

PRODUCT CODE: C411030

AQUAGUARD® XH GELCOATS are high performance, hybrid, cosmetic finishes for the production of FRP composite materials intended for service in demanding indoor and outdoor applications. These gelcoat finishes show excellent chemical, UV and weathering resistance properties, and feature a stone-like cosmetic appearance, with reflective highlights to create a highly decorative finish.

AQUAGUARD® XH GELCOATS are the ideal gelcoat choice for FRP swimming pool composite applications.

FEATURES

- Good flow/levelling properties
- One step application spray system to obtain an attractive reflective finish
- Rapid air release
- Highly resistant to pre-release
- Good sag resistance
- Highly resistant to tripping/wrinkling
- Excellent UV resistance
- Good gloss retention
- Excellent chemical resistance
- Excellent sprayability

BENEFITS

- Easy control of film thickness
- Productivity improvements and cost savings achievable, compared with other methods for producing this type of finish
- Minimal air entrapment
- Improved part quality
- Consistent film thickness
- Improved part quality. Increased tolerance to application variability
- Maintains original colour for longer following outdoor exposure
- Superior appearance of finished articles during service life
- Products maintain original cosmetic appearance for longer
- Can be sprayed using industry standard spray equipment, however modifications may be required

TYPICAL LIQUID RESIN PROPERTIES @ 23°C

Summer/Spray grade: contains chip

PROPERTY	TYPICAL VALUES	TEST DETAILS
Gel time	10 – 14 minutes	2% v/w MEKP NR20
Viscosity	5000 – 6000 cP	Brookfield RVF sp 4/4 rpm
Shelf Life	4 months	When stored in original closed container in the shade

Aquaguard® XH Gelcoats are available in a number of colours. Please refer to your local allnex Composites representative.

ADDITIONAL INFORMATION

Aquaguard® XH Gelcoats contain particulate materials (polyester chips) suspended in the gelcoat.

SWIMMING POOL APPLICATIONS

During the development of AQUAGUARD®XH Gelcoat, the product was tested and qualified to meet the critical requirements of Australian Standard AS1838, indicating suitability for use as a surface finish in FRP swimming pool constructions, utilizing standard salt water chlorination systems. As part of this R&D program, well cured panels faced with AQUAGUARD®XH Gelcoat were also subjected to accelerated chlorine exposure tests. Based on the resulting performance data, these gelcoats are regarded as suitable for use in FRP swimming pool and spa constructions, fitted with standard chlorination filter systems, and operating at ambient temperatures.

AQUAGUARD®XH Gelcoat is not recommended for use in elevated temperature pool or spa applications where the surface finish will be subjected to continuous, long term exposures to treated pool water above 32°C. Irrespective of operating water temperature, the chlorine level should be maintained in the ideal range of 1.5 – 2.5 ppm, and a maximum level of 5 ppm should not be exceeded. pH must also be maintained in the ideal range of 7.2 – 7.4.

AQUAGUARD®XH GELCOAT is not suitable for direct contact with Ozone – which is an extremely aggressive oxidiser. Alternative sanitiser systems involving Ozone generation can be successfully used with pool constructions surfaced with AQUAGUARD®XH GELCOAT provided that the ozone generation system is isolated and does not allow any ozone to come in contact with the Gelcoat surface.

Note: Over time, with increased exposure to climatic / chemical conditions, some lightening of colour and reduction in reflective properties of the cured Gelcoat may occur. This product contains dispersed particulate material which necessitates the removal of filters from spray equipment prior to application. (see application notes below).

APPLICATION GUIDELINES

Aquaguard® XH Gelcoats contain particulate materials suspended in the gelcoat. These materials are required to achieve the final cosmetic appearance. All filters from the equipment should be removed before spray up. Refer to your equipment supplier for assistance with modification if difficulty is experienced.

Temperature	15 - 30°C
Catalyst Level (MEKP, 9% Active Oxygen)	1.5 – 2.5% v/w
Film Thickness (wet apply 3 to 4 passes)	22 – 32 thou (0.55 – 0.80mm)
Coverage to achieve above film thickness	625 - 875gm ²

Gun Tip (Remove all filters) – 60 thou minimum tip size

AQUAGUARD IMPROVED PERFORMANCE

Water Resistance Rating



Chemical Resistance Rating



The higher the number ratings indicate better performance

TYPICAL MECHANICAL PROPERTIES IN CURED STATE

(FULLY POSTCURED CASTING)

PROPERTY	TYPICAL VALUE	TEST DETAILS
Density	1.19 gcm ⁻³	ISO/R 1183-1970
Tensile Strength	70 MPa	ASTM D638
Tensile Elongation	3.09 %	ASTM D638
Flexural Strength	129 MPa	ASTM D790
Flexural Modulus	3.55 GPa	ASTM D790
Volume Shrinkage	7-8%	ISO 3521-1976
Heat Distortion Temperature	89°C	ISO 75-1974
Barcol 934-1 Hardness	40	Barcol Impressor

STORAGE AND HANDLING

To ensure maximum stability and maintain optimum resin handling properties, Gelcoat should be stored in closed containers, away from heat sources and sunlight. The product be stored away from all sources of ignition. Stored resin quantities should be kept to a reasonable minimum and used on a first in/first out stock rotation basis. Prolonged storage, or unfavourable storing conditions, may cause separation, therefore agitation of the Gelcoat before use is recommended.

STANDARD PACKAGING

Mild steel drums (open top)
Mild steel pail

Refer MSDS before use