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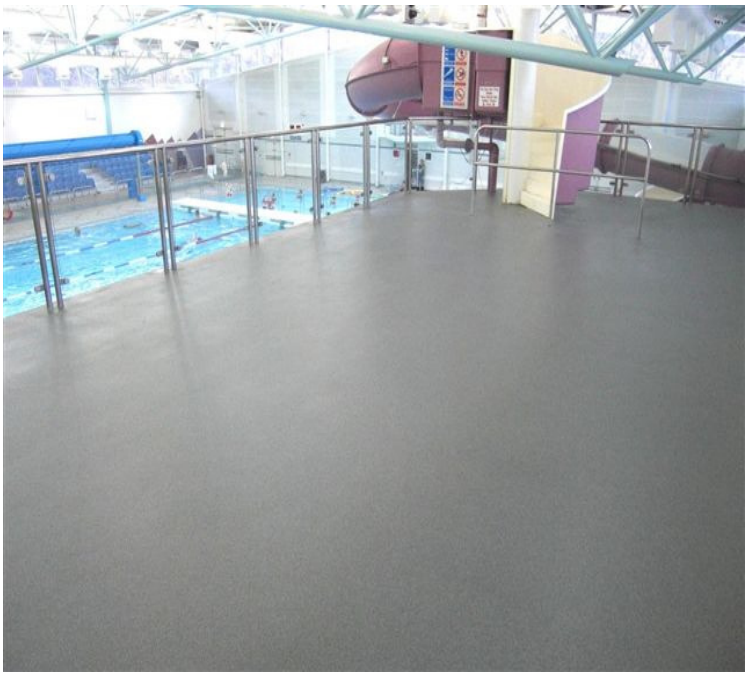
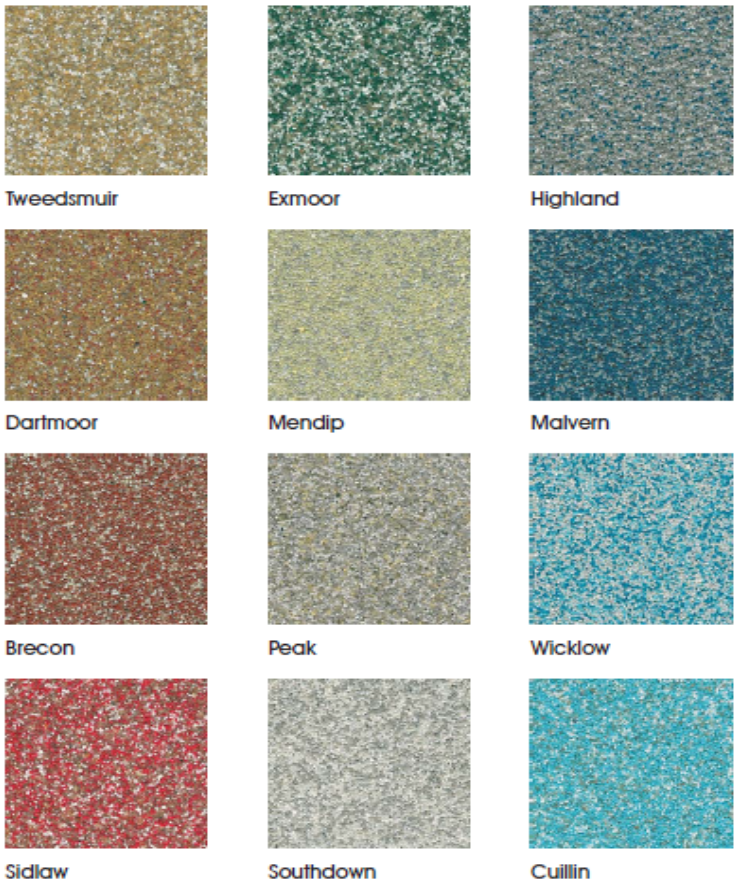
CAST TB PLUS



Standard Colour Chart



DESCRIPTION

4.5 mm Solvent-Free, Decorative, Epoxy Screed
TB + Cast is a three-part solvent-free epoxy resin system with a decorative appearance, comprising of clear resin and coloured graded aggregates and a textured broadcast finish applied onto the installed TB Screed. TB + Cast produces a highly decorative high strength slip resistant floor providing exceptional abrasion and chemical resistance.

