



DM Terrazzo, A high quality, fast, polishable, architectural cement topping

## TECHNICAL OVERVIEW

### Lead Times

Smaller projects product can be sourced generally within a week. For larger scale projects we allow 5-6weeks to import large quantities from America into Australia. Colours chosen may also require a 1-week lead time to get them batched and supplied to us for use.

### Composition

DM Terrazzo uses Rapid Set®TRU is an advanced, professional grade, hydraulic cement-based, architectural topping and resurfacer as its base product. Rapid Set cement is rapid-hardening calcium sulfoaluminate (CSA )cement, not a portland cement. Rapidset Tru™ rapidly levels, maintains workability for 20 minutes, is ready for foot traffic in 2 to 3 hours, produces a smooth, strong surface, has high-bond strength, and ready for coatings in 12 hours and polishing within 24 hours. Integral colours are sourced to colour projects and only the finest aggregates are chosen to complete DM Terrazzo projects. Made from natural materials tonal variation can be expected. DM Terrazzo does not contain any epoxy or resins.

### TYPICAL PHYSICAL DATA

Working time 20 minutes

Flow life 15 minutes

#### Compressive Strength, ASTM C109 Mod.\*

4 hours 3000 psi (20.7 MPa)

24 hours 5000 psi (34.5 MPa)

28 days 6500 psi (44.8 MPa)

#### Slant Shear Bond Strength, ASTM C882 Mod.\*

7 days 2100 psi (14.5 MPa)

28 days 2900 psi (20.0 MPa)

#### Tensile Strength, ASTM C307\*

7 days 210 psi (1.44 MPa)

28 days 365 psi (2.51 MPa)

#### Flexural Strength, ASTM C348\*

24 hours 850 psi (5.86 MPa)

28 days 1900 psi (13.1 MPa)

\*Data obtained at 70°F (21°C)



USGBC and related logo is a trademark owned by the U.S. Green Building Council and is used by permission.

Comparison of Attributes	Rapid Set Cement Concrete	Portland Cement Concrete
Drive On or Build On Strength (3000 psi )	1 hour	24-72 hours
Final Strength (8000 psi )	1 day	28 days
Drying Shrinkage	Reduced by 70%	Excessive
Cracking	Drastically Reduced	Excessive
Chemical Attack	Resistant	Prone to
Reaction to alkali-silica reaction (ASR )	None	Prone to
Lifetime (before needing to be replaced )	80 years	20-40 years



7/10 Enterprise Cl, West Gosford  
 T: 02 4314 1911 F: 0415 658 882  
 matt@diagrind.com.au / www.diagrind.com.au

## Environmental Advantages

Use TRU to reduce your carbon footprint and lower your environmental impact. Production of Rapid Set cement emits far less CO<sub>2</sub> than Portland cement. Contact your representative for LEED values and environmental information.

## Applicable Surfaces

Solid flat new/old (crack repaired )concrete slabs. If Needed for heights, we will install a subfloor of Cementall to achieve the correct floor heights.

### Floor Preparation

1. Substrate must be clean, sound concrete that is free of gypsum compounds and all materials that may inhibit bond such as: oil, curing compound, dust, mastic, bond breakers, and other surface contaminants.
2. Floor is ground with course diamonds to prepare surface for bonding. This will remove any contaminants. Any major cracks and holes are repaired prior to installation of DM Terrazzo.
3. An acrylic primer is installed on the floor and flooded with sand to create a bond between the existing concrete and the overlay.
4. Aluminium edge strips (ranging in size 10mm-20mm dependent on the thickness of the DM Terrazzo )are installed to honour any current expansion joint. Around edges and doorways. Larger construction joints will require flexible expansion joints.

**Cold Weather:** Environmental and material temperatures below 21C may delay setting time and reduce the rate of strength gain. Lower temperatures will have a more pronounced effect. Thinner sections will be more significantly affected. To compensate for cold temperatures, keep material warm, use heated mix water, and follow procedures for Cold Weather Concreting.

**Warm Weather:** Environmental and material temperatures above 21C may speed setting time and increase the rate of strength gain. Higher temperatures will have a more pronounced effect. To compensate for warm temperatures, keep material cool, use chilled mix water and follow procedures for Hot Weather Concreting.

## Flexible Expansion joints

These are job specific and will require a site inspection to determine exact style and widths. Terrazzo tile strip is commonly used on the smaller expansion joints and can be supplied in a range of metals such as brass, zinc and aluminium. They are split by a neoprene centre which is flexible and can be made in several colours. The Large construction expansion joints seen in commercial projects need to be made to order and can either be a metal floor joint cover or a gasketed floor joint cover.

