

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° C / 50° F or above 30° C / 86° F.
- Ambient humidity of the surroundings should not exceed 85% during application and during curing process.
- Substrate temperature must be 3° 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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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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