STANDARD COLOURS

TB + Cast is available in a range of 12 standard colours.

TYPICAL AREAS OF USE

- Food preparation areas
- Wet production areas
- Wash down areas
- Sports Changing Rooms
- Showers

ADVANTAGES

- Attractive Colour Range(s)
- Good slip resistance
- Good chemical and stain resistance
- Fully bonded to the substrate
- Medium impact and excellent abrasion resistance
- Provides seamless floor finish (substrate joints must be cut through)

CHEMICAL RESISTANCE

Quattro TB + Cast affords resistance to a range of commonly used chemicals. However, premature or prolonged contact with chemicals (including water) during the curing process may give rise to discolouration, staining and variation in gloss. In all cases of chemical spillage, it is essential that the spillage be immediately removed and the surface washed down with clean water, removing water by wet vacuum after operation. Although some chemicals may cause discolouration, this may not affect the durability and integrity of the resin screed.

CAST TB PLUS TECHNICAL DATA SHEET

Typical Physical Properties

Slip Resistance	DIN 51130	Shoes / Oil	R13
	TRRL	Pendulum Test Value (Wet)	**Low** Potential for Slip when fully sealed
Speed of Cure		Light Foot Traffic	24 hours @ 20°C
		Full Cure	7 days @ 20°C
Application Temperature			10°C to 25°C
Usable Working Life			30 minutes @ 20°C

Packaging
Quattro TB Screed is available in a 23kg, three-part composite pack.

Cast Quartz Aggregate is available in 20kg bags.

Coverage
Quattro TB Screed
3.7m2 / 23kg unit @ 3mm

Shield Seal Clear
Broadcast coat 15-25*m² per 5.3kg unit
(*depending on compaction of the screed)

Cast Quartz Aggregate
Broadcast @ 2kg m2

Shield Seal Clear NT
1st coat 10m² per 5.3kg unit
2nd coat 20m² per 5.3kg unit

Material usage is dependent upon temperature, surface profile and porosity; stated coverage rates should be referred to for guidance only and cannot be relied upon to determine exact quantities.

Although stringent quality assurance processes are employed, when colour consistency is required, a single batch should be used. We cannot guarantee batch matches between different batches of aggregate. Necessary transitions between batches should be planned for non-conspicuous areas.

Storage
Ensure that the product is received in good order and store in a dry, frost free environment, ideally between 15°C and 20°C for at least three days before laying. Excessively high and low storage temperatures will affect the laying performance of the product.

Suitable Substrates
Quattro + Cast may be applied to a variety of sub-strates including, but not limited to, concrete, polymer-modified cementitious screeds, terrazzo, 25mm WBP plywood (consult Quattro Contracting (Pen) Ltd for further guidance). For all proprietary subfloor systems refer to the manufacturer for recommendations and seek further guidance from Quattro Contracting (Pen) Ltd. FeRFA, The Resin Federation, does not recommend Calcium Sulphate, Anhydrite or Hemi-hydrite screeds for overlayment with synthetic resin surfaces.

Substrate Requirements
Substrates should be dry, structurally sound and free from contamination, friable materials or laitance which may affect either the adhesion or penetration of the resin system. All residues of old paint coatings and dust must be removed. Substrates to achieve 26N/mm² compressive strength (BS EN 12504-2:2001) and surface tensile strength 1.5N/mm² (BS EN 13892-8:2002). Substrates must include an effective damp proof membrane and contain residual moisture not greater than 5% by weight (75% R.H.) to BS 8203:1996. Thin-bed synthetic resin systems follow the surface of the substrate, so it is essential that the surface regularity of flatness conforms to or exceeds BS 8204.2:2002 class SR2 (+/- 5mm under a 2 metre straight edge). Any deviation from this may require a surface improver to be applied which must be suitable to receive an epoxy resin overlay.

Please consult Quattro Contracting (Pen) Ltd or FeRFA Guide to the Specification and Application of Synthetic Resin Flooring for further information.

