"High Performance Industrial Flooring"

401-ECO PumaCRETE®

½" Heavy-Duty Polyurethane Mortar Flooring

PRODUCT DESCRIPTION

401-ECO PumaCRETE is a heavy-duty floor specially formulated for U.S. Postal Service workrooms and distribution facilities. It is approved for the repair or replacement of asphalt plank flooring (ACM tiles).

This low-odor, urethane-based, screeded floor topping is designed to provide excellent resistance to forklifts, mail carts, and other physical aggression from commonly used rubber wheels.

COMPOSITION

Water-dispersed polyurethane resin system combined with graded silica aggregates, and an optional 3-part 401-TF topcoat.

APPEARANCE

Matte finish. Standard texture is light non-slip; texture may be increased or decreased for custom applications.

DURABILITY

Resistant to impact, abrasion, and heavy loading from fork trucks, pallet jacks, and carts commonly found in U.S. Postal Service facilities.

WATER & MOISTURE TOLERANCE

Handles up to 25 lbs of water vapor transmission and over 99% concrete internal RH. The flooring functions as a vapor-permeable mitigation system.

CERTIFICATIONS

401-ECO PumaCRETE is specified for replacement and repair of asphalt and ACM tiles in U.S. Postal facilities.

SUBSTRATES

Concrete, existing well bonded resinous flooring quarry tile, brick and structurally sound substrates.

SURFACE PREPARATION

Ensure surfaces are clean and dry.

Remove any loose, unsound materials using grinders such as diamond grinders and scarifiers/planers.

Shotblasting or other mechanical surface preparation is recommended for most applications.

ICRI Concrete surface profile of CSP-4-CSP6 is appropriate in most cases.

Refer to PumaCRETE's Substrate Preparation Guidelines for more information.

PRODUCT CHARACTERISTICS

Finish	Matte; light non-slip texture standard
Typical Thickness	1/4 to 3/4 inch (6–18 mm)
Application Range	35–85°F; optimum 70°F
Storage	Materials are freezable — store above 35°F
Colors	Standard: Black. 60 colors available (see the PumaCRETE color guide)

Light colors will fade with this product due to UV exposure.

COVERAGE

Theoretical, 1/4 inch	22 sq ft per unit
Theoretical, 1/2 inch	11 sq ft per unit
1/2 inch ACM tile replacement	Typically 8 sq ft per unit (estimated actual rate)

Rates decrease over rough surfaces. Always check your coverage rate during installation to ensure proper coverage.

CURE SCHEDULE @ 70°F

Foot traffic	8–12 hours
Full cure	24 hours

Catalyst is available if a faster cure time is required.

TECHNICAL DATA

Property	Method	Result
Compressive Strength	ASTM C579	9,620 psi
Tensile Strength	ASTM C307	4,900 psi
Flexural Strength	ASTM C580	3,601 psi

MIXING INSTRUCTIONS

1 unit = 1 pail resin + 1 pail hardener + 1 bag ECO aggregate

1. Pour one pail of 401 Resin into the mixing container.
2. Color/tint: mix the tint into the resin for 30 seconds — **Black:** 8 oz 122-PumaTINT powder; **all other colors:** 8 oz 120-PumaCOLOR liquid tint.
3. Add one pail of 401 Hardener. **Mix for 30 seconds** using an eggbeater/birdcage-type paddle with a heavy-duty (high-torque) mud mixer drill.
4. Slowly add one bag of ECO aggregate (52 lb) and mix until all aggregate is absorbed (approx. 1 minute). **Immediately pour out 100% of the contents**, scraping out material on the inside of the pail with a trowel as needed.

APPLICATION

One-pass urethane cement mortar. It may be spread at 1/4 to 3/4 inch with a screed board, screed box, or flat 4" × 12" trowel.

JOINT TREATMENT & SPECIFICATION DETAIL

Moving joints in the substrate must be honored in the PumaCRETE floor. Joints in new concrete and expansion joints (in general, joints wider than 1/4 inch) must be treated as moving joints: sawcut to 40% of depth and fill with backer rod and a flexible two-part joint sealant.

Please refer to the PumaCRETE Engineering/Architectural Details.

MAINTENANCE

Regular cleaning of the applied system is recommended to maintain slip-resistant properties and appearance. Use normal proprietary cleaning agents with a standard auto floor scrubber. Waxing may be employed for enhanced shine and cleanability. See the PumaCRETE Cleaning Instructions.

TECHNICAL DATA (CONTINUED)

Shear Strength	ASTM D732	5,100 psi
Abrasion Resistance (Method A)	ASTM C779	0.019 in @ 60 min
Impact Resistance	—	IR > 4
Impact Strength	ASTM D4226	>160 in-lb
Adhesion	ASTM D4541	400 psi, 100% failure in concrete
Surface Hardness (Durometer D)	ASTM D2240	85–90
Density	—	130.41 lb/ft^3
Water Absorption	MIL-PRF-3134	0.64%
Coeff. of Thermal Expansion	ASTM C531	1.5×10^{-5}
Thermal Distortion	—	Passing up to 300°F
Flammability — Critical Radiant Flux	ASTM E648	1.07 watts/sq cm
Flammability	ASTM D635	Self-extinguishing
VOC	ASTM D3960	0.083 lb/gal
Coefficient of Friction	—	> 0.60

CHEMICAL RESISTANCE

Excellent resistance to organic and inorganic acids, alkalis, fuel and hydraulic oils, and aromatic and aliphatic solvents.

TECHNICAL SUPPORT

For any application questions, please call PumaCRETE technical support at 857-226-8247.

HEALTH & SAFETY

Water-based, 0 g/L VOC product system. Please read the Safety Data Sheet (SDS) before use for detailed information on safe handling and use of this product.

CONDITIONS OF USAGE

Installation of all products purchased must be by professional installers periodically published by PumaCRETE Corp. or otherwise approved by PumaCRETE Corp. in writing. Modification to any of PumaCRETE's products voids the warranty. The installer shall maintain a written, contemporaneous record of field conditions (including, without limitation, surface and atmospheric conditions, usage rates, and lot numbers of products installed). PumaCRETE Corp. reserves the right of inspection of any installed product, installation and maintenance records, and records of field conditions, and may conduct additional testing as is reasonably required to investigate any warranty claims. Warranty shall only apply to products or materials that have been paid for in full.