

## DATA SHEET

### U-SCREED™ POLYURETHANE INDUSTRIAL FLOORING TERRAZZO GRIND AND POLISH.

### KWIKRETE™ DECORATIVE STONES



THALES CERTIFIED

#### GENERAL DESCRIPTION:

U-SCREED™ POLYURETHANE INDUSTRIAL FLOORING TERRAZZO is a heavy-duty based floor designed to provide excellent resistance to abrasion, chemical attack, and other physical aggression. It is suitable for wet and dry environments in the beverage, food, and mechanical industries, applicable to areas with high performance.

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#### DECORATIVE STONES:

At Kwikrete™, we offer an extensive range of decorative stone options to suit a variety of aesthetic preferences and project requirements.

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#### COMPOSITION:

Water dispersed polyurethane resin system combined with graded silica aggregates.

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Registration Number: 2012/175489/07



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## APPEARANCE:

A level mottled aggregate surface with chosen background colour providing a light slip resistant texture. The floor will result in uniform finish.

## DURABILITY:

Highest order of durability, resistance to abrasion, impact, and chemical attack. Stable to steam cleaning.

## THICKNESS:

Typical: 1mm; 3mm; 4mm; 6mm; 9mm

## BOTTLE COVING:

U-Screed™ Primer – Refer to Datasheet ( $\pm 16.4$  linear meters per kit)

U-Screed™ Mortar – Refer to Datasheet ( $\pm 8.9$  linear meters per kit)

U-Screed™ 1mm – Is applied over U-screed Mortar as the final coat as a colour ( $\pm 20$  linear meters per kit)



## U-SCREED TERRAZZO (US TERRAZZO)

U-Screed can be used as a Decorative Terrazzo System with varies color and Stone at 8 - 10 mm thick

Its decorative, hygienic, resin-based terrazzo floor finishing screed. Exhibiting an exposed aggregate texture with a smooth surface of uniform color designed for excellent resistance to abrasion, chemical attack and other physical aggression. The product is based on the latest resin technology incorporating antimicrobial silver ion protection.

### TYPICAL INSTALLATIONS:

Heavy duty situations to contact. Chemical processing - Food processing - Brewing -Heavy-duty traffic and plant vehicles - Engineering process areas.

### SUBSTRATES:

Concrete, polymer-reinforced screeds, grano, concrete.

### SUBSTRATE REQUIREMENTS:

Concrete substrates must have a minimum compressive strength of 25 MPa, minimum tensile pull-off strength of 1.5 MPa and be free of oil, fat, grease, dust, and loose friable materials. Moisture testing to be done.

### BENEFITS:

- Antimicrobial performance
- High chemical resistance
- Easy to clean and sterilize anti-slip surface, minimal joints
- Heat resistant to 120°C
- Steam cleanable
- Freeze/thaw resistant
- Non-tainting and non-dusting
- High abrasion resistance



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- Withstands high mechanical stress
- Suitable alternative to expensive acid resistant tiles
- Low odour during application
- Positive slip resistance

## **SURFACE PREPARATION:**

- To be assured of maximum adhesion and properties from polyurethane resin products the correct surface preparation is essential.
- A clean, dry surface, void of contamination and oils, mechanically grinded or abraded.
- Remove all previous coatings, unbounded concrete, and laitance mechanically through diamond grinding, abrasive blasting or scarifying to obtain a sound and porous surface.
- Sweep dust and loose debris followed by vacuuming, to obtain a dry and dust-free surface.

## **APPLICATION CONDITIONS:**

- 5-30° C Maximum moisture content of substrate 10%.

## **PRIMING:**

- Priming of all surfaces should be undertaken; primer should be allowed to cure for a minimum of 16 hours, prior to application of the polyurethane resin. (Maximum cover coating time at 20° C -48 hours) Prime at approx. 125g/m<sup>2</sup>.
- We recommend that all size kits are primed, but 6mm and 9mm kits are considered self-priming.

## **MIXING:**

- Pre-mixing of the coloured liquid component is recommended to ensure any light settlement is reincorporated.
- Thoroughly scrape the contents of the liquid colour component into the brown hardener component and mix for a minimum of one minute or to provide a homogeneous mix.
- The resultant mixture should then be loaded into a rotary drum mixer and the aggregate component added in stages, until a lump free mix is obtained.
- Apply to pre-primed areas and level between battens as necessary, with a steel float. Final finishing may be affected by “back rolling” with a spiked roller.