## Subfloor heating

DM Terrazzo can be applied over in slab heating systems, always consult us prior to installation to confirm requirements.

## Slip rating

DM Terrazzo can be finished to a P1-P5 non-slip rating. Please advise of the requirement and we will finish to the correct specification. We have achieved honed DM terrazzo with a P5 non-slip rating and full gloss finish with a P1 and P2 non slip rating and everything in between.

## Overlay pour height

Interior/exterior heights are dependent on the aggregate chosen. A minimum of 3/8" thickness (10 mm )is required for polished flooring. DM terrazzo is installed between 10mm-15mm thick as a standard (this is dependent on aggregate size chosen )Then is ground back to expose the aggregate. The finished surface is between 8mm-13mm with standard aggregate. For floors subjected to high-load, rubber-wheeled traffic, must be applied at a minimum thickness of 1/2" (13 mm )

## Cure rate

DM Terrazzo provides rapid High Strength; 5000 psi (34.5 MPa )in 24 hours and 6500 psi (44.8 MPa )in 28 days. DM Terrazzo using Rapid Set TRU may be polished wet or dry after 24 hours at normal conditions.

Terrazzo is ready for foot traffic 2-3 hours after installation and ready to be ground after 24hours.

No wet curing is required under normal conditions at 70F (21C )If used in exterior applications, apply a fine water mist to the newly hardened surface of TRU as soon as it can be done without marring the surface, and continue until one hour after final set. Avoid excessively dry, windy, hot or sunny conditions. Adhesives, thin set or paint can be applied after 6 hours. If used as a topping that will receive traffic, a high-quality sealer or epoxy can be applied per the manufacturer's recommendations after 12 hours. TRU is not recommended in locations where de-icing salts will be used.

## Grinding/polishing

DM Terrazzo using Rapid Set TRU may be polished after 24 hours at normal conditions. Rapid Set TRU grinds and polishes much like concrete and can achieve a very high gloss and Distinctness-of-Image (DOI )due to its high density and low polymer content. Polishing any topping requires a high degree of experience and craftsmanship. We typically finish floors at a satin to gloss finish but can achieve matte to gloss finishes using mechanical polishing processes or topical sealers.

## Wet Areas

The product is suitable for wet areas. It is advised the subfloor has the falls poured into it so the overlay can be poured to the required falls needed to the installed drains. The floor will no de-laminate if it is installed as per manufacturers requirements.

## Sealing

There are two methods of grinding and sealing of DM Terrazzo floor. The Diamond polishing method required the overlay to be hardened with a densifier which dustproofs the floor and then sealed with an impregnating sealer provided by Crete Colors International.

required the overlay to be hardened with a densifier which dustproofs the floor and then sealed with an impregnating sealer provided by Crete Colors International.

The alternative method is sealing the floor with acrylic based topical floor sealers. This sealer is a sacrificial sealer and will require regular re-coating of the topcoat of the sealer.

## Onsite mixing

DM Terrazzo is mixed onsite in batches ranging in size due to the size of the aggregate chosen. Floors with zero aggregate are batched in between 50-125kg batches whereas those with larger aggregate may only be batched in 50kg lots. Due to the inherent characteristics of concrete like products, the use of natural products and the application method, small areas of unexposed aggregate and some tonal variation may occur within the floor and this is to be expected.

## Maintenance

Maintenance of a DM Terrazzo floor is very important. The better the maintenance the longer the floor will need between sealing and revitalising. The type of maintenance will depend on the type of finish that was completed. At the end of each project we supply sample cleaning products and a cleaning and maintenance schedule for the floor.

We recommend daily basic cleaning such as sweeping to remove sand and dirt from the floor.

Both types of floors require a pH neutral cleaner as highly acidic and alkaline cleaner will damage the polished floor and require the floor to be re-polished.

For the residential home clean the floor with a vacuum and weekly mopping with a pH neutral cleaner. If surface was finished using Diamond polishing methods; every few cleans clean the floor with C2 Maintain or C2 clean (samples are provided upon completion )

Commercial surfaces clean floor using an autoscrubber and if the floor was finished using Diamond polishing methods use C2 clean and C2 maintain to clean the floor surface. We recommend following the manufacturers instructions with the C2 clean and C2 maintain. If the floor had a topical sealer applied then clean the floor with an autoscrubber using chemicals such as pH 7 or scrub n shine supplied by [www.ocsupplies.com.au](http://www.ocsupplies.com.au).