S.D.S) for further information.

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## **Technical Properties**

Mix Ratio:	By volume: 1-part resin (A) to 1-part hardener (B) By weight: 100g of resin (A) to 110g of hardener (B)	
Viscosity:	Mixed: 100 - 200 cps	
Pot Life (210g):	35 - 45 minutes at room temperature	
Work Time (25 C)	10 -15 minutes	
	*Work time is significantly decreased as temperature and humidity	
	increases*	

PC-290

## **Chemical Resistance**

Products	1 day	7 day
Hydrochloric acid, 10%	Excellent	Excellent
Hydrochloric acid, 30%	Excellent	Excellent
Nitric acid, 10%	Good	Weak
Phosphoric acid, 50%	Good	Good
Sulfuric acid, 37% (battery acid)	Excellent	Good
Acetic acid, 10%	Excellent	Excellent
Citric acid, 10%	Excellent	Excellent
Oleic acid	Excellent	Excellent
Ammonium hydroxide	Excellent	Excellent
Sodium hydroxide	Excellent	Excellent
Ethylene glycol (antifreeze)	Excellent	Excellent
Isopropyl alcohol	Good	Good
Methanol	Good	Weak
Aircraft fuel	Excellent	Excellent
Gasoline	Excellent	Excellent
Mineral spirits	Excellent	Excellent
Xylene	Excellent	Excellent
Mineral oil	Excellent	Excellent
Motor oil	Excellent	Excellent
Skydrol	Excellent	Excellent

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TECHNICAL DATA SHEET

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## **Physical Properties**

Solids by Weight:	89% (+/- 1%)
Shelf Life:	1 year in unopened containers
Foot traffic @ 25° C	4-6 hours
Recommended Full Cure	3 days @ 25°C
Adhesion (concrete-primer)	550 psi (substrate ruptures), ASTM D4541
Abrasion Resistance	30 mg loss, ASTM D4060
Tensile Strength:	6 500 - 7500 psi, ASTM D638
Elongation	100%, ASTM D638
Compression Strength	9500 psi, ASTM D695
	0.2 %, ASTM D570
Water Absorption %	
Hardness, Shore D	75 - 78
VOC g/L	< 50 g/L

# **Disclaimer and Product Warranty**

MPC warrants that our products are free from manufacture defects in accordance with our quality control procedures. Any products proven defective are limited to the replacement of defective product or refund of the purchase price as determined by MPC. Please contact your local MPC sales representative for more information and warranty requirements.

The information and recommendations contained in this technical data sheet are based on reliable test results according to MPC. The data mentioned are specific to the material indicated. If used in combination with other materials, the results may be different. It is the responsibility of the user to validate the information therein and to test the product before using it. MPC assumes no legal responsibility for the results obtained in such cases. MPC assumes no legal responsibility for any direct, indirect, consequential, economic or any other damages except to replace the product or to reimbursement the purchase price, as set out in the purchase contract.

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