

Non-Shrink Grout

Non-Shrink Grout is a shrinkage-compensated cementitious grout designed for grouting decorative concrete cuts.

1. DESCRIPTION

Non-Shrink Grout is used to fill in decorative cut lines in concrete. This grout is specially designed to counteract the effects of shrinkage usually associated with cementitious grouts. Non-Shrink Grout displays excellent adhesion to the substrate, non-toxic, and impact resistant. It is designed to develop high early strength, enabling quick cure time and project progression. Non-Shrink Grout can be coloured with any of oxides or left as natural grey.

Applications:

- Grouting of decorative cuts

Characteristics:

- Excellent adhesion and impact resistance.
- Can be coloured with PeterFell oxides.

Limitations:

- Not for grouting cuts wider than 15 mm.
- Not for grouting of tiles, paving or other material.
- In cases of excessive slab movement, due to design or environment, any stresses or cracking will occur down construction cuts (what they are designed for). This movement can result in cracking (typically fine hairline cracks) or 'popping' of cementitious grout (even Non-shrink grout with impact resistant compounds). In these extreme cases a more flexible material should be used.

This product guide covers the preparation, application, and maintenance of Non-Shrink Grout - if there is any question as to the suitability or application of this product please contact Peter Fell Ltd prior to use. Refer to the SDS for full Health and Safety information.

2. PRECAUTIONS

- Non-Shrink Grout is CORROSIVE – please ensure all safety guidelines are read prior to use and are strictly adhered to during application
- Grouting should NOT be conducted as for ceramic tiles - this will lead to contamination of the concrete.
- DO NOT USE EXCESS WATER to clean wet grout from the concrete surface during application as this can lead to contamination of the concrete surface. Ensure ONLY clean water is used.

3. TEST AREA

If colour is being added to the grout, it is recommended that a small sample is prepared prior to application to ensure the colour is acceptable.

- Samples can be made in small container, then rolled into a 'sausage' shape and left to dry.

It is important to assess the colour only when the grout is completely dry as the colour will change as the grout dries.

4. PREPARATION

Cut lines need to be clean and free of any loose material.

- If hosing out cut lines ensure they are completely dry before applying any grout.

5. EQUIPMENT

- Bucket (for mixing).
- Applicator, either:
 - Grout Gun: Cartridge gun than can be filled repeatedly with grout, and a nozzle that can be cut to fit cut size.
 - Trowel: Small tiling or pointing trowel.
- Grout Tape: Low tack tape to protect concrete surface.
- Hose (small piece) or spoon to give concave finish.
- Safety Equipment – see section 8. Personal Protective Equipment.

6. Application

Mixing:

- The table below outlines mixing guidelines for the grout:

Cuts (lineal meters)#	Grout Weight	Water		Colour (5% dose)*
		Suggested	Maximum	
up to 15 m	5 kg	0.8 L	0.9 L	70 ml
up to 35 m	10 kg	1.6 L	1.8 L	140 ml
up to 50 m	15 kg	2.4 L	2.7 L	210 ml
up to 70 m	20 kg	3.2 L	3.6 L	280 ml
up to 85 m	25 kg (bag)	4.0 L	4.5 L	350 ml

= Measurements based on standard decorative cut 10 mm wide by 10 mm deep.
* = For colour dosed at different rates or for full colour dose rate and weight information contact Peter Fell Ltd

- It is recommended to mix small quantities at a time (i.e. 5 kg). It is strongly recommended grout is mechanically mixed (i.e. using drill attachment).
- Measure suggested water and add approximately 3/4 of this volume to the mixing container.
- If adding colour measure into water, rinsing container to ensure all colour is added.
 - Important to add colour in same way in all subsequent mixes to ensure colour consistency.
- Add grout to liquid and mix thoroughly (mechanical mixing recommended).
 - If hand mixing ensure ALL grout is thoroughly incorporated.
- Add remaining water as required to achieve desired consistency.
 - DO NOT add extra water as this will effect the colour.

Application:

There are two methods for the grouting of decorative cuts:

- (i) Grout Gun: The recommended method. The Grout Gun allows controlled application, reducing the risk of spillage and contamination of the surrounding surface.
- (ii) Trowel: A more time-consuming method that requires the surround of the cut lines to be protected using Grout Tape.

Both methods are described below. For both methods it is recommended to start in the least obvious location, working in small lengths at a time. Both methods can be finished in the same way (see ‘Finishing’ below) yielding the same results.

(i) Grout Gun Method:

- Non-Shrink Grout should be mixed as described above to a reasonably fluid consistency
- Cut Grout Gun nozzle to required width at a 45° angle.
- Remove trigger mechanism and fill gun with prepared grout mixture.
- Replace trigger mechanism and secure.
- Walk slowly backwards dispensing grout evenly into cut lines, controlling flow by pressure on the trigger.
- Ensure grout totally fills cut lines and is contacting all internal cut faces, and grout is slightly proud to top surface(i.e. marginally above level of the concrete).
- Finish grout in desired fashion (see ‘Finishing Options’ below) before it sets (within 30 minutes of mixing).

