



DESCRIPTION

Ezi Non-Shrink Grout 100 is a shrinkage compensated, additive fortified & homogenized pre-mix cementitious grout. Designed for application as dry pack, plastic & flowable consistency. Manufactured in accordance to ASTM C1107.

USAGE

Suitable to use for :

- Machine foundation (with no heavy impact or vibration)
- Base plate
- Under column
- Underpinning of buildings
- Column in precast construction
- Pile grouting
- Concrete Anchor (ie. anchoring of post, sign, railing & other fixtures)
- Repair of concrete structures
- Patching of cavities, gaps, recesses etc.

COMPOSITION AND PERFORMANCE

Ezi Non-Shrink Grout 100 is designed using a combination of high compressive strength hydraulic binders, graded aggregates and special additive with expansive values.

Ezi Non-Shrink Grout 100 affords the following properties when fully cured:

- Easy to mix and apply
- Good flow characteristic
- Dense & Compact
- Non-Shrinking
- High Early Strength
- Rapid Strength Development
- Long term durability
- Expansion properties to compensate for any shrinkage.
- High Compressive Strength
- Impact Resistant
- Non-Corrosive
- Non-Toxic
- Iron Free (ie. avoid staining)
- Chloride Free (ie. prevent rusting of steel, anchor bolt etc.)
- Suitable for dry pack, plastic & flowable application.

APPLICATION PROCESS

(1) Preparing the substrate:

- Substrate (incl. cavities or voids) must be dry, sound & free of contaminants eg. grease, dust, laitance, oil, paint, loose particles etc.
- Metal surfaces must be free of rust, scale, grease, oil etc.
- Substrate may be roughened to optimized bonding.
- Absorbent substrate must be well saturated with clean water; but free of any surface water or free water; prior to application of Ezi Non-Shrink Grout 100.
- Formwork must be well sealed to avoid leakages.

PRODUCT INFORMATION

Name	: Ezi Non-Shrink Grout 100
Packing	: 25 kg
Shelf Life	: 12 months (In cool & dry condition)
Appearance	: Grey Powder
Aggregate	: 1.5mm ± 0.5mm
Dry Solid Content	: 100%
pH Value	: Alkaline
Toxicity Hazard	: No
Inflammability	: No

APPLICATION DATA

Mix Ratio	
Flowable	: Approx. 4.0 - 4.5 ltrs per 25kg bag
Plastic	: Approx. 3.5 - 4.0 ltrs per 25kg bag
Dry Pack (Stiff)	: Approx. 3.0 - 3.5 ltrs per 25kg bag
Yield	
Flowable	: Approx. 0.0130m ³ / 25kg bag
Plastic	: Approx. 0.0125m ³ / 25kg bag
Dry Pack (Stiff)	: Approx. 0.0120m ³ / 25kg bag
Consistency of mortar mix	: From Dry Pack, Plastic to Flowable
Thickness	: 5 - 50mm per pour
Initial Setting Time	: Approx. 30 - 60 minutes
Recommended Cure Time	: 3 days
Application Temperature	: Between +5°C - 35°C (Ambient Temperature)

TECHNICAL DATA (Tested at approx. 25 °C)

Compressive Strength	
Flowable	
1 day	: ≥ 25 N/mm ²
7 days	: ≥ 45 N/mm ²
28 days	: ≥ 60 N/mm ²
Plastic	
1 day	: ≥ 30 N/mm ²
7 days	: ≥ 50 N/mm ²
28 days	: ≥ 65 N/mm ²
Dry Pack (Stiff)	
1 day	: ≥ 35 N/mm ²
7 days	: ≥ 55 N/mm ²
28 days	: ≥ 70 N/mm ²
Temperature Resistant	: 100°C
Water Resistant	: Good
UV Resistant	: Good
Resistant to Acid	: Fair
Resistant to Alkali	: Fair
Resistant to Oil & Solvent	: Fair

Tested in reference to the requirement of ASTM C1107

(2) Preparing the mix:

- Pour 70% - 80% of the pre-measured required Clean Water into a clean container and gradually add in the full bag of Ezi Non-Shrink Grout 100 while continuously mixing it with slow speed mechanical mixer (Refer Mixing Ratio).
- Gradually add the remaining pre-measured required water and mix until the desired mortar consistency is achieved.
- Mix for approx. 3 - 4 minutes using a slow speed mechanical mixer. Manual mixing by hand must be avoided.

(3) Applying the mix:

- After mixing stir well with a spatula for a few seconds to release any entrapped air; prior to use.
- For base plate grouting (in pourable consistency), pour the grout immediately into the prepared formwork. Ensure that sufficient pressure head is maintained to ensure continuous and uninterrupted grout mortar flow. Always pour grout from one side.
- Pour with the least thickness; and avoid thickness in excess of 50mm per pour.
- For grouting Anchor Bolts; the grout mix consistency should be stiff.
- For formwork grouting of column reinforcement; the grout mix consistency should be either flowable or pourable.
- For grouting over large span area, it is necessary to organize the proper work sequence in order to maintain a continuous flow all the way through.
- Where Ezi Non-Shrink Grout 100 needs to be applied to thickness in excess of 50mm or for large span grouting areas; it has to be incorporated with graded 10mm contaminant free aggregates in order to reduce potential temperature rise that is generated during its curing. The quantity of aggregates added should not exceed 1 Part aggregates to 1 Part Ezi Non-Shrink Grout 100 by weight. Mix using traditional concrete mixer.
- After application of grout completes, remove any excess material before it hardens.
- It is recommended that the mixed grout is applied promptly after mixing preferably within 30 minutes for best results; and at ambient temperature range of between 5°C - 35°C.

(4) Curing the grout:

- The initial setting time of Ezi Non-Shrink Grout 100 is approx. 30 - 60 minutes however it is advisable that the grout is allowed to mature for at least 3 - 4 days before being subjected to normal service condition.
- Formwork must be maintained for at least 3 days before being removed. Where necessary upon removal of formwork the exposed surface may be cured with an approved curing compound.
- It is good site practice to avoid rapid or excessive loss of moisture from the exposed grout surface by covering it with a plastic sheet. This will ensure proper hydration and attainment of optimal strength.

(5) Cleaning of tools:

- Clean tools immediately with water. After it had hardened, cleaning can only be done by mechanical means.

Note:

- At temperatures below 20°C, the setting time & strength development of Ezi Non-Shrink Grout 100 may be delayed.
- Ezi Non-Shrink Grout 100 contains expansive additives, that expands during its plastic and/or hardening stage to compensate for shrinkage of the cementitious matrix. The expansive additives is only effective; if and when water loss can be avoided.
- It is the responsibility of the users to ensure that the right condition & suitability of all substrate, prior to application.

MATERIAL SAFETY INFORMATION

A non-toxic, cement-based product which is considered non-hazardous in normal usage. Avoid inhalation, ingestion, skin & eye contact. For more details please refer to Ezi Material Safety Data Sheet.

When working with this product, recommended to follow the safety precaution below:



COMPANY INFORMATION

MANUFACTURED BY : Ezi MOTARTECH SDN. BHD. (874800-D)

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