



POTASSIUM SILICATE DENSIFIER FOR CONCRETE

- Pure, premium quality potassium silicate
- RTU: ready to use formulation at 15% concentration
- If used correctly with no excess product left on the surface, Forti-Kal™ will not substantially change the slip resistance of the surface.
- Forti-Kal™ is UV and chemically resistant and, once cured, will last for decades, even outdoors.
- Water-based, zero VOC
- Made at our factory in Melbourne, Australia.

Forti-Kal™ Applications

• Anti-dusting and curing treatment for green (freshly poured) concrete

To attain full strength, newly poured concrete needs to retain its water content for long enough for the maximum amount of cement to react and form the correct hydrogels to make the maximum number of bonds.

Treating the concrete with penetrating Forti-Kal™ will form CSH hydrogel inside the pores of the concrete, substantially restricting water bleed and evaporation and retaining water so the concrete can cure properly.

• Primer/moisture barrier for green concrete.

Freshly poured concrete contains a lot of water, which will evaporate and cause coatings to blister and delaminate, salts to redeposit underneath and lift tiles, damp and mould growth under carpeting, insulation matting, wood, etc. Therefore 60 days of curing is usually required before applying a coating or floor covering over the fresh slab.

Treating the concrete with penetrating Forti-Kal™ will form CSH hydrogel inside the pores of the concrete, substantially restricting water bleed and evaporation, so coatings and other floor coverings can be immediately applied.

- **NOTE:** If a 100% membrane is needed against water and water vapour, for example:
 - a) areas where water can pool and sit for extended periods, such as bathrooms;
 - b) areas where concrete will move and crack over time;
 - c) surfaces where there can be chemical spills, a suitable acrylic or epoxy class 3 membrane with sufficient elasticity, elongation and chemical resistance is recommended.
- **Concrete densifier for concrete polishing.**
Forti-Kal™ is a potassium silicate, which has a smaller molecular size than a potassium silicate so can be used to impregnate concrete in the earlier stages of grinding and later stages, after using a 400 grit polishing pad (impregnating twice is recommended for optimal results).

How to Use:

1. Read full Product Data Sheet before using Forti-Kal™.
2. Test on an inconspicuous area and allow to dry to check the result.
3. Ensure the concrete is dry inside before applying. If applying on freshly poured (green) concrete, it is recommended to give the concrete a minimum of 2 hours cure time before applying.
4. Apply when surface temperature is above 2 °C (36 °F) and below 27 °C (80 °F).
5. Apply generously and evenly with a pump sprayer, so the surface remains glistening wet for at least 2 minutes. AVOID POOLING.
6. DO NOT over apply – all of the product should penetrate without leaving any excess on the surface. If product all penetrates within 5 minutes, apply more.
7. How much Forti-Kal™ to use:
 - a) As a primer / curing agent / moisture barrier / anti-dusting treatment – it is important to get enough product into the pores. Minimum 2 coats recommended.
 - b) For optimal polished concrete, impregnate twice:
 - i. First impregnation - after grinding with 80 to 100 grit metal-bond pad. If the first coat penetrates within 5 minutes, apply a second, lighter coat (and further coats if necessary).
 - ii. Second impregnation - after 400 grit resin bond pad. If it is not penetrating well, dilute 2 parts Forti-Kal™ to 1 part water.
 - iii. Allow treated surface to cure for minimum 4 hours before grinding. Forti-Kal™ cures faster than sodium, potassium, lithium densifiers, but longer cure = harder = more shine.
 - iv. For the best results, try Forti-Col™ new technology colloidal silica densifier.
8. Application rate PER COAT: approximately 6 to 15 m²/L (240 to 600 square ft/gal) depending on concrete density and porosity.
9. Recommended dilution: Forti-Kal™ is ready-to-use out of the container.

For freshly poured or dense concrete, Forti-Kal™ can be diluted a little more: 2 parts Forti-Kal™ to 1 part water (no more than 1 part Forti-Kal™ to 1 part water).

Precautions

Causes skin irritation. Causes serious eye irritation
Do not get in eyes, on skin or on clothing.
Wear protective gloves/protective clothing/eye protection/face protection.

Accidents

Spillage: Take up mechanically or with absorbent material such as sand, earth or vermiculite.

First Aid

Eye Cautiously rinse with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Skin contact Remove/take off all contaminated clothing immediately. Rinse skin with water/shower.
(or hair)

For advice, contact a Poisons Information Centre on 13 11 26 (Australia Wide) or a doctor (at once).
If swallowed, do not induce vomiting.

Poisons Information Centres:

Australia - 13 11 26 (Australia Wide)

USA - American Association of Poison Control Centres 1-800-222-1222

Canadian Poison Centres – Ontario (24/7): Telephone: 416-813-5900; Toll free: 1-800-268-9017

UK - England and Wales: NHS 111 - dial 111; **Scotland:** NHS 24 - dial 111; **Republic of Ireland:** 01 809 2166

Technical Data

- Specific Gravity: ~1.14
- Colour: Clear, colourless to light straw-yellow liquid
- Weight: 5 L (1.3 gal) = 6 kg (13.2 lb), 15L (4 gal) = 17.25 kg (33.1 lb), 20 L (5.3 gal) = 23 kg (51 lb), 200 L (53 gal) = 232 kg (512 lb)
- VOCs: Zero

Transport

TDG UN Status: This material is not regulated as a hazardous material for transportation.

Pack Sizes

5 L (1.3 gal); 15 L (4 gal); 20 L (5.3 gal)

Shelf Life and Storage Guidelines

Best within 2 years of manufacture date. Store away from direct sunlight.
Keep container tightly sealed, in a well-ventilated place, at 36 – 90 °F or 2 – 32 °C

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