METZ 94-SL
POLYURETHANE SELF-LEVELLING

www.metz.net.au

DESCRIPTION:
Metz 94-SL is a 100% solids self-levelling flooring system based on polyurethane and concrete technologies which offers a combination of toughness, abrasion resistance, chemical and temperature resistance unequalled by other resin-based flooring systems such as epoxies and polyesters. Metz 94-SL is applied with a smooth finish to a nominal thickness of 3mm.

FEATURES AND BENEFITS:
- **Chemical Resistance**
  Excellent resistance to a wide range of acids, alkalis, solvents, oils and fats. Refer Metz Chemical Resistance Chart.
- **Impact and Abrasion Resistance**
  Resilient. Absorbs impact and does not shatter like most epoxy and polyester systems. Resists heavy traffic and physical abuse.
- **Temperature Resistance**
  Withstands temperatures to at least 100ºC . 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**
  Self-levelling 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 meaning that differential movement between topping and substrate is minimised.
- **Quality Accreditation**
  The management system governing the development and manufacture of this product is proudly ISO9001:2008 certified.

RECOMMENDED:
As a flooring system with smooth finish for:

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

NOT RECOMMENDED:
- For floors with falls greater than 1 in 70, or for floors subject to constant steam cleaning. Refer Metz 94-TG or 93PU-TG.
- For coves and vertical surfaces. Refer Metz 33-VG or Metz 94-VG.
- For floors requiring higher slip resistance refer Metz 94-TG or use a broadcast aggregate with sealer system. Refer Metz for details.

PHYSICAL PROPERTIES: (Typical Values)

Density	1.95-2.05 g/cm^3	Maximum service temperature, ºC	100
Compressive Strength	50 MPa	Coefficient of thermal expansion, per ºC	16 x 10^{-6}
Adhesion to concrete (ASTM C1583)	>1.5MPa (concrete failure)	Shrinkage, %	0.34

Available colours: Red, grey and green as standard.
Metz 94-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 also be visible.

COVERAGE:
Theoretical quantities (allow for wastage)

Metz Epoxy Sealer:	100 sq.m per 8kg kit (if required)
Metz 94-SL Scratch Coat:	0.7 kgs per sq. metre for lightly ground concrete (if required)
Metz 94-SL:	6 kg per sq. metre at 3 mm thickness

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INSTRUCTIONS FOR USE

1. **Temperature of Working Area:**
For optimum resuts, maintain a temperature of 10-30ºC on air and substrate and components during application and curing.
The material temperature should be between 18 and 25ºC to ensure proper levelling and adequate pot life.
At temperatures below 10ºC, the application becomes more difficult and curing is retarded.
At temperatures above 30ºC, the working time decreases.
Note: At temperatures below 15ºC, an accelerator should be used. Contact Metz for details.
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 94-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) Primer/Scratch Coat
The use of Metz Epoxy Sealer or a 94-SL scratch coat is recommended when seeking the best possible surface finish. A Scratch Coat should be used when the concrete surface is unven and/or contains a number of small holds.
(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 94-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 6mm, 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 forced action planetary mixer is recommended. A slow speed drill with suitable paddle or a special resinous cements mixer fitted with a suitable mixing blade can also be used. Consult Metz for details.
(ii) Mixing Proportions

	By Weight	By Volume
94 Liquid	1	3.65 litres
94 Hardener	1.27	3.75 litres
94-SL Powder	5.5	1 x 20kg bag

Note: Same mix is used for scratch coat

Under no circumstances should any of these mix ratios be altered
The powder is an active ingredient in the mixture and it's proportion can only be slightly adjusted to suit conditions.
(iii) Mixing Procedure
Remix liquid and hardener 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 2-3 minutes. Material must be thoroughly wetted out and uniform in consistency. If using a small drill type mixer to ensure no unmixed material is applied to the floor, transfer to a new container and remix for 30 seconds.
(iv) Pot Life at 20ºC 25 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.
4. **Installation:**
(i) Primer (if required)
Refer to Metz Epoxy Sealer data sheet. Apply evenly over surface.
Allow Sealer to dry (4-5 hrs at 20ºC) before applying 94-SL.
(ii) 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 94-SL.
(iii) Metz 94-SL
Note: As the application method for this product is critical a more detailed "Work Method Statement for laying Metz 94-SL" is available from Metz. A brief summary only follows.
Immediately after mixing, discharge material onto floor. Apply by screed rake or trowel to a nominal thickness of 3mm. Systematically backroll with a spiked roller to remove any high or low spots in the material.
Ensure all finishing is completed within 15 minutes at 20ºC.
5. **Setting/Curing:**
Initial set, at 20ºC: 24 hours
Full cure, at 20ºC: 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 20ºC prior to exposure.
6. **Storage:**
Store materials between 10 and 30ºC and protect from moisture in original unopened containers. At temperatures under these conditions, shelf life is minimum 6 months.
7. **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.

Always ensure you have the latest data sheet version, refer www.metz.net.au

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METZ SPECIALTY MATERIALS PTY LTD
A.C.N. 140 636 639
15A Stanton Road, Seven Hills, NSW 2147
Facsimile: (02) 9671 4292 Phone: (02) 9671 1311

6 University Place, Clayton North, VIC 3168
Facsimile: (03) 9561 6944 Phone: (03) 9561 6144

Unit 16, 42 Smith Street, Capalaba QLD 4157
Facsimile: (07) 3823 5552 Phone: (07) 3823 5555

Distributor