109-PumaTHANE

PumaCRETE Corp. 857-226-8247
177 Huntington AVE Boston , MA 02115
www.PumaCRETE.net

TECHNICAL DATA SHEET

DESCRIPTION

109-PumaTHANE is a uniquely versatile high-performance hybrid polyurethane top coat. **109-PumaTHANE** is a clear two component thermosetting, low odor, 100% solids, U-V stable urethane. It has been designed to be used in areas that require maximum abrasion, wear resistance, and excellent all around chemical resistance.

109-PumaTHANE S-Resin (HIGH GLOSS)
109-PumaTHANE Satin (Satin F-Resin)

Use the following for special climates:

RH<40% and/or temperatures <60°F ("low range")
109-PumaTHANE F-Resin

RH >70% and/or temperatures >70°F ("high range"), 109-PumaTHANE HH-Resin.

FEATURES & BENEFITS

- Excellent Abrasion Resistance
- No VOC, Low Odor
- U-V Stable
- High & Low Humidity Curable
- High & Low Gloss
- **MicrobeBLOK** Antimicrobial
- Meets USDA & FDA Standards
- OSHA and ADA Compliant
- Complies with VOC Regulations by the EPA for AIM Coatings

COLORS

See "Color Guide"

TYPICAL USES

- Hangars and Aerospace
- Manufacturing
- Labs, Clean Rooms
- Pharmaceutical
- Garages
- Hospital
- Retail

PACKAGING

- 1 gallon metal pail - Resin
- 1 gallon black pail - Hardener.

STORAGE

Materials should be stored indoors between 60°F (16°C) and 90°F (32°C).

SHELF LIFE

One (1) year from date of manufacture.

LIMITATIONS

This product is best suited for application in temperatures between 60°F and 90°F. Some light colors may require multiple coats for adequate hiding power. Certain colors appear white when scratched. Slight batch-to-batch color variations may occur. When ordering to match a previous color, inquire if the same batch number or quality control number is still available.

OPTIONAL

PumaGrip (non-skid)

PumaWear (wear resistance)

ProColor Universal Colorants (on-site pigmenting)

MicrobeBLOK (anti-microbial)

PRODUCTS GUIDE

1. **109-PumaTHANE S-Resin** offers extended working time up to 40 minutes at 70°F, 50% RH. Rising temperatures above 70°F will measurably reduce working time. When mixed **at 1 part Resin and 2 parts Hardener**, it can be applied from 3-4 mils in thickness.

2. **109-PumaTHANE F-Resin** is designed for use when the relative humidity is below 40%, and/or the ambient temperatue is below 60°F. This resin will also provide an accelerated cure for fast-track applications when the relative humidity is above 50%, and/or the ambient temperatue is above 60ºF. When mixed **at 1 part Resin and 2 parts Hardener**, it can be applied from 3-4 mils in thickness.

3. **109-PumaTHANE HH-Resin** offers optimal working times in higher temperatures and relative humidities. It's best applied at temperatures of 70°F and rising humidities above 70%, with working times up to 40 minutes. When mixed at 1 part Resin and 2 parts Hardener, it can be applied from 3-4 mils in thickness.

4. **109-PumaTHANE Satin Resin** is a low gloss system. When mixed **at 1 part Resin and 1 part Hardener**, it can be applied from 3-4 mils in thickness.

5. **109-PumaTHANE Satin F-Resin** is designed for use when the relative humidity is below 50%, and/or the ambient temperature is below 60°F. This resin will also provide an accelerated cure for fast-track applications when the relative humidity is above 50%, and/or the ambient temperatue is above 60°F. When mixed **at 1 part Resin and 1 part Hardener**, it can be applied from 3-4 mils in thickness.**109-PumaTHANE Hardener** is used with ALL the **109-PumaTHANE Resins.**

PRELIMINARY FLOOR INSPECTIONS

CHECK THE TEMPERATURE AND HUMIDITY:
109-PumaTHANE is senstive to moisture and temperature during application and curing. Floor temperature and materials should be between 65°F (18°C) and 90°F (32°C). Humidity must be less than 90%. DO NOT coat unless floor temperature is more than five degrees over the dew point.

COVERAGE RATE

A gallon of **109-PumaTHANE** will cover in the following manner, with a **standard spread rate** for a finish topcoat at 3-4 mils or 401-534 s.f. per gallon. *Application of body/grout and topcoats are variable in thickness depending upon condition of substrate and type of system.

RECOAT REQUIREMENTS

In the event of a recoat application beyond 36 hours, the existing topcoat should be lightly ground using 100-grit diamonds, vacuuming, and tack-wiping before re-application. Please call **PumaCRETE** technical support for further instructions.