(ii) Trowel Method:

- Non-Shrink Grout should be mixed as described above to a firm consistency.
- Line both sides of ALL cut lines with Grout Tape
- Apply grout into cut lines using trowel, taking care not to spread excess onto unprotected concrete.
- Ensure grout completely fills cuts, ensuring contact with all internal cut faces, and is slightly proud at top surface (i.e. marginally above level of the concrete).
- Finish grout in desired fashion (see 'Finishing Options' below) before it sets (within 30 minutes of mixing).

Finishing Options:

Grout can be finished either flush or set down (concave) from the concrete surface, depending on personal preference. Finishing should be done only when grout has started to cure (stiffen), approximately 5 - 25 minutes from time of mixing - this will vary depending on mix consistency, application and drying conditions.

Flush:	Once grout is sufficiently stiff, run a trowel or equivalent tool parallel to the surface, cutting grout flush with surface. To close the surface, work the trowel over the grout until desired finish is achieved. Any excess grout should be allowed to harden completely before attempting to remove.	
Concave:	Once grout is sufficiently stiff, run a trowel or equivalent tool parallel to the surface, cutting grout flush with surface. Run a pointing tool along grout to achieve desired curvature. Alternatively, a piece of hose (approximately 13 mm diameter works well) can be used. Any excess grout should be allowed to harden completely before attempting to remove.	

Clean-up:

- DO NOT USE EXCESS WATER TO CLEAN GROUT as this will spread the grout and contaminate the concrete, especially if using coloured grout.
 - Use ONLY clean water when cleaning grout during application.
- Excess grout should be allowed to completely harden prior to removal from concrete surfaces.
 - Hardened grout can be removed from concrete by broom or brushing.
- A damp sponge or cloth can be used to ensure a final clean-up of the grout line. Ensure water is continuously changed and clean the cloth/sponge regularly to prevent contamination during this process.

All tools and equipment are to be cleaned immediately in water after use. The hardened grout can only be removed mechanically once it has set.

Drying Time:

While grout will harden within 3 hours of application, Non-Shrink Grout requires a minimum of 24 hours to attain full cure.

7. STORAGE AND HANDLING

<i>Pack Sizes:</i>	2, 5, and 25 kg bags.
<i>Handling:</i>	Wear suitable protective clothing – see section 8. Personal Protective Equipment.
<i>Storage:</i>	Store in cool, dry, well ventilated place in original container. Store out of reach of children. Store away from direct sunlight, oxidizing agents (e.g. nitrates), acids, anionic, detergents, and foodstuffs. Keep away from naked flames and other heat sources. Take precautions against static discharge. Ensure container is sealed when not in use, and checked regularly for leaks or spills. Do not allow vapours to collect in enclosed spaces. Non-Shrink Grout can be stored for up to 12 months.

8. PERSONAL PROTECTIVE EQUIPMENT

Eyes:	Avoid contact with eyes. Use safety glasses and/or chemical splash goggles.
Skin:	Suitable protective workwear e.g. cotton overalls buttoned at the neck and wrist is recommended. Chemical resistance apron is also recommended where large quantities are handled. Protective gloves are recommended. PVA or Viton/Butyl gloves are recommended. Replace frequently. Gloves should be checked for tears or holes before use. Open cuts abraded, or irritated skin should not be exposed to this material. Rubber safety boots.
Respiratory:	A respirator is recommended when airborne concentrations approach the Workplace Exposure Standard (WES) – see SDS for more information. Use a respirator with an organic vapour cartridge and a dust/mist filter. If using respirator, ensure that the cartridges are correct for the potential air contamination and are in good working order. Refer to SDS for full safety information.

Refer to the SDS for full Health and Safety information.

9. FIRST AID

Swallowed:	DO NOT induce vomiting. Give water or milk to drink. Obtain medical attention immediately. For emergency information contact the <i>National Poisons Centre (0800 764 766)</i> .
Eyes:	Immediately flood with copious quantities of water, holding eye open if necessary, for at least 15 minutes. Seek urgent medical attention.
Skin:	Remove contaminated clothing and shoes and wash skin thoroughly with excess water. If irritation occurs or persists, seek medical attention. Launder clothing and clean shoes before re-use.
Inhalation:	Remove patient from exposure, keep warm and at rest. If there is respiratory distress, give oxygen and seek immediate medical attention.

Refer to the SDS for full Health and Safety information.

10. PHYSICAL PROPERTIES AND IDENTIFICATION

Appearance:	powder
Odour:	cement like odour
Solubility:	n/a
pH:	12, concentration 500g/L
UN Number:	n/a
HSNO Approval:	HSR002544
Hazchem code:	n/a
DG Class:	n/a
Packing Group:	n/a

PRODUCT WARRANTY

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