

Ficore® Solid Composite Construction

Clear technical overview for hospital water birth pools

Ficore® was developed specifically for high-performance baths and water birth pools. It combines strength, hygiene, durability and comfort in a single solid composite structure.



**Hard NPG
sanitary surface**



**Integral
colour layer**



**Glass tissue
reinforcement**



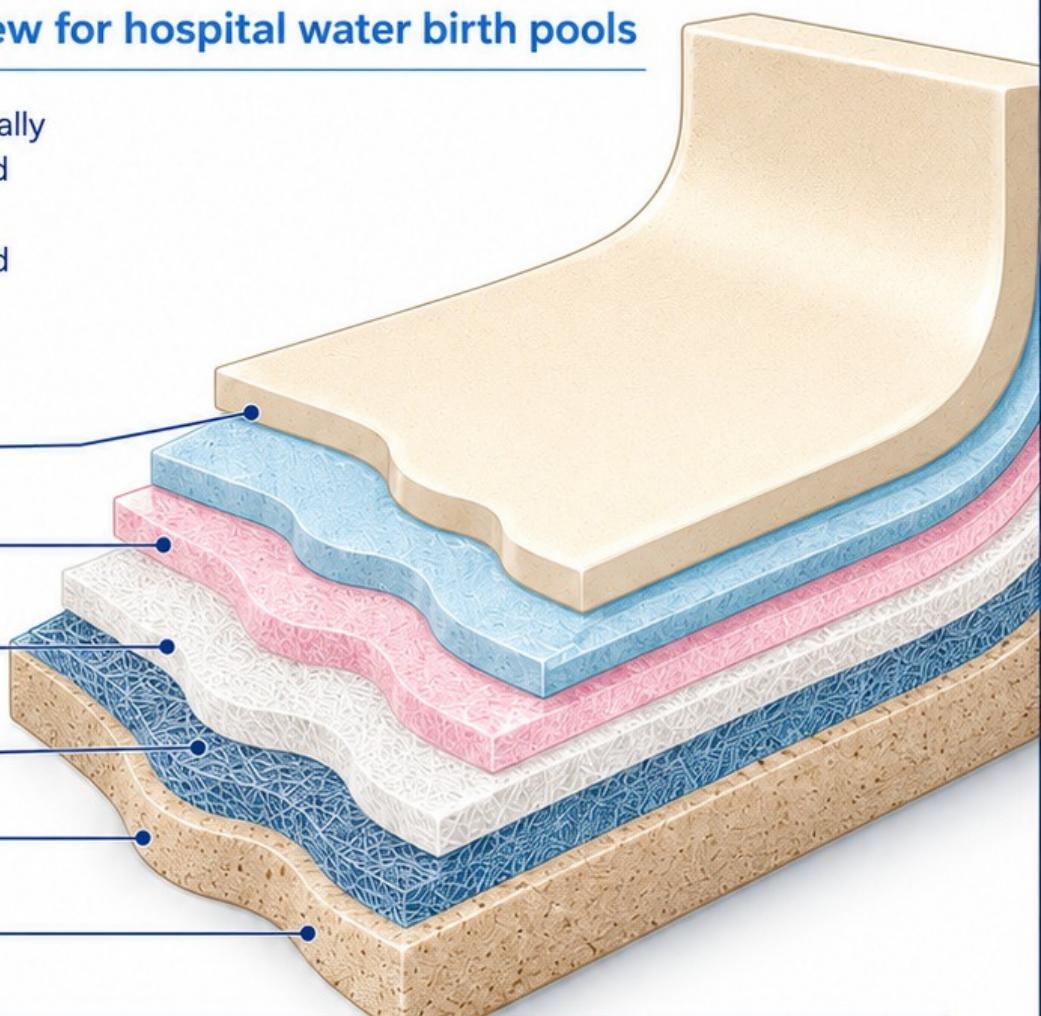
Surface veil



**Glass reinforcement
layer**



**Thick structural
core**



Ficore® is a solid composite of eight materials, chemically fused and heat-cured at high temperature. It is **not laminated or merely bonded**, so it cannot delaminate or come apart.

