Swimming pool guide
High performance systems for composite swimming pools
Scott Bader is the partner of choice in the manufacturing of our swimming pools at LPW Corporate. With high performance gelcoats and resins such as Crystic® G 976 SMK and Crystic® 397PA, we get excellent performance for debulking and superb resistance to hydrolysis and chemical/UV degradation. These products also fit well with our automated process.

Baudouin de Troostembergh
General Manager, LPW Corporate
COMMON ISSUES WITH COMPOSITE SWIMMING POOLS

OSMOSIS

Water permeation through gelcoat

Potential causes
- Protection of the laminate is weak due to the gelcoat being too thin
- Under cured as a result of the level of peroxide and/or an unsuitable working temperature
- Poor application with microporosity in the gelcoat and/or bubbles in the skin coat
- Non-specialised products which can result in poor chemical resistance and/or the use of emulsion CSM behind the gelcoat

Crystic® solutions and benefits
- Using our Crystic® pool grade gelcoats with VE679PA skin coat ensures an optimised barrier to osmosis
- Excellent osmosis resistance when tested at 40°C for 12 months
- Zero porosity achievable with 700-800µ cured film thickness
- Fast curing properties using Crystic® VE679PA

BLACK SPOTS

Cause of problems
- Black algae development
- Copper salt deposit
- Gelcoat cobalt oxidation

Crystic® solutions and benefits
- Low cobalt content
- High level of pigment dispersion
- No microporosity
- High water resistance

PRODUCT RANGE

<table>
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<tr>
<th>PRODUCT</th>
<th>DESCRIPTION</th>
<th>GELTIME (mins)</th>
<th>TENSILE STRENGTH (MPa)</th>
<th>TENSILE MODULUS (GPa)</th>
<th>HDT (°C)</th>
<th>WATER ABSORPTION (mg)</th>
<th>AVAILABILITY*</th>
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| Gelcoat NPG/ISO ensures aesthetics and protection
| G 976 SMK  | Spray ISO/NPG gelcoat with high chemical resistance and low colour fading | 9 | 70 | 3.4 | 90 | 14 | Middle East | Oceania | South East Asia |
| G 997 SMK  | Water clear spray ISO/NPG gelcoat used with glitters or chips for special effects | 11 | 70 | 3.4 | 90 | 14 | Middle East | Oceania | South East Asia |
| Skincoat ensures chemical resistance
| VE 679PA   | Modified vinyl ester resin with good chemical resistance and rapid curing | 23 | 52 | 3.0 | 94 | 15 | Oceania |
| VE 682PA   | Isophthalic modified vinyl ester resin for skin coat applications | 17 | 74 | 3.6 | 82 | 16 | South America |
| 397PA      | ISO/NPG polyester resin with high HDT | 8 | 65 | 3.5 | 117 | 19 | South East Asia |
| Laminating resin ensures the mechanical performance of the swimming pool
| 2-446PA    | Pre-accelerated, thixotropic, spray viscosity polyester resin with low styrene emission | 25 | 50 | 3.8 | 67 | 15 | Africa |
| 491PA      | Thixotropic, isophthalic polyester resin with good water and chemical resistance | 12 | 77 | 3.5 | 77 | 17 | Africa |
| 489PA      | Thixotropic, isophthalic polyester resin | 12 | 76 | 3.5 | 77 | 17 | Africa |
| Topcoat ensures the protection of the back of the laminate
| 6SPAX      | Brush ISO topcoat with good resistance to water ingress | 9 | 75 | 3.5 | 75 | 18 | Middle East | Oceania | South East Asia |

*Availability - minimum and maximum batch/consignment sizes may apply. Subject to revision due to specific country regulatory changes. Products may not be available in all countries within stated region, check with local SB representative.
TYPICAL SWIMMING POOL CONSTRUCTION

Following extensive research and development on the use of pigments in swimming pools, Scott Bader now offers highly chemical resistant pigments to avoid colour fading, which is a major issue experienced in swimming pools.

Optimum construction

1. Gelcoat
2. Skincoat
2. Laminating resin
4. Topcoat

CHEMICAL RESISTANCE PERFORMANCE - CHLORINATED WATER AT 5% CONCENTRATION

The charts below show superior performance from Scott Bader’s Crystic® system for both gloss retention and colour shift vs. several competitive products.

Hypochlorite resistance (5% concentration - 2 months)

Hypochlorite resistance (5% concentration - 2 months)