METALLIC FLOW

PRODUCT TECHNICAL DATA SHEET

PPC EP 100 Metallic Flow is a premium, high-solids, two-component, self-leveling epoxy coating specifically formulated to restore, protect, and enhance the appearance of concrete floors. This versatile system can be customized with a wide range of color pigments or metallic powders to achieve seamless, opaque, high gloss finishes with exceptional decorative appeal. Engineered for superior mechanical performance, excellent chemical resistance, and long-term durability, **PPC EP 100 Metallic Flow** combines outstanding functionality with refined aesthetics. Its advanced formulation also promotes enhanced penetration and adhesion when used as a primer on dense or difficult-to-prepare concrete substrates.

WHERE TO USE

- Distribution centers, manufacturing, and warehouses facilities.
- Industrial, commercial and residential uses
- Manufacturing facilities
- Warehouses
- Commercial centers
- Office buildings
- Retail stores
- Metallic systems
- Parking garages
- Food/beverage processing and preparation plants
- Public facilities including hospitals and schools
- Pharmaceutical companies

ADVANTAGES

- Environment friendly (100% solids, VOC-free and no solvent)
- Potential for LEED eligibility
- Virtually odor free
- Easy application with long pot life and working time (60 minutes)
- Can be used for metallic epoxy systems
- Superior mechanical and chemical properties suited for the toughest industrial applications
- Good elongation and excellent abrasion resistance
- High resistance to amine blush and contamination (fisheyes)
- Impermeability / low moisture sensitivity
- High density of the product prevents dirt penetration resulting in low maintenance post application
- Available in unlimited color range

THEORETICAL COVERAGE RATES

200 sq ft. per gallon at (8WTF)
160 sq ft. per gallon at (10 WTF)
133 sq ft. per gallon at (12 WTF)
54 sq ft. per gallon at (30 WTF)
40 sq ft. per gallon at (40 WTF)
50 sq ft. per gallon at (50 WTF)

PACKAGING & COLORS

Kit Sizes:
3 US gallon kit (3 x 3.78L)

Color: Clear

MIX RATIO

PPC Metallic Flow mix ratio is 2A:1B, meaning two parts A (resin) to one part B (hardener) by volume.

SHELF LIFE AND STORAGE

12 months from the date of manufacture in original unopened factory sealed containers. Keep away from extreme cold, heat, or moisture. Keep out of direct sunlight and away from fire hazards.

PHYSICAL/CHEMICAL CHARACTERISTICS

Hardness ASTM D2240	85 - 90 Shore D
Abrasion (CS17, 1000 g,100 cycles) ASTM D4060	0.10 g
Tensile Strength ASTM D638	6500 PSI
Compressive Strength ASTM	11000 – 12500
Elongation % ASTM D638	3 - 5
Viscosity Mix	650 – 750 cps
Solids Content	100%
Coefficient of friction ASTM D1894	0.5 – 0.7
Working time	15 - 20 min (22°C / 72°F and 30% Rel. Hum.)
Gel Time	45 – 61 min (22°C / 72°F and 30% Rel. Hum.)
Recoat Time	10-24 hours (22°C / 72°F and 30% Rel. Hum.)
Dry Through	13 hours (22°C / 72°F and 30% Rel. Hum.)
Foot Traffic	24 hours (22°C / 72°F and 30% Rel. Hum.)
Light Traffic	48 hours (22°C / 72°F and 30% Rel. Hum.)
Full cure	5 days (22°C / 72°F and 30% Rel. Hum.)

OVERVIEW OF INSTALLATION STEPS

Mandatory Mockup: A 100-200 sq/ft mockup should be installed as a guide for installation and quality control panel days or weeks before the actual installation of the coating system. The mockup should be approved by an authorized representative of the Property Management for Slip Resistance, aesthetics, and functionality.

Surface Preparation: Concrete should be clean, dry and free of grease, oil, paint, curing agents or any contaminants that may inhibit proper adhesion. Concrete should be cured for at least 28 days before applying the coating system. If the concrete slab has been installed within 28 days, A MVB moisture mitigation system can be considered. (Refer to The MVB technical data sheet for additional details). Proper testing procedures should be practiced with regards to soil acidity and moisture vapor transmission. Take a pH reading to ensure concrete is neutral (a reading between 5 and 9 is acceptable). Use a calcium chloride test to measure moisture vapor transmission. Readings of 3.5 lbs/1000 sq. d. during a 24-hour period or less are acceptable for applying coatings. Floors with higher results can receive an MVB moisture mitigation system.
Surface must be shot blasted or prepared with an equivalent mechanical means in line with CSP-2 or more. Ensure the surface is free of contaminants, and the pores are open to allow the product to penetrate.

If the product is applied over an existing epoxy flooring system that has been cured for a period longer than 24 hours, it should be sanded with a proper floor machine. A mechanical bound to a sanded surface is required and the pores of the existing coating must be opened for better adhesion. Vacuum dust and properly wipe the surface with alcohol prior to applying PPC Metallic Flow. Conduct adhesion tests if there is a doubt about surface preparation.

No grinding or surface profile is needed when **Premera FP1 Fusion Primer** is used

When using a broadcast decorative system, the base coat with the flakes should be scraped and cleaned after appropriate hardness is reached prior applying the topcoat. Contact us for more details on how to use the product with broadcast systems.

