



# METZ 93PU-SL

## POLYURETHANE POUR AND SPREAD



### DESCRIPTION:

METZ 93PU-SL is 100% solids pour and spread flooring system based on polyurethane and concrete technologies which offers a combination of toughness, abrasion resistance, chemical and temperature resistance unequalled by other resinbased flooring systems such as epoxies and polyesters. Metz 93PU-SL is applied to a nominal thickness of 3 mm. For areas requiring additional slip resistance aggregate broadcast plus a seal coat produce an approximately 4 mm thick floor.

### FEATURES AND BENEFITS:

- **Chemical Resistance**  
Excellent resistance to a wide range of acids, alkalis, solvents, oils and fats.
- **Impact and Abrasion Resistance**  
Resilient. Absorbs impact and does not shatter like most epoxy and polyester systems. Resists wear from heavy traffic and physical abuse.
- **Temperature Resistance**  
Withstands temperatures to 130°C . Can be steam cleaned.
- **Non Tainting, Non Hazardous**  
Does not give off objectionable odours during application and curing. Components not dangerous for transport or storage.
- **Ease of Application**  
Pour and spread formulation. Quick and easy to install.
- **Low Expansion Co-efficient**  
Its thermal co-efficient of expansion is much closer to that of concrete than those of epoxies and other resin based self levelling systems.

### RECOMMENDED:

As a flooring system for:

- Commercial Kitchens
- Food Processing Plants
- Clean Rooms
- Breweries and Soft Drink Plants
- Pharmaceutical Plants
- C.I.P. Areas
- Dairies and Milk Products Processing
- Confectionary Plants
- Chemical Plants

### NOT RECOMMENDED:

- For floors with falls greater than 1 in 70. Refer METZ 93PU-TG.
- For coves and vertical surfaces. Refer Metz 93PU-VG
- For floors subject to constant steam cleaning. Refer Metz 93PU-TG

### PHYSICAL PROPERTIES:

(Typical Values)

Density	1.80-1.90 g/cm <sup>3</sup>
Compressive Strength	70 MPa
Adhesion to concrete	concrete failure
Maximum service temperature, °C	130
Coefficient of thermal expansion, per °C	40 x 10 <sup>-6</sup>

METZ 93PU-SL is an industrial finish, not an architectural finish and therefore the cured surface may contain surface imperfections. Steam cleaning and exposure to sunlight may cause lightening of surface colour. Batch lines may be visible in the smooth finish version.

### COVERAGE:

Theoretical quantities (allow for wastage)

METZ 93PU Scratch Coat:*	0.7 kgs per sq. metre for lightly ground concrete.
METZ 93PU-SL:	5.55 kg per sq. metre at 3 mm thickness.
<b>Broadcast Aggregate:+</b>	3kg per sq. metre
<b>Sealer:+</b>	0.6 kg per sq. metre for standard 18/40 aggregate.
	Allow extra if coarser aggregate used.

\*\* Scratch coat is only essential if seeking a smooth finish. Not required if broadcast aggregate system is used.

+Only used in the broadcast aggregate version for increased slip resistance.

### APPLICATION TEMPERATURE:

For optimum results, maintain a temperature of 10 – 30°C on air and substrate and components during mixing, application and curing. Note: The material should be between 18 and 25°C to ensure proper self-levelling and adequate pot life.



CHEMICAL & CORROSION RESISTANT  
MATERIALS OF CONSTRUCTION





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### INSTRUCTIONS FOR USE

#### 1. Temperature of Working Area:

For optimum results, maintain a temperature of 10 -30°C on air and substrate and components during application and curing.

The material temperature should be between 18 and 25°C to ensure proper levelling and adequate pot life.

At temperatures below 10°C, the application becomes more difficult and curing is retarded.

At temperatures above 30°C, the working time decreases.

Application in direct sunlight and rising surface temperatures may result in blistering of the coating due to expansion of entrapped air or moisture in the substrate.

#### 2. Surface Preparation:

METZ 93PU-SL is difficult to lay on falls greater than 1 in 70.

All surfaces must be clean, dry and free from oil, grease, water and other contaminants which may inhibit bond. Concrete on grade should utilise a waterproof barrier beneath the slab.

##### (i) Scratch Coat

The use of a scratch coat is recommended when seeking a smooth finish.

##### (ii) New Concrete

New concrete should have attained a compressive strength of 20 MPa minimum and be at least 14 days old. Surface must be free from laitance, form oils and curing compounds. Grind, abrasive blast or high pressure water blast to remove laitance and provide a uniform, textured surface. Surface moisture content should be less than 5%, contact Metz for details of testing equipment.