CAST TB PLUS TECHNICAL DATA SHEET CONTINUED

Substrate Preparation
Surface preparation is the most vital aspect of resin flooring application. Inadequate preparation will lead to loss of adhesion and failure. The substrate in question will dictate the method of preparation. In the case of a concrete floor, preparation by dust enclosed diamond floor grinder may be appropriate, or if of a sufficient area for economic reasons, should be lightly shot blasted to leave a textured surface free from contamination. If the floor has been treated with a cementitious surface improver, then the surface should be prepared in accordance with the manufacturer's recommendations, or abraded with an STR machine followed by thorough vacuuming. Treatment of local repairs such as cracks and holes, improvement or modification of levels and removal of high spots, should be undertaken prior to the flooring installation. Please consult Quattro or FeRFA's Guide to the Specification and Application of Synthetic Resin Flooring for further guidance.

Planning
Before proceeding with the installation, careful consideration should determine the best way of installing the system. Efforts should be made to minimise day joints and optimise the open time of the product (i.e. minimise the distance between mixing and laying). It is best to also consider the effect of external influences on the final installation (i.e. direction of light from windows etc.). Time spent at this stage will be invaluable towards the success of your installation.
The TB + Cast floor system is designed to be laid at a nominal 4.5 mm thickness. Quattro recommend that stainless steel mixing, laying and application tools are used in this process. Metal transfer from mild steel tools may result in discolouration of the screed which will be unacceptable to your customer. This will be particularly noticeable with pale colours, please contact Quattro for further guidance.

Application
The following application guide is based on laboratory and simulated site conditions. However, when installations conditions differ appreciably from those detailed by Quattro, the performance characteristics of both mixing and laying may not be as expected. To achieve the best results at all times please endeavour to establish the correct conditions which in turn will allow the materials to be laid effectively, and meet your customer's expectations.

Installation Conditions
Apply in well ventilated areas. Both the slab and air temperature should be greater than 10°C and rising, up to 25°C. It is not advisable to mix and lay epoxy resin products outside the range 10°C to 25°C. Ambient conditions should be maintained at least 3°C above dew point or below 75% R.H. during the initial stages of cure.
At site temperatures below 10°C cure times will be substantially increased unless some form of external heating is used. (Avoid using heating sources that give rise to high levels of humidity) It must be recognised that the concrete slab temperature will generally be lower than the air temperature, often as much as 10°C,
and this will govern the rate of cure. As the resin flooring cures, in condensing conditions moisture vapour may condense onto the surface and cause 'blooming', a permanent clouding of the surface. Cold, wet or humid conditions, and limited air-flow, can result in condensation on the part-cured floor. The workability, open-time, cure development and return to traffic will be significantly affected by ambient conditions.

Priming the Substrate
In order to achieve a uniform finish, prevent bubbles and maximise substrate adhesion, primer must be used. A primer should be selected which is suited to the installation, and appropriate for the nature and moisture content of the substrate (seek further guidance from Quattro). The appropriate Quattro primer should be applied in accordance with the Product Datasheet. Whilst the primer is wet, lightly seed with a sharp, medium size kiln-dried aggregate (preferably 0.7 to 1.2mm quartz in colour to match the TB + Cast to be applied) and leave to cure. Ensure that the substrate is well sealed and that all hungry areas are addressed before proceeding to install the system. If the overcoating time period for the primer is exceeded, the surface should be lightly abraded and vacuumed before further coats are applied.

Product Installation
Using a slow speed drill and paddle thoroughly mix together the TB Screed base and hardener. Pour all the mixed base and hardener contents into a suitable clean polypropylene or stainless steel mixing vessel. The aggregate should be added gradually into the pre-mixed binder, whilst continuing the mixing action, and mix for a further 2-3 minutes in the forced action mixer. Excessively vigorous mixing should be avoided as this can lead to undesirable air entrainment. Care should be taken to ensure that any material adhering to the sides, bottom and corners of the mixer is thoroughly blended in.
If the mixing area is not adjacent to the laying area the time required to transfer the mixed material will reduce the open installation time. Remember to always use the correct PPE. Using a clean stainless steel trowel or sledge apply the TB Screed system to the prepared primed substrate. Ensure that the system is
being laid to the desired depth (3mm) and fully closed off to leave a uniform compact surface. Because the flooring is hand finished, there may be slight variations in surface appearance resulting from the trowelling. A skilled operative will endeavour to keep these to a minimum so that the overall appearance and performance of the flooring will not be affected.