Why it matters



1. More slip resistant

Less slippery than acrylic or fibreglass



2. Superior heat retention

Keeps water hot up to 6x longer than standard acrylic backed by glasfibre



3. Strong and rigid

Will not flex, buckle or change shape under pressure



4. Chemical and water resistant

Withstands cleaning, disinfection and thermal shock



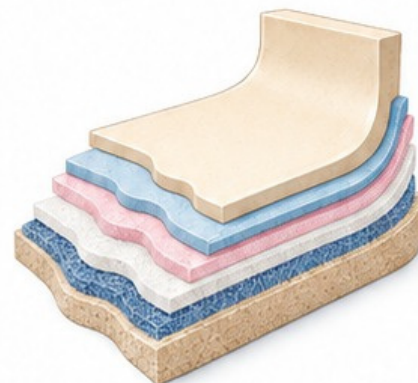
5. Fully repairable

Damage can be repaired and restored



6. Built to last

Life expectancy in excess of 25 years



Ficore[®] properties and advantages

Part 1 — material performance and practical benefits

Property	Key fact	Why it matters
 Construction	Solid composite of eight materials; chemically fused and heat-cured. Not laminated or merely bonded.	No risk of delamination; long-term structural integrity.
 Surface hardness	50% harder than acrylic when hot.	Better scratch resistance and durability in real use.
 Wear and gloss retention	Only 0.5% reflectance loss after 10,000 cycles; acrylic typically 2%.	Helps the finish stay cleaner-looking for longer.
 Rigidity	Strong, rigid and non-flexing.	Stable under load in clinical use.
 No chassis required	Requires no metal or timber support frame.	Simplifies installation and avoids creaking or movement.
 Heat retention	Keeps water hot up to 6× longer than standard acrylic backed by glassfibre.	Improves comfort and reduces hot-water top-ups.
 Thermal shock resistance	Withstands hot water up to 80°C and alternating hot / cold water.	Well suited to repeated filling, emptying and cleaning cycles.
 Chemical resistance	Resists most acids and alkalis.	Supports cleaning, descaling and disinfection.

Ficore[®] properties and advantages



Part 2 — hygiene, usability and whole-life value

Property	Key fact	Why it matters
 Water immersion performance	Approved for long-term potable water storage; ANSI Z124.1 water resistance test passed.	Supports confidence in long-term wet-use durability.
 Slip characteristics	Less slippery and more slip resistant than acrylic or fibreglass.	Better traction for mothers and staff.
 Warm tactile feel	Warm to the touch despite its hard surface.	More comfortable and reassuring for mothers.
 Seamless hygiene	One-piece seamless shell with hard, smooth, easy-clean surface.	Fewer crevices and dirt traps; easier infection-control cleaning.
 Design precision	Permits sharper detail, tighter radii and curves.	Enables ergonomic, purpose-designed birth-pool forms.
 Impact resistance	Highly resistant to impact; will not chip or crack like brittle finishes.	Better durability in busy hospital use.
 Repairability	Fully repairable and restorable.	Protects the asset and extends service life.
 Colours and finishes	Available in many colours; gloss or matt finish.	Design flexibility for different settings.
 Service life	Life expectancy in excess of 25 years.	Better whole-life value and sustainability.



Ficore[®] compared with acrylic and fibreglass / GRP

Part 1 — structure, durability and heat performance

Requirement	Ficore [®]	Acrylic	Fibreglass / GRP	Why Ficore [®] matters
 Construction method	Solid fused composite; heat-cured.	Thermoformed acrylic sheet, usually reinforced.	Gelcoat with glassfibre laminate.	Unified structure with low risk of delamination.
 Rigidity	Strong, rigid, non-flexing; no chassis required.	Can flex or creak; often needs reinforcement.	More rigid than plain acrylic, but less stable than Ficore [®] .	Stable under load in clinical use.
 Surface hardness	50% harder than acrylic when hot.	Softer; scratches more easily.	Variable; not shown to match Ficore [®] .	Better scratch resistance and durability.
 Wear / gloss retention	0.5% reflectance loss after 10,000 cycles.	Typically 2% in the cited test.	No equivalent result supplied.	Keeps a cleaner-looking finish for longer.
 Heat retention	Keeps water hot up to 6× longer than standard acrylic backed by glassfibre.	Lower heat retention.	Lower heat retention.	Improves comfort and reduces hot-water top-ups.



At a glance: Ficore[®] combines structure, hardness and heat retention in one engineered composite.



Ficore® compared with acrylic and fibreglass / GRP

Part 2 — hygiene, safety, repair and whole-life value

Requirement	Ficore®	Acrylic	Fibreglass / GRP	Why Ficore® matters
 Thermal and chemical resistance	Withstands hot water up to 80°C, thermal shock, and most acids and alkalis.	More limited resistance.	More limited resistance.	Better suited to repeated cleaning and use.
 Slip characteristics	Less slippery and more slip resistant than acrylic or fibreglass.	More slippery.	More slippery.	Better traction for mothers and staff.
 Hygiene and cleanability	Hard, smooth, seamless, easy-clean surface.	Scratches can affect long-term finish.	Surface wear can affect finish.	Supports infection-control cleaning.
 Repairability	Fully repairable and restorable.	More limited repair options.	Repairable, but less easily restored.	Extends service life and protects investment.
 Service life	Life expectancy in excess of 25 years.	Typically shorter.	Typically shorter.	Better whole-life value.
 Design freedom	Sharper detail, tighter radii and curves.	Can be formed, but performance depends on reinforcement.	Can be moulded, but surface integrity may be limiting.	Supports ergonomic, purpose-designed birth-pool design.



Why hospitals choose Ficore®

- Strong, rigid and durable
- Easier to clean and maintain
- Long-term value for hospital water birth pools