##### (iii) Old Concrete

Concrete must be sound. Remove laitance, old paints, protective coatings and attacked or deteriorated concrete.

Chemically clean surface to remove any contaminants.

Grind, abrasive blast or high pressure water blast to remove laitance and provide a uniform, textured surface.

All structural cracks should be repaired and all slopes re-established - consult METZ for details. Smaller voids should be filled with a Metz 93PU-SL scratch coat.

All prepared surfaces must be allowed to dry prior to coating application.

All surfaces must be vacuumed to remove any loose deposits and contamination.

##### (iv) Mild Steel

Abrasive blast to AS1627.4, Class 2.5 minimum.

##### (v) Edge Detail

Wherever an exposed edge of the material occurs, (e.g. in doorways) an anchoring groove at least 9mm. deep should be cut in the substrate. Consult Metz for full details.

#### 3. Mixing:

##### Proper mixing is essential for a successful installation.

##### (i) Mixing Equipment

The correct mixing equipment is essential. The use of incorrect equipment will result in blistering of the coating. A slow speed drill with suitable paddle or a special resinous cements mixer fitted with a suitable mixing blade are recommended. Consult METZ for details.

##### (ii) Mixing Proportions

<b>METZ 93PU-SL</b>	<b>By Weight</b>	<b>By Volume</b>
93PU-SL Liquid	1	2.3 lts
93PU-SL Hardener	2	4.2 lts
93PU-SL Powder	5.88	1 x 15 kg bag

Note: Same mix is used for scratch coat

<b>METZ 93PU Sealer</b>	<b>By Weight</b>	<b>By Volume</b>
93PU-SL Liquid	1.0	4.5 lts
93PU-SL Hardener	1.8	7.4 lts
93PU Sealer Powder	0.6	3 kg

**Under no circumstances should these ratios be altered**

The powder is an active ingredient in the mixture and it's proportion cannot be adjusted to suit conditions.

##### (iii) Mixing Procedure

Remix liquid prior to use.

**Mixing times and procedures are critical and must be carefully controlled.**

Mix liquid and hardener together for 10 - 20 seconds only. Add powder gradually to avoid formation of lumps. At completion of powder addition, mix for a minimum of 3 minutes. Material must be thoroughly wetted out and uniform in consistency. To ensure no unmixed material is applied to the floor, transfer to a new container and remix for 30 seconds.

##### (iv) Pot Life at 20°C 30 minutes.

Note: increase in temperature will decrease pot life, as will leaving mixed material in a large mass. Spread out material in a thin layer as soon as possible after mixing.

##### (v) Clean Up

Mixing equipment, tools etc, can be cleaned with xylene, acetone or M.E.K. prior to initial set of cement.

Note: Splashing solvent on freshly laid material will result in discolouration.



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### INSTRUCTIONS FOR USE

#### 4. Installation:

(i) *Scratch Coat (if required)*

Apply thinly to prepared surface using squeegee, trowel or similar. After spreading across surface scrape off all excess.

Allow to set (usually overnight) before applying 93PU-SL.

(ii) *METZ 93PU-SL*

It is recommended that the area to be coated is split into bays, so thickness can be monitored.

Locate mixing equipment as close to the working area as possible.

Immediately after mixing, discharge material onto floor. Apply by screed rake to a nominal thickness of 3 mm. Systematically backroll with a spiked roller to remove any high or low spots in the material.

Ensure all rolling is completed within 10 minutes of laying at 20°C

While a wet edge remains, lay the next mix, and so on in a continuous operation to ensure good marrying of the mixes.

(iii) *Broadcast Aggregate (if required)*

Within 15 min (at 20°C) of applying Metz 93PU-SL broadcast the aggregate. Apply to refusal (approx. 3 kg per sq.m). Spread evenly, do not allow to clump. Next day remove excess then apply sealer with short nap roller. Ensure seal coat covers all aggregate.

#### 5. Setting/Curing:

Initial set, at 20°C: 24 hours

Full cure, at 20°C: 7 days

Do not allow water, chemicals or traffic on the material surface for a minimum of 24 hours. For harsh chemical or physical environments, cure a minimum of 72 hours at 20°C prior to exposure.

#### 6. Safety Precautions:

Use chemical goggles, PVC gloves and barrier cream.

Avoid contact with skin and eyes.

Avoid breathing dust.

For full safety precautions, refer to the Material Safety Data Sheets for all components.