## MIXING SUGGESTIONS FOR EASY APPLICATION:

- Open all aggregate bags before the mixing starts to ensure no time is wasted between mixes.
- Set up the mixing machine as close to the floor as possible (Use two mixing vessels to ensure time between mixes / kits is minimized) Prior to mixing, the temperature of the three components must be between 15 and 25 C.
- Pre-mix the resin component before use. Add the hardener component to the resin component and mix using a low-speed electric mixer (300 - 400 rpm) for 1 minute until homogeneous.
- Decant the mixture into a rotary drum mixer and add the aggregate component in stages, mixing for a minimum of 2 minutes until a uniform coloured, lump-free mix is obtained.
- Apply primed areas to the required thickness using a steel float. Ensure that anchor grooves are fully wetted out with material.
- Note: due to the high resin content, 'back-rolling' of U-Screed can lead to an increased risk of pin-holing and texture in the surface.

## COVERAGE RATES:

- 1.8m<sup>2</sup> at 9mm
- 2.2m<sup>2</sup> at 6mm
- 3.2m<sup>2</sup> at 4mm
- 4m<sup>2</sup> at 3mm
- 5m<sup>2</sup> at 1mm

## MAINTENANCE:

Regular cleaning of the applied system is recommended to maintain slip resistant agents in combination with pressure washing / steam cleaning may be employed.



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## ANCHOR JOINTS:

Anchor joints must be present in the surface of the concrete within 75mm to 150mm of all joints, column base, perimeter walls, drainage channel and door thresholds etc.

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## CURE SCHEDULE:

- Usable life of full unit/mix at 20° C. 15min
- Initial film gel time (joining up) at 20° C/9mm build 20 min.
- Cure time to light pedestrian traffic 12 hours.
- Cure time to light wheeled traffic 24 hours.
- Cure time to heavy duty traffic 48 hours
- Full chemical resistance 7 days

## CHEMICAL RESISTANCE:

Excellent resistances to organic and inorganic acids, alkalis, fuel and hydraulic oils, aromatic and aliphatic solvents.

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## TECHNICAL DETAILS:

|                             |                                                                                                                                                                                                                                                           |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Colours</b>              | All standard colours - REFER TO COLOUR CHART AS INDICATION - Always refer to physical sample                                                                                                                                                              |
| <b>Equipment Care</b>       | All tools should be cleaned with thinners or xylene immediately after use                                                                                                                                                                                 |
| <b>Packaging</b>            | Supplied in 2.90 Litre Resin, 2.45LT Hardener & 25Kg Aggregate                                                                                                                                                                                            |
| <b>Health &amp; Safety</b>  | All protective clothing must be worn and used in accordance with safety regulations.                                                                                                                                                                      |
| <b>Storage</b>              | The storage, mixing and application conditions can affect the quality of the finish produced. Cool and a dry place. Store off the ground in un-opened packs in a dry store, under cover between 10°C and 30°C out of direct sunlight. Protect from frost. |
| <b>Shelf Life</b>           | Resin and hardener components 12 months<br>Aggregate component 6 months                                                                                                                                                                                   |
| <b>Compressive Strength</b> | >50 MPa                                                                                                                                                                                                                                                   |
| <b>Tensile Strength</b>     | >12 MPa BS6319                                                                                                                                                                                                                                            |
| <b>Flexural Strength</b>    | >20 MPa                                                                                                                                                                                                                                                   |
| <b>Concrete Adhesion</b>    | >1.5MPa (Concrete failure) ASTM D7234 Impact Resistance 1kg>1.8m<br>2kg>1.5m ISO6272-1:2011                                                                                                                                                               |
| <b>Hardness</b>             | 80 Shore D                                                                                                                                                                                                                                                |
| <b>Slip Resistance</b>      | Dry>70 Wet >25 TRRL Pendulum slip test                                                                                                                                                                                                                    |
| <b>Vapor Permeability</b>   | 3g / m2 / 24hrs. @ 9mm ASTM E96: ninety                                                                                                                                                                                                                   |
| <b>Water Uptake</b>         | (Permeability) Nil Karsten Test                                                                                                                                                                                                                           |
| <b>Heat Resistance</b>      | 5°C to 90°C @ 6 mm - 15°C to 110°C @ 8 mm                                                                                                                                                                                                                 |
| <b>Chemical Resistance</b>  | Refer to chemical chart                                                                                                                                                                                                                                   |
| <b>Foot Traffic</b>         | 12 to 16 hrs.                                                                                                                                                                                                                                             |
| <b>Heavy Traffic</b>        | 24 hrs.                                                                                                                                                                                                                                                   |



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