"High Performance Industrial Flooring"

401-HF PumaCRETE®

Heavy-Duty Polyurethane Mortar Flooring

PRODUCT DESCRIPTION

401-HF PumaCRETE is an extra heavy-duty floor with a matte finish, available in light to aggressive texture. It is a low-odor, cement-urethane-based, screeded floor.

It can restore a very rough surface and is designed to provide excellent resistance to abrasion, chemical attack, physical aggression, and thermal shock. Designed for industrial facilities, it handles forklifts and other heavy loads on commonly used rubber wheels.

COMPOSITION

Water-dispersed polyurethane resin system combined with graded silica aggregates, and an optional 2-part 401-TF topcoat.

APPEARANCE

Matte finish. Texture may be specified as LIGHT, MEDIUM, or HEAVY.

Heavy texture requires brush cleaning or high-pressure water.

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-HF PumaCRETE is accepted by USDA, FDA, SQF, HACCP, BRC, and many other agencies.

TYPICAL APPLICATIONS

Industrial manufacturing and food/beverage processing facilities.

SUBSTRATES

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

PRODUCT CHARACTERISTICS

Finish	Matte; light, medium, or heavy texture
Typical Thickness	1/4 to 3/8 inch (6–9 mm)
Application Conditions	35–85°F; ideal working temperature 70°F
Storage	Materials are freezable — store above 35°F; optimum application temperature 70°F
Colors	Standard: Gray, Tile Red. 60 colors available (see the PumaCRETE color guide)

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

COVERAGE

1/4 inch	22 sq ft per unit
3/8 inch	15 sq ft per unit

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

CURE SCHEDULE @ 70°F

Foot traffic	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
Shear Strength	ASTM D732	5,100 psi
Abrasion Resistance (Method A)	ASTM C779	0.019 in @ 60 min

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.

MIXING INSTRUCTIONS

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

1. Pour one pail of 401 Resin into the mixing container.
2. Mix 8 oz of PumaCOLOR liquid tint into the resin for 30 seconds.
3. Add one pail of 401 Hardener. **Mix for 30 seconds** using a birdcage-type paddle.
4. Add 1 quart of portland additive per mix.
5. 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, screed box, or flat 4" × 12" trowel.

SPECIFICATION DETAIL

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. Steam cleaning may be employed if needed. See the PumaCRETE Cleaning Instructions.

TECHNICAL DATA (CONTINUED)

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/ft³
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
Resistance to Fungi Growth	ASTM G21	Rating of 1, passes
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) 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.