Mixing: Before the final mixing, pre-mix part A at low speed. Special attention must be paid to colored versions of the product since pigments may have separated from the rest of the formulation during storage. Mixing should be done until the color is uniform. If a metal pigment system is being considered, it is imperative to read the METALLIC PIGMENTS data sheet for mixing times as well as advice. Then, mix two parts of A and one part of B together at low speed in a separate container. The mixing container must be clean and free of any outside particles. Mix thoroughly for a minimum of three minutes, until a completely homogeneous mixture is obtained. Use a low-speed drill (300-450 rpm) to minimize the entrapment of air. It is recommended to activate the mixer in reverse mode after the first 90 seconds for the liquid to mix from the bottom of the mixing can to the top. Make sure to scrape sides and bottom of mixing container so no unmixed material remains.

Application: Apply only when air and slab temperature is between 16°C/ 61°F - 30°C / 86°F and the relative humidity of less than 85%. If a heated floor is installed, ensure that the system is turned off during application and for the full duration of the cure. The product has been designed to adhere to concrete surfaces.

When used as a base coat, apply with a squeegee in thin coats without back rolling to seal properly the surface, this will help reduce the creation of pin holes. For the second coat, repeat the same steps and back roll the product. It is recommended to apply the product in a multi-directional (north- south, east-west) motion to ensure proper coating thickness. If there is a significant presence of pinholes after applying the first coat due to the porosity of the concrete, sand and plug the pinholes with epoxy gel.

FOR BEST RESULTS

- Always apply at decreasing temperatures. Concrete is porous and traps air. During rising temperatures (typically in the morning), air expands and can cause gas release in the coating. It is safer to apply coatings in the late afternoon, especially for outdoor applications.
- The optimal ambient temperature should be between 18°C and 28°C (65°F and 82°F) during application.
- Always protect materials from excessive heat and cold, and pre-condition to room temperature as necessary.
- Regularly check wet film thickness with mil gauge and monitor consumption to ensure correct application rates are obtained.
- The proper application of this product is the sole responsibility of the end user. Job site visits by PPC representatives are only for the purpose of making recommendations, and do not assume any liability for supervision or quality control.
- Spray down **Premera T2 MCM** topcoat to provide superior resistance to harsh chemicals, abrasion, mold, mildew, moss, chlorides & salt spray, acid rain, UV damage, oxidation, animal & bird waste damage, gum, and graffiti.

LIMITATIONS

- Acceptable moisture emissions for concrete are 3 lbs. per 1,000 SF over a 24-hour period (<4%) based on a calcium chloride test.
- RH test results should be below 85% according to ASTM F2170. If moisture is above this level, blistering and coating delamination may occur.
- Use **PPC Moisture Vapor Barrier** epoxy moisture mitigation primer over concrete substrates that have MVT emissions that exceed the limits described above.
- Coating systems are prone to cracking if the concrete shifts or separates under the coating. Therefore, joint and crack treatment should be reviewed before coating application.
- Concrete must be minimum age of 21-28 days, depending on curing and drying conditions.
- The color may yellow over time when exposed to UV.

LIMITED WARRANTY

PPC warrants its products to be free of manufacturing defects and that they will meet PPC current published physical properties. PPC warrants that its products, when properly installed by a state licensed contractor according to PPC guide specifications and product data sheets over a sound, properly prepared substrate, will not fail for a period of 12 months. Seller's sole responsibility shall be to replace that portion of the product which proves to be defective. There are no other warranties by PPC of any nature whatsoever expressed or implied, including any warranty of merchantability or fitness for a particular purpose in connection with this product. PPC shall not be liable for damages of any sort, including remote or consequential damage resulting from any claimed breach of any warranty whether expressed or implied. PPC shall not be responsible for the use of this product in a manner to infringe on any patent held by others. In addition, no warranty or guarantee is being issued with respect to appearance, color, fading, chalking, staining, shrinkage, peeling, normal wear and tear or improper application by the applicator. Damage caused by abuse, neglect and lack of proper maintenance, acts of nature and/or physical movement of the substrate or structural defects are also excluded from the limited warranty. PPC reserves the right to conduct performance tests on any material claimed to be defective prior to any repairs by owner, general contractor, or applicator.

DISCLAIMER

All guidelines, recommendations, statements, and technical data contained herein are based on information and tests we believe to be reliable and correct, but accuracy and completeness of said tests are not guaranteed and are not to be construed as a warranty, either expressed or implied. It is the users responsibility to satisfy himself, by his own information and test, to determine suitability of the product for his own intended use, application and job situation and user assumes all risk and liability resulting from his use of the product. We do not suggest or guarantee that any hazard listed herein are the only ones which may exist. Neither seller nor manufacturer shall be liable to the buyer or any third person for any injury, loss or damage directly or indirectly resulting from use of, or inability to use, the product. Recommendations or statements, whether in writing or oral, other than those contained herein shall not be binding upon the manufacturer, unless in writing and signed by a corporate officer of the manufacturer. Technical and application information is provided for the purpose of establishing a general profile of the material and proper application procedures. Test performance results were obtained in a controlled environment and PPC makes no claim that these tests or any other tests, accurately represent all environments. For further information please contact us at the following email address: orders@premierprotectivecoatings.com or visiting www.premierprotectivecoatings.com

DISPOSAL

Any surplus material, including both Part A and Part B components, should be combined and allowed to cure. Upon curing, the product can be disposed of without any restrictive conditions. Uncured materials should be securely stored in an appropriate sealed container and disposed of in strict adherence to the applicable provincial, state, municipal, and federal regulations.

CAUTION

ALWAYS KEEP OUT OF THE REACH OF CHILDREN
KEEP FROM FREEZING CONDITIONS
INTENDED FOR INDUSTRIAL USE ONLY