



VITRITE® composite

DESCRIPTION

Purpose-developed for the manufacture of top quality luxury baths, Vitrite® is a composite of ten different materials. These are cast and chemically fused during the manufacturing process, then heat cured at very high temperature. Vitrite® is not laminated or bonded. Unlike lesser, mass produced materials, it cannot come apart or de-layer.

DEVELOPMENT

The 20th century saw a great increase in the number of baths made from fireclay and similar materials. It became evident in the 1990s that although they could be beautiful and durable (if properly built), they had two major defects. The first was that, because of their bulk, they were extremely heavy. This made them difficult to manoeuvre and limited where they could be placed. The second drawback was that many had a propensity to crack, craze or fragment in response to even the slightest impact.

Rather than see the disappearance of baths with this style, shape and finish, Design & Form Ltd set out to develop a new material from which lighter, more robust, yet faithful reproductions could be made. The company's starting point was its own unique composite Ficore® which offered proven strength, performance and durability, and which was recognised, all round, as the finest bath-making material in the world. (For more details, please see our Ficore® reference sheet.)

Vitrite® is a further development of the same technology. It has the appearance, the tactile feel, and the slight surface undulations of ceramic but it exhibits none of its great weight and fragility. It delivers improved impact and chip-resistance, outstanding chemical resistance and a harder, scratch-resistant surface. Under anything but the closest inspection, it is indistinguishable from fireclay-type ceramics.

PHYSICAL PROPERTIES

Vitrite's surface is made from isophthalic neo-pentyl-glycol, which is hard, resistant to abrasion but pleasant to the touch. It offers important advantages over more conventional materials.

- Vitrite® is 50% harder than acrylic (from which 80% of baths are now made). Importantly, this hardness test is conducted when both materials are hot - i.e. replicating real-world conditions when a bath is in use. This surface hardness means that a Vitrite® bath more effectively resists scratches and other damage; its surface also retains its gloss.
- American National Standard Institute 'wear' tests with abrasive slurry, carried out by an independent laboratory, show that after 10,000 cycles, Vitrite® showed only a 0.5% loss of reflectance, where acrylic typically lost 2%.

- Vitrite® is able to withstand continuous exposure to hot water at 80°C (176°F), and to tolerate thermal shock produced by alternating hot and cold water.
- Vitrite® is resistant to most chemicals including acid and alkaline solutions (e.g. lime scale remover) which neither acrylic nor vitreous enamel can withstand.
- In the unlikely event of damage, Vitrite® is easily repairable - far more so than many other bath materials.
- Vitrite® is resistant to high temperatures - e.g. cigarette burns.
- Vitrite® does not have a tendency to chip, crack, or fracture under impact (as does vitreous enamel, and some standard cast resins that are filled with crushed stone and other minerals).
- Its impact resistance, at 75,000 J/m² is considerably higher than standard cast resins or acrylic, as is its resistance to organic solvents at 96°C (205°F).

CUSTOMER BENEFITS

- Vitrite® can be produced in literally any colour.
- Vitrite® permits more sharply defined detail - i.e. tighter radii and curves, than any other bath material. Cleaner, more precise designs are therefore achievable.
- Vitrite® is a very effective insulator; it keeps water hot considerably longer than standard cast resins. This permits longer soaks and reduces the water and energy wasted by having to refill or top up a bath to keep it warm.
- Vitrite® exhibits excellent structural integrity. It is non-flexing, and will not buckle, bow or change shape under pressure. It requires no other material to reinforce it, nor any chassis/frame to support it.
- While many cast resin, vitreous enamelled or acrylic baths carry only five-year guarantees, all our Vitrite® baths are supported by a guarantee of 25 years.
- Vitrite® baths can be kept clean of normal grease and dirt using only a soft liquid detergent. Hard water stains are easily removed.
- Despite the hardness of its surface, Vitrite® remains always tactile and pleasantly warm to the touch.

SUMMARY

Vitrite® is an advanced material specifically developed for the reproduction of fireclay ceramic baths typical of the late 19th and early 20th centuries. Importantly, however, it delivers far superior robustness, insulation and tactile qualities.

It is trademarked and manufactured exclusively by Design & Form Limited.

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