

Technical Bulletin # 451A

Product Description

A two-component, 100% solids, high performance, self leveling floor coating that is designed to cure rapidly. This system provides a high gloss, seamless, hygienic surface that is extremely hard wearing and durable. The coating can also be applied to provide an anti-slip texture.

- Zero VOC, extremely low odor
- Full gloss finish
- Can be used with high build systems or anti slip versions
- Also available in tint base formulations for a wide array of colors
- Accelerated curing substantially reduces recoat and shutdown time

Surface Preparation

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. Shot-blasting, mechanical scarification, suitable chemical means, or sandblasting should be employed to prepare substrate.

Old Concrete: Coating 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. Holes and cracks should be filled with IMPAX Crack Fillers before application of a coating. If surface deterioration presents an unacceptably rough floor, IMPAX 5020 Floor Resurfacer is recommended to patch and resurface damaged concrete.

Steel: Consult ITW Resin Technologies' Technical Service Department.
Wood: Consult ITW Resin Technologies' Technical Service Department.

Previously Painted Surfaces: If the paint is peeling or degrading in any way, it should be completely removed by sanding, shot-blasting or stripping. If the previous coating is completely intact, the surface may be cleaned with a strong detergent or solvent and scuff sanded to remove the gloss. A spot test should be made by applying a small amount of coating over old paint. The old finish may wrinkle or lift within 60 minutes. If it does not, wait 5 days and test for adhesion and compatibility. Do this by cutting an "X" into the coating, place tape firmly over the cut, then strip with a hard, fast pull. If the old finish fails, it must be removed or an appropriate barrier coat should be considered.

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

Recommended Systems

See IMPAX Product Selection Guide for more details.

Concrete/Wood:

1st coat: IMPAX 33, IMPAX 3300LV-N, or IMPAX Water Based Epoxy Primers (Clear or Gray)

2nd coat: IMPAX 650 Fast Set

Painted Surfaces in Sound Condition:

1st coat: IMPAX Water Based Epoxy Primer Clear

2nd coat: IMPAX 650 Fast Set

IMPORTANT: When recoating IMPAX 650 Fast Set, it must be done no less than 4 hours after application and no more than 24 hours at 72°F (22°C) @ 50% RH. Product must be tack free before recoating. If this "window" has passed, the surface of the cured IMPAX 650 FS must be abraded to ensure adhesion of subsequent coats.

Mixing and Application Instructions

To mix 1 gallon units: Use electric or air mixer (approximately 250 rpm) with metal mixing blade (Jiffy Model HS or equal). Premix resin for 1/2 minute then pour hardener contents into slack-filled resin can. Mix for 2 to 3 minutes moving blade around can while mixing. Avoid whipping air into material. To mix 5 gallon units use same procedure as mixing 1 gallon units except a larger blade (Jiffy Model ES or equal) is required. With material freshly mixed, pour material onto the surface in a long puddle and spread with a flat or notched squeegee (depending on millage required). An applicator wearing spiked shoes should then immediately backroll and crossroll the material with a high quality 3/8" nap soft woven roller or equivalent to remove the squeegee lines and to ensure uniform film thickness. Finish application by "laying off" in one direction. Immediately roll the coating with a spiked roller to remove any entrapped air. Do not spike roll after 20 minutes it is strongly recommended that only full units be used, that both components are thoroughly mixed, and that all material from the bottom and sides of the container is mixed. We do not recommend using partial kits. Do not scrape or drain mixing containers. Do not reduce this material.

If an anti-slip texture is desired, broadcast a clean, dry 30 to 50 mesh silica sand into the selected high build primer immediately after application. Broadcast sand until the primer is saturated and only dry sand is showing (approximately 1/2 pound per square foot). After the primer has set (6 hours minimum), sweep excess sand off the surface. Then topcoat with 15-25 mils of IMPAX 650 Fast Set. A lower topcoat thickness will produce more pronounced non-slip profile, heavier topcoats will produce smoother profiles. Spike rolling is not necessary when IMPAX 650 Fast Set is applied as an anti-slip.

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ITW Polymer Technologies
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ITW Performance Polymers Europe
ISO 9001:2008
Q 06420

PRECAUTION: Maintain good ventilation and avoid breathing vapors. Avoid prolonged and repeated skin contact. Wear safety glasses and impervious gloves.

Technical Information

COLOR:	Haze Gray, Deck Gray, Sandstone, Tile Red. Some Tint Bases (Do not use Fast Set Hardener with White or Clear Resins)
GLOSS:	Full Gloss
VOLUME SOLIDS:	100%
VOC:	Less than 0.2 lbs. per gallon (25 gr/ltr) (Based on Mixed Components)
COVERAGE:	160 sq.ft./gal. @ 10milsDFT/WFT (minimum) (15 m ² /gal. @ 254 microns DFT/WFT)
PACKAGING:	1-gal. unit containing 1 gal. slack filled resin can, 1/2 gal. slack filled can hardener (3.6 liters unit volume) 5 gal. unit containing 5 gal. slack-filled resin can, 1-1/2 gal. hardener jug (18 liters unit volume)
APPLICATION TEMPERATURES:	55°F minimum to 100°F maximum (12°C minimum to 38°C maximum) *Must be 5°F above dew point
RELATIVE HUMIDITY:	85% maximum
SERVICEABILITY:	Recoat - 4 hrs. minimum, 24 hrs. maximum @ 72°F (22°C) @ 50% RH Foot Traffic: 6 hrs. minimum @ 72°F (22°C) @ 50% RH Heavy Service 24 hrs. @ 72°F (22°C) @ 50% RH Full Cure 4 days @ 72°F (22°C) @ 50% RH *Note – Higher or lower temperatures can dramatically effect cure times, consult with Technical Service Dept. for more details.
MIXING RATIO:	Approximately 2.1 to 1 parts Resin/hardener by volume (depending on color) Consult ITW Resin Technologies' Technical Service Department for details.
INDUCTION:	None
POT LIFE:	25 minutes @ 72°F (22°C) Note–Higher or lower material temps. can dramatically effect pot life, consult with Technical Service Dept. for details.
FLASH POINT:	200°+F (93°C)
VISCOSITY:	2,700 cps (mixed colors)
CLEAN UP:	IMPAX IXT 59 Solvent
SERVICE TEMPERATURE:	10° to 120°F (-23° to 49°C)
SHELF LIFE:	18 months in closed container stored @ 50° to 90°F (10° to 32°C)

Date

07/2006

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