"High Performance Industrial Flooring"

301-SL PumaCRETE®

Medium-Duty Cementitious Urethane Flooring

TECHNICAL DATA SHEET

PRODUCT DESCRIPTION

This is a semi-flowable, 1/8-inch cementitious urethane floor with an optional silica broadcast and topcoat. This medium duty floor is available in textures varying from smooth to rough, and has excellent resistance to chemicals, thermal shock, and cool wet conditions in food/beverage processing and manufacturing facilities.

Advantages include durability against mechanical abrasion and other physical aggression, including powered lifts and typical material-handling equipment. It is specified for renovation or new construction.

Due to 1/8-inch thickness, it is designed for medium duty applications, where the existing substrate does not have major deterioration.

COMPOSITION

Water-dispersed polyurethane resin system combined with graded silica aggregates; no objectionable odor.

APPEARANCE

Standard finish: smooth, matte finish. May be applied with a quartz/non-skid texture for ramps, wet areas, or other custom applications.

DURABILITY

Resistant to wear from pallet jacks, carts, and fork truck traffic in medium duty applications.

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.

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	Smooth, matte; optional quartz/non-skid texture
Typical Thickness	1/8 inch
Volume	0.62 cu ft per unit
Application Range	35–85°F; ideal working temperature 70°F
Colors	Standard: Tile Red, Gray, Black. Additional colors available — see the PumaCRETE color chart
Shelf Life	One (1) year from date of manufacture (unopened)

TECHNICAL DATA

Property	Method	Result
Compressive Strength	ASTM C579	8,820 psi
Tensile Strength	ASTM C307	4,785 psi
Flexural Strength	ASTM C580	9,840 psi
Shear Strength	ASTM D732	4,965 psi
Abrasion Resistance (Method A)	ASTM C779	0.020 in @ 60 min
Impact Strength	ASTM D4226	>160 in-lb
Adhesion	ASTM D4541	400 psi, 100% failure in concrete
Hardness (Durometer D)	ASTM D2240	85–90
Density	ASTM C905	130 pcf
Water Absorption	MIL-PRF-3134	0.64%
Coeff. of Thermal Expansion	ASTM C531	1.5×10^{-5}
Thermal Distortion	—	Passing up to 270°F
Flammability — Critical Radiant Flux	ASTM E648	1.07 watts/sq cm
Flammability	ASTM D635	Self-extinguishing
VOC	ASTM D3960	0.083 lb/gal

MIXING INSTRUCTIONS

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

1. Pour one pail of 301 Resin into the mixing container.
2. Tint: mix the tint into the resin for 30 seconds — **Black:** 5 oz black powder tint; **all other colors:** 8 oz PumaCOLOR liquid tint.
3. Add one pail of 301 Hardener. **Mix for 30 seconds** using an eggbeater/birdcage-type paddle.
4. Slowly add one bag of SL aggregate (25 lb) and mix until all aggregate is absorbed (approx. 1 minute). **Immediately pour out 100% of the contents.**

APPLICATION

301-SL PumaCRETE includes a primer/sealer coat, an 1/8 inch cementitious urethane slurry (base coat) and an optional polymeric lock coat.

1. Primer is roller or squeegee/roll applied, in order to seal the concrete. Use 103-PumaPOXY WB or 104-PumaPOXY MB (both of these are moisture tolerant for new concrete, and may be applied over 7 day old concrete),
2. Apply the base coat using a 3/8 inch v-notch squeegee and flat steel hand for edges including areas around equipment and drains. Use a spike (pin) roller to help level the finish. Optional silica broadcast into the wet slurry.
3. Top coat is squeegee applied, and then rolled to level.

OPTIONAL LOCK COAT (TOPCOAT)

104 PumaPOXY MB	Polymeric topcoat w/ optional 46 grit aluminum oxide texture.
107 PumaPOXY	Polymeric topcoat that locks in the quartz and provides enhanced gloss, abrasion and chemical resistance, with an easy-to-clean, antimicrobial finish.
108 PumaSPARTIC	Cures as low as +20°F and can be driven on with forklifts within a few hours.
110 PumaLAC	Novolac epoxy providing enhanced chemical resistance to concentrated acids and solvents.

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.

TECHNICAL DATA (CONTINUED)

Coefficient of Friction	—	> 0.60

SPREAD RATE

1/8 inch	60 sq ft per unit

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

PACKAGING

Resin	1 pre-measured container, 301 Resin (146 oz)
Hardener	1 pre-measured container, 301 Hardener (110 oz)
Aggregate	1 bag SL aggregate (25 lb)
Optional slip resistance	Broadcast graded quartz, 40/60 or 20/40 mesh (50 lb bag)

If using a partial unit, pre-mix the resin component before proportioning; materials can then be proportioned by volume.

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 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. This writing constitutes the sole and only agreement of warranty relating to PumaCRETE products.