MIXING INSTRUCTIONS

Application Equipment:

- Personal Protective Equipment (PPE) & clothing per SDS (Safety Data Sheet)
- Jiffy® Mixer Blade (ES Model)
- Clean Mixing Container
- Low Speed /High Torque Power Drill
- Shed-Resistant Roller Cover - 1/4" Roller Nap
- Wide-Boy Bucket for "Dip 'n' Roll"

See "Products Guide" for mix ratio. **8-16 oz. of PumaColor Colorant** is recommended **per gallon** of material. (See product label.) When field pigmenting, it should be added and mixed in homogenously to the resin prior to adding the hardener. When combining, be sure to add the resin (clear or pigmented) into the clean mixing container first. Then add the hardener scraping out the container. Always pour into the **center** of the mixing container. Mix the components thoroughly for **1-2 minutes** with a Jiffler ES style mix blade. Mix only enough material at one time that can be applied without exceeding the pot life.

- **PumaWear** additive is available for enhanced abrasion and wear resistance in the **PumaTHANE** finish coat. NOT to be used in WET areas. One quart can per 1.5 gallon mix.
- **PumaGrip** additive can be included for enhanced non-slip resistance. 3 oz. per gallon of liquid.

CLEANING GUIDELINES & MAINTENANCE

Allow floor coating to cure at least 3 days before cleaning by mechanical means (e.g., sweeper, scrubber, disc machine).

CARE

Proper maintenance will increase the service life and help maintain the appearance of your new **PumaCRETE** floor coating system. This product is considered to be a low maintenance coating system, however, certain textures and service environments require specific procedures. SEE "CLEANING GUIDELINES" for more information.

CAUTION

Avoid scratching or gouging the surface. All floor coatings will scratch if heavy or sharp objects are dragged across the surface.

Do not drop heavy or pointed items on the floor as this may cause chipping or concrete pop-outs in the case of a weak substrate cap.

Rubber tires can permanently stain the floor coating from plasticizer migration. In warehouse & industrial settings, the use of non-marking tires is highly recommended to prevent discoloration. Rubber burns from quick stops and starts can heat the coating to its softening temperature, causing permanent marking.

REPAIRS

Repair gouges or scratches or chip outs as soon as possible to prevent moisture or chemical contamination.

DISPOSAL

Dispose in accordance with federal, state and local regulations.

TECHNICAL SUPPORT

For any application questions, please call **PumaCRETE** technical support at **8**57-226-8247

SDS

PLEASE SEE SAFETY DATA SHEET (SDS) FOR SAFETY AND PRECAUTIONS. USE PRODUCT AS DIRECTED. **KEEP OUT OF THE REACH OF CHILDREN.**

PHYSICAL CHARACTERISTICS	
Percentage solids by weight	100%; 96% Satin Resin
Mix Ratio (by volume)	PumaTHANE S, F, and HH- 1 part Resin: 2 parts Hardener PumaThane Satin & Satin F - 1 part Resin: 1 part Hardener
Viscosity at 70°F	800 cps
Pot life at 70°F	60 minutes (average)
Cure Time, Tack-Free at 70°F, 50% Relative Humidity	PumaThane S-Resin: 10-12 hours foot traffic PumaThane Satin & HH-Resin: 18-24 hours foot traffic PumaThane F & Satin F-Resins: 6-8 hours foot traffic 48 Hours Full Traffic; HH-Resin; 24 Hours, S & F-Resin
Working Time at 70°F, 50% Relative Humidity	PumaThane HH-Resin: 40+ minutes PumaThane S-Resin: 40 minutes PumaThane Satin Resin: 40+ minutes PumaThane F & Satin F-Resins: 15 minutes
Recoat Window	Maximum of 36 hours (F-Resins: 24 hours)
Coverage Rate	4 mils, 401 sq ft/US gallon 3 mils, 534 sq ft/US gallon
Volatile Organic Compound	(VOC) nil

PHYSICAL PROPERTY	TEST METHOD	RESULT
Konig Hardness (3 mils)	ASTM D-4366	171
Tensile Strength	ASTM D-2370	6,500 psi
Tensile Elongation	ASTM D-2370	8%
Adhesion	ASTM D-4541	400 psi, concrete failure (applied over epoxy)
Impact Resistance	ASTM D-2794	>160 in/lb
Water Absorption	ASTM D-570	<0.1%
Flame Test (3 mils over cement board)	ASTM D-648	Class 1
Abrasion Resistance CS17 Wheel 1000 GM Load 1000 Cycles	ASTM D-4060	10-15 mg loss, 24 hours 5-10 mg loss, 72 hours
Coefficient of Friction (James Friction Tester) Wet Dry	ASTM D-2047	 0.7 (smooth) 0.8 (smooth)