

## Professional Grade Epoxy Floor Coating

Technical Bulletin # 455A

### Product Description

IMPAX PGE is a versatile, two-component, 100% solids epoxy floor coating system. It is designed for use with selected aggregates to produce a durable, high-build, monolithic surface. It will protect new concrete from chemical attack and heavy industrial use and will restore old deteriorated concrete to new. When applied over mechanically prepared substrates, it is self-priming and can be topcoated with almost any of the IMPAX systems to provide a wide range of textures, colors and finishes. IMPAX PGE is easily applied using standard notched trowels, squeegees or gauge rakes, and can provide film thicknesses up to 1/8" in a single application.

### Use & Benefits

The IMPAX PGE was developed primarily to address floors that require a higher build system because of previous wear, abuse, or chemical attack, but are not degraded to the point where they require a 1/4' mortar type resurfacer. It is economical, labor friendly and produces stunning results, often with as little as a two coat system. Packaged in 20 gallon pail kits or 212 gallon drum kits, it is designed with the professional flooring contractor in mind.

- Economical high-build epoxy
- Easy to install using conventional epoxy application tools
- Can be finished smooth or with a non-slip finish
- Self-priming as a slurry
- Convenient bulk packaging
- Good impact and thermal properties
- Versatile

### Surface Preparations

(For more detailed information, see Bulletin #400B)

**New Concrete:** All surfaces must be firm, free of any laitance or efflorescence, clean, free of any adverse moisture conditions, have an appropriate surface profile, and be well cured before coating. Newly poured concrete must age at least 30 days at temperatures over 70°F before coating. Form release agents, sealers, curing compounds, salts, hardeners and other foreign matter will interfere with adhesion and must be removed. Shotblasting, mechanical scarification, sandblasting, or suitable chemical means should be employed to prepare substrate.

**Old Concrete:** Resurfacing older, uncoated concrete floors is done in much the same manner as new concrete. Before preparation, the concrete surface must be thoroughly cleaned with a strong detergent cleaner to remove all grease, oils, etc. All loose concrete must be removed.

**Steel/Wood:** Application to steel and wood floors is essentially the same as for concrete floors; however the surface preparation and structural considerations vary. Consult our Engineering and Technical Service Department for proper evaluation and recommendations.

**Previously Painted Surfaces:** Consult ITW Resin Technologies' Technical Service Department for proper evaluation and recommendations.

### Recommended Systems

Concrete	1st coat: IMPAX PGE applied at recommended thickness 2nd coat: Recommended IMPAX finish coat(s)
Steel	1st coat: Suitable rust inhibitive epoxy primer 2nd coat: IMPAX PGE applied at recommended thickness 3rd coat: Recommended impax finish coat(s)
Wood	Consult ITW Resin Technologies representative for details
Previously Surfaces in Sound Condition	1st coat: IMPAX PGE applied at recommended thickness 2nd coat: Recommended IMPAX finish coat(s)

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## Mixing and Application Instructions

### 1/16" Thick System (smooth finish)

After proper surface preparation, make sure all material, tools, mixing equipment and manpower are ready to apply. The material is mixed at a 3 parts resin to 1 part hardener ratio by volume, so arrange for appropriately market proportioning containers. Transfer the measured material to the mixing container, being careful to completely drain proportioning containers to insure accurate mix ratios. To make a single batch mix, use 3 quarts of resin to 1 quart of hardener. Blend material thoroughly using an electric or air mixer and an appropriate metal mixing blade at approximately 250 RPM. Mix for two minutes until the product is consistent. Slowly add one gallon of clean, graded, dry silica flour (approximately 325 mesh) until thoroughly blended. Insure that all lumps are dispersed and a smooth consistency is obtained. Continue mixing material while adding one gallon of clean, graded, dry silica sand (approximately 50 mesh) until uniformly blended. This blend will yield approximately 2 gallons of mixed material. Larger batches will use the same epoxy and aggregate ratios, but appropriately larger mixing equipment should be used.

With material freshly stirred to avoid settling of the aggregates, pour a substantial portion on the floor in a bead 18" to 24" wide. Using a 3/16" V-notched squeegee or appropriate gauge rake, spread material at a rate of approximately 25 square feet per gallon (60 mils WFT/DFT). Immediately back-roll and cross-roll the material with a high-quality loop roller to remove squeegee lines and to insure a uniform film build.

After the material has set for 8 hours, it is ready to topcoat. Please consult your ITW Resin Technologies representative for system recommendations.

### 1/8" Thick System (anti-slip finish)

If a non-slip finish is required, simply broadcast a clean, dry, graded 30-50 mesh silica sand into the system described above while it is still wet. The sand can be hand or mechanically broadcast, but it must be allowed to settle into the finish without disturbing or moving the epoxy. Broadcast the area to excess (saturation) until only dry sand is showing (no wet or glossy spots). Coverage for the sand can vary between ½ and 1 pound per square foot. Once the epoxy has set, sweep and vacuum off any loose or excess sand in preparation for the finish coat of IMPAX 650 SL applied at 15-30 mils (50-100 sq.ft. per gallon). See IMPAX bulletin #433A for more details

### 1/8" Thick System (smooth finish)

To achieve an 1/8" thick system, follow the application instructions for the 1/16" smooth system described above. Broadcast clean, dry, graded 30-50 mesh silica sand into the IMPAX POE base coat while it is still wet. The sand can be hand or mechanically broadcast, but it must be allowed to settle into the finish without disturbing or moving the epoxy. Broadcast the area to excess (saturated) until only dry sand is showing (no wet or glossy spots). Coverage for the sand can vary between ½ and 1 pound per square foot. Once the epoxy has set, sweep and vacuum off any loose or excess sand. Apply a single sealer/grout coat of the IMPAX PGE at 30 mils WFT/DFT (50 sq. ft. per gallon). Spread the material using a notched rubber squeegee and back-roll with a high quality 3/8 roller cover. Make sure the film thickness is uniform, and no rough spots or puddles are evident. After the material has set for 8 hours, it is ready to topcoat. Please consult your ITW Resin Technologies representative for finish coat recommendations.

\*Note - The systems outlined in this technical bulletin are factory recommendations and are intended as guidelines. Other aggregate blends and/or epoxy to aggregate ratios can be used, but performance should be verified by the installer.

## Technical Information

COLOR:	Amber
VOLUME SOLIDS:	100%
VOC: (based on mixed components)	0 lbs/gal. (0 grams/ltr)
COVERAGE:	Approximately 50 sq. ft/batch mix @ 60 mils DFT (1.22 sq. m/L @ 2.36 mm DFT) A single batch mix consists of 1 gal. mixed epoxy, 1 gal. silica flour 325 mesh and 1 gal. silica 50 mesh.
PACKAGING:	20 gal. (75.7 L) pail kits, 212 gal. (802.5 L) drum kits
APPLICATION TEMPERATURES:	55 °F minimum to 100 °F maximum (12 °C minimum to 37 °C maximum) *Must be 5 °F above dew point
RELATIVE HUMIDITY:	85% maximum
SERVICEABILITY:	Recoat 8hrs. mm. @ 72 °F (22 °C) at 50% Relative Humidity
MIXING RATIO:	3:1
INDUCTION:	None
POT LIFE:	20 min. @ 70 °F (21 °C)
FLASH POINT:	+200 °F (+93 °C)
VISCOSITY:	1500 cps +/- 250 cps
CLEAN UP:	IMPAX IXT-59 Solvent
SERVICE TEMPERATURE:	+10 °F to 120 °F (-12 °C to 49 °C)
SHELF LIFE:	18 months

**Date** 08/2007

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