

**OVERVIEW** 

# HIGH PERFORMANCE CRYSTIC® GELCOATS FOR SWIMMING POOLS

Scott Bader has long invested in market leading research and development from laboratory to application, combining superior pigment technology with our industry leading Crystic® performance systems for unrivalled performance.



## TECHNICAL PERFORMANCE BENEFITS

- Exceptional aesthetic finish and protection
- High quality coating
- Long-term performance
- Chemical resistance
- High performance reinforced laminate

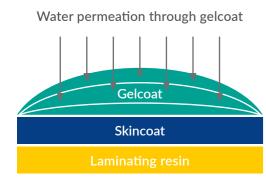
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## COMMON ISSUES WITH COMPOSITE SWIMMING POOLS

#### **OSMOSIS**



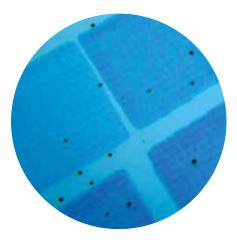
#### **Potential causes**

- 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**

PRODUCT	DESCRIPTION	GELTIME (mins)	TENSILE STRENGTH (MPa)	TENSILE MODULUS (GPa)	HDT (°C)	WATER ABSORPTION (mg)	AVAILABILITY*		
Gelcoat NPG/ISO ensures aesthetics and protection									
VE 661PAT	Pre-accelerated Bisphenol A epoxy, thixotropic vinyl ester based resin with good chemical resistance	20-40	80	3.4	100	35	•		
G 976 SMK	Spray ISO/NPG gelcoat with high chemical resistance and low colour fading	9	70	3.4	90	14			
G 997 SMK	Water clear spray ISO/NPG gelcoat used with glitters or chips for special effects	11	70	3.4	90	14			
Skincoat ensures chemical resistance									
VE 679PA	Modified vinyl ester resin with good chemical resistance and rapid curing	23	52	3.0	94	15	Middle East Africa  Oceania  South East Asia		
VE 682PA	Isophthalic modified vinyl ester resin for skin coat applications	17	74	3.6	82	16			
397PA	ISO/NPG polyester resin with high HDT	8	65	3.5	117	19	Africa		
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	Oceania South East Asia		
491PA	Thixotropic, isophthalic polyester resin with good water and chemical resistance	12	77	3.5	77	17	Oceania South East Asia		
489PA	Thixotropic, isophthalic polyester resin	12	76	3.5	77	17	Africa South America		
Topcoat ensu	Topcoat ensures the protection of the back of the laminate								
65PAX	Brush ISO topcoat with good resistance to water ingress	9	75	3.5	75	18	Middle East Africa  Oceania South Asia		

<sup>\*</sup>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.

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### 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

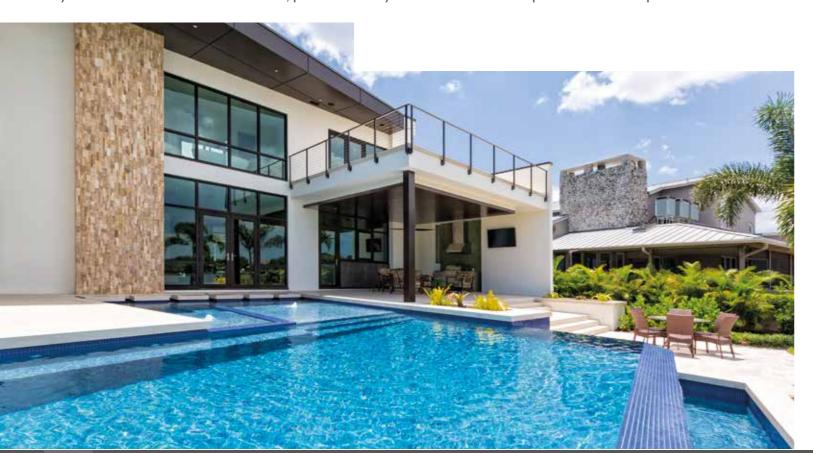
#### **RECOMMENDED COLOURS**

Our testing confirms light colours are recommended for the manufacture and relining of GRP swimming pools. Dark colours are not recommended.

The vast range of gelcoat and topcoat colours that are available have varying effects on surface temperatures under sunlight. White and light colours reflect the most sunlight whilst black and dark colours absorb it. Hence darker colours develop a higher temperature compared to lighter colours. As the temperature of the swimming pool water warms so does the gelcoat or topcoat.

Our topcoats contain wax which ensures they cure tack free. At high temperatures, dark colours are at risk of improper cure due to the wax remaining in the solution of the topcoat rather than forming a tack free barrier between the topcoat and the air.

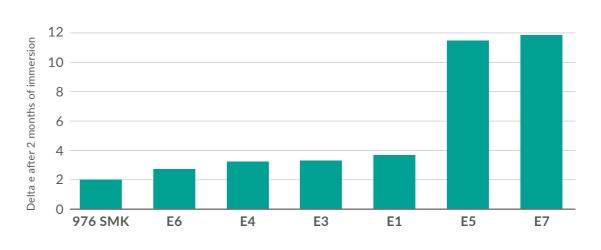
If you're unsure of the colour to choose, please contact your local Scott Bader representative for expert advice.



## CHEMICAL RESISTANCE PERFORMANCE - CHLORINATED WATER AT 5% CONCENTRATION

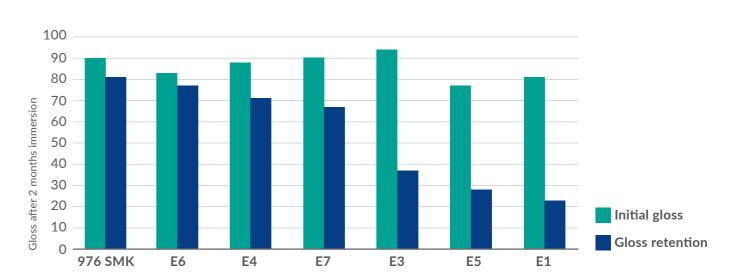
The charts below show superior performance from Scott Bader's Crystic® system for both gloss retention and colour shift vs. several competitive products.

#### Hypochlorite resistance (5% concentration - 2 months)





#### Hypochlorite resistance (5% concentration - 2 months)



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