METZ 33EN MACHINERY GROUTS
EPOXY NOVOLAC MACHINERY GROUTS

DESCRIPTION:

Metz 33EN Grouts are 100% solids epoxy novolac systems that are used for grouting machinery base plates, column bases, anchors etc. They can also be used as concrete repair materials.
Metz 33EN Machinery Grout is available in two grades - pouring grade and packing grade.

FEATURES AND BENEFITS:

- Outstanding Chemical Resistance
  Resistant to a wide range of concentrated acids and alkalis, solvents, oils and fats. Resistant to spillages of concentrated sulphuric, hydrochloric and phosphoric acids. Refer Metz Chemical Resistance Chart.
- Excellent Adhesion
  Tenacious bond to concrete and metallic surfaces
- Solventless
  100% solids system.
- Cures under Adverse Conditions
  Cures at temperatures down to 0°C and high relative humidity
- High Strength
  Superior performance to cement-based grouts
- Adaptability to Conditions
  Powder content can be varied to suit site conditions
- Quality Accreditation
  The management system governing the development and manufacture of this product is proudly ISO9001:2015 certified

RECOMMENDED:

For grouting machinery base plates, column bases, anchors etc in strong chemical areas.
Metz 33EN Pouring Grout is a free-flowing, self levelling formulation containing fine fillers.
Metz 33EN Packing Grout is an aggregate filled formulation with a damp sand consistency.

NOT RECOMMENDED:

- For exposure to some strong organic acids and solvents. Refer to Metz Chemical Resistance Chart or contact Metz for alternative recommendations.

PHYSICAL PROPERTIES: (Typical Values)

	33EN Pouring Grout	33EN Packing Grout
Density g/cm^3	1.9 - 2.1	2.0 - 2.2
Compressive Strength, MPa	100	100
Adhesion to concrete (ASTM C-478)	concrete failure	concrete failure
Flexural Strength, MPa	60	35
Coefficient of thermal expansion, per °C	75 x 10^{-6}	40 x 10^{-6}

COVERAGE: Theoretical quantities (allow for wastage)

Metz 33EN Pouring Grout 2 kg per sq. metre per mm. of thickness.
Metz 33EN Packing Grout 2.10 kg per sq. metre per mm. of thickness.

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METZ®

INSTRUCTIONS FOR USE

1. Temperature of Working Area
   For optimum results, maintain a temperature of 5-35°C on air and substrate and components during application and curing.
   At temperatures below 5°C, the application becomes more difficult and curing is retarded.
   At temperatures above 35°C, the working time decreases. Application in direct sunlight and rising surface temperatures may result in blistering due to expansion of entrapped air or moisture in the substrate.
2. Surface Preparation
   All surfaces must be clean and free from oil, grease, water and other contaminants which may inhibit bond. Remove all standing water. For best results, surfaces should be dry.
3. Mixing
   i) Mixing Equipment
   Mechanical mixing is recommended.
   A special resinous cements mixer or mortar mixer is suitable. Smaller quantities can be mixed using a heavy duty drill with a suitable paddle. Consult Metz for details.
   ii) Mixing Proportions
   (a) Metz 33EN Pouring Grout

	By Weight
33EN-SL Liquid	2
33EN Hardener	1
P1 Powder	6-8

   Use the maximum powder possible to achieve required flow characteristics. This will depend on pour depth, temperature and substrate conditions.
   (b) Metz 33EN Packing Grout

	By Weight
Liquid L2	2
33EN Hardener	1
P5 Powder	16-19

   Use the maximum powder possible to achieve a fully wetted out mortar. This will depend upon packing height. If after packing any exposed surface is unsealed use Metz 33EN Sealer, Metz 4HB-EN or Metz 5EN to seal.
   iii) Mixing Procedure
   Decant materials directly into the mixing bucket on electric scale. Measuring by volume gives inconsistent results impacting product performance. The liquid to hardener ratios must not be altered under any circumstances.
   Mix liquid and hardener together slowly and thoroughly. Add powder gradually with constant stirring. Mix for 2 to 3 minutes.
   All material should be wetted out and uniform in colour and consistency.
   Material which has begun to set must be discarded. Do not add any solvent, additive or adulterant to any component, or to the mixed material.
   iv) Pot Life at 20°C 20 minutes (pouring grout)
   30 minutes (packing grout)
   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 to extend working time.
   v) Clean Up
   Mixing equipment, tools, etc., can be cleaned with Metz Cleaner, xylene, acetone or M.E.K. prior to initial set of cement.
   Note: Ensure you have the latest mixing instructions refer www.metz.net.au for most current data sheet version
4. Installation
   1) Pouring Grout - As Metz 33EN Pouring Grout is self-levelling, it requires forms to be constructed. Forms are usually wood, of the same type as used for concrete. They must be watertight and braced to withstand the pressure from the grout.
   Apply the grout by pouring. Ensure a continuous flow of material.
   2) Packing Grout - Metz 33EN Packing Grout has a damp sand consistency, and is installed by packing or ramming into place. Finish surface with steel trowel. If required a sealing coat can be applied to any exposed surfaces.
5. Setting/Curing
   Initial set, at 20°C: 6 hours
   Full cure, at 20°C: 3 days
   Do not allow water, chemicals or heavy loads on the material 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. Storage
   Store in original sealed containers in cool, dry place. Under these conditions minimum shelf life is 12 months.
7. Standard Pack Sizes

33EN-SL Liquid, L2 Liquid	20kg pail, 200kg drum
33EN Hardener	10kg pail, 200kg drum
P1, P5 Powder	20kg bags

8. Safety Precautions
   Liquid and Hardener
   Use chemical goggles, PVC gloves and barrier cream. Avoid contact with skin and eyes.
   Powder
   Avoid breathing dust. Ensure adequate ventilation.
   For full safety precautions refer to Safety Data Sheets for all components.

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

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