CAST TB PLUS TECHNICAL DATA SHEET CONTINUED

After the TB Screed has cured Shield Seal is applied as a broadcast coat. Pour the contents of the hardener into the base unit, and using a slow speed drill and paddle thoroughly mix the contents for 2 minutes. Apply the seal coat to the screed using a dense polypropylene foam squeegee, taking time to work the seal into the surface, ensuring that all porous areas of quartz are fully satisfied. Ensure the resin left on the surface is uniform ready to accept the broadcast aggregate. Into the wet resin the Cast Quartz Aggregate should be broadcast at 2kg/m2 or until the surface is fully blinded. Care should be taken not to throw the aggregate too close to the surface of the resin system in order to avoid unsightly clumping of the aggregate on the surface. The system must be sealed with two coats of Shield NT Seal. Ensure the surface of the resin screed is contamination free and all loose aggregate removed and thoroughly vacuumed as necessary. Pour the contents of the hardener into the base unit, and using a slow speed drill and paddle thoroughly mix the contents for 2 minutes. Apply the seal coat to the screed using a dense polypropylene foam squeegee, taking time to work the seal into the surface, ensuring that all porous areas of quartz are fully satisfied. Roll the surface with a short nap synthetic roller to remove all excess and leave to cure for not longer than 24 hours at 20°C. Mix and roller apply the finishing seal coat to leave a uniform closed film across the floor where all excess is removed. Failure to remove excess may affect the slip resistance and appearance of the finished system.

Do not flood seal the TB + Cast product as this can cause staining or discolouration, in the seal system.
To achieve a cosmetic matt finish, the application of a single coat of Seal UVR-WB can be applied not more than 24 hours at 20oC following the final seal. Pour the contents of the hardener into the base unit, and thoroughly mix using a slow speed drill and paddle for 2 minutes. Apply a very thin coat using a short nap synthetic roller applying the product to the floor from a paint tray. Heavy application of this seal will result in an opaque appearance of the finished floor, therefore care is required in its application.

Joints
The spacing of movement joints must be determined by the design of the subfloor. All live movement joints in the subfloor must be continued through the resin flooring, failure to do so will result in live cracks being reflected through the resin finish. In all instances the type and positioning of movement joints should be agreed at the design stage between all parties concerned. Please refer to Quattro or FeRFA's Guide to the Specification and Application of Synthetic Resin Systems for further guidance. All joints should be filled with Expand flexible jointing compound. Please see Expand Datasheet for further information.

Protection
Whilst of an extremely durable nature these floor systems must by thoroughly protected from the rigours and abuse that exist during the ongoing contractual works.
The resin floor should reach full chemical cure in 7 days at 20°C. Untreated felt paper will suffice as protection from light traffic, however if protection is required from other trades then the following protection option should be considered. Where heavier access is required then a more suitable medium to take the loadings, such as shuttering ply or Correx by Cordek, should be placed on top of the untreated felt paper. The resin system should have cured for at least 48 hours prior to placing the protection. No polyethylene sheets, linseed-treated hardboard, print or dyed card should be placed in contact with the resin surface. All joints in the protection medium should be taped, and all accidental spillages should be recovered immediately by removal and reinstatement of the protection. Damage will occur to the system if ignored.

Cleaning (during installation)
All tools and equipment should be regularly cleaned using Solve EP to reduce build up and maintain the quality of the installation. Avoid contamination of the resin surface with solvent as this may cause localised bloom to occur.
Ensure that the correct PPE is worn at all times.

Disposal
Due diligence must be adopted if accidental spillages occur. Recover using absorbent granules, transferring into a suitably marked container. Disposal of all empty containers and accidental spillages should be in accordance with the local waste disposal authority.

Cleaning Guidance
Please see associated cleaning recommendations to which can be obtained form our head office:- 01768 868004