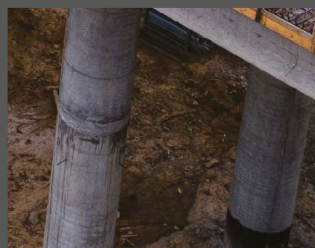
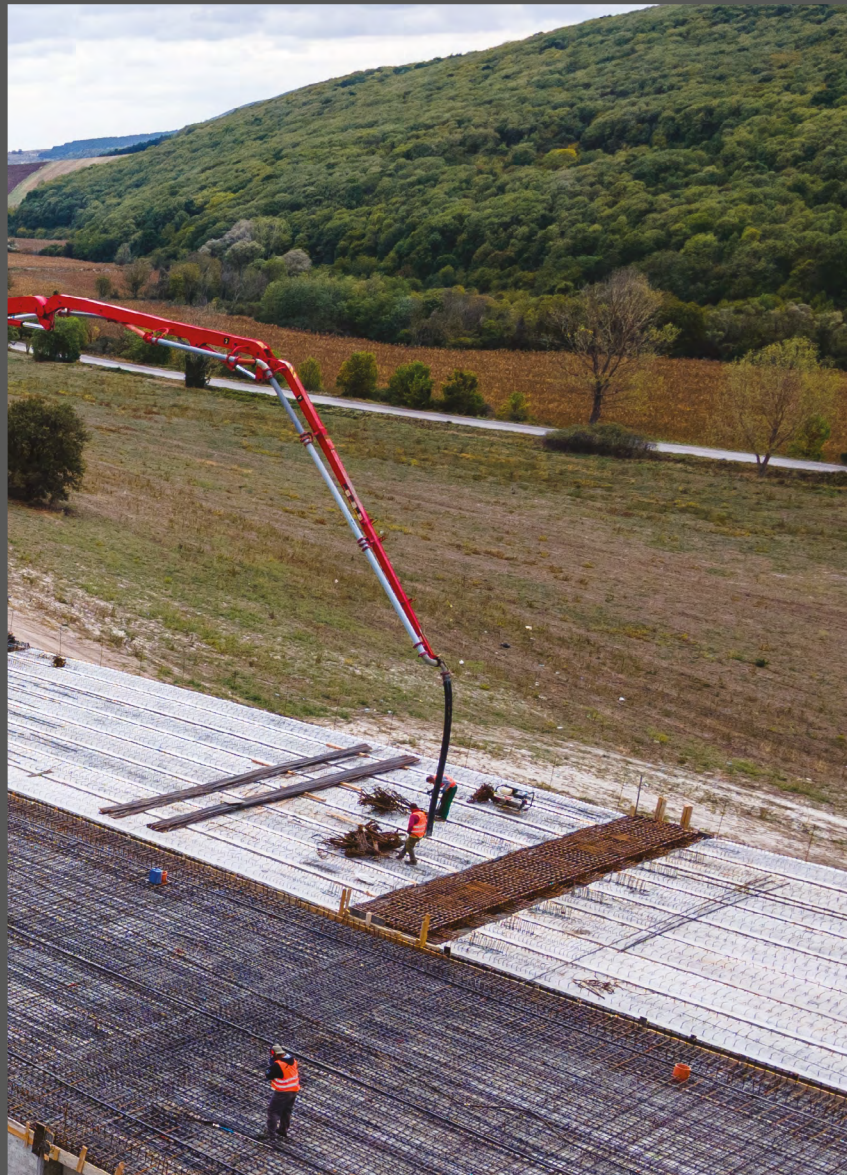




Rebar and Pultrusion

Urethane Acrylate and
Vinyl Ester resin technology





92%

OF CUSTOMERS RATE OUR
PRODUCT QUALITY AS
GOOD OR EXCELLENT.

Scott Bader Customer Survey December 2023

OVERVIEW

WHY SCOTT BADER?

Product performance

Since 1921, we have created products that people rely on, every day. Today, we continue to innovate the market, solving problems for industries and businesses the world over.

Technical expertise

Our Global Technical Support Team are among the best in the industry, with the talent, experience and knowledge to guide and develop the technical solutions you need.

Global supply

We offer global supply from eight manufacturing sites and 19 offices around the world, further supported by a global network of distributors.

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GRP REBAR

HIGH PERFORMANCE VINYL ESTER TECHNOLOGY



Crystic VE671 is a premium vinyl ester resin engineered for high-performance rebar applications. Renowned for its exceptional curing properties and superior durability, Crystic VE671 stands as the resin of choice for industry professionals seeking high-performance, reliability and efficiency.

Advanced curing capabilities

Crystic VE671 is designed to cure effectively with industry-standard hot moulding catalysts. These catalysts are optimal for the pultrusion process, providing flexibility and efficiency in the manufacturing process.

Catalyst flexibility

The curing temperatures and catalyst ratios of Crystic VE671 are flexible. Lower catalyst ratios necessitate higher curing temperatures, whilst higher catalyst ratios enable lower curing temperatures, offering flexible processing vs Epoxy.

Optimised manufacturing efficiency

Crystic VE671 can achieve typical line speeds of 3.5 meters per minute (mpm) with oven temperatures ranging from 150°C to 200°C. This efficiency ensures a streamlined production process, maximising output and reducing downtime.

Energy efficiency

Crystic VE671 is more energy efficient compared with epoxys, providing significant value in terms of life cycle costs and a lower environmental footprint.

Corrosion resistance

Extensive research has shown our high quality Crystic VE671 vinyl ester technology offers superior corrosion resistance when compared with other resin technologies, particularly in alkaline concrete environments. This characteristic is critical for end users focusing on long-term durability and life cycle performance.

Proven performance

Crystic VE671 has undergone rigorous testing to ensure long-term durability. Industry leaders have set high standards, and Crystic VE671 has successfully met and exceeded these stringent criteria.



PROVEN PERFORMANCE RESULT:

	PARAMETER	STANDARD	TYPICAL 10MM REBAR ROD
1	Fibre mass fraction	ASTM D2584	> 75%
2	Short-term moisture absorption	ASTM D 570	< 0.025 %
3	Long-term moisture absorption	ASTM D 570	< 0.125%
4	Glass transition temperature	ASTM D 3418	> 100 C
5	Degree of cure	ASTM D 2160	> 95%
6	Tensile strength	ASTM D 7205	> 930 Mpa
7	Tensile modulus	ASTM D 7205	> 55 Gpa
8	Alkali resistance with load	ASTM D 7705, Procedure B	Tensile strength retention by 87%



PULTRUSION

URETHANE ACRYLATE AND VINYL
ESTER RESIN TECHNOLOGY

Lightweight and high mechanical performance

Inherent toughness, good pigmentability for high quality component coloration. Bonds well to both glass and carbon fibers with the ability to run at above average line speeds to achieve high productivity output rates.

Wet bath and injection pultruder options

Our resin grades are formulated for both wet bath and injection pultruder processing systems, in fact, all Crestapol pultrusion resins achieve rapid wet out. Being highly reactive, they can achieve full mechanical properties without the need for post cure.

FST properties with efficient line speed

The high reactivity and inherent toughness of our resins means that even when heavily ATH filled for applications needing FST properties, they still achieve efficient line speeds and good mechanical properties.



Technical support

Our Global Technical Support Team are product and process specialists, with the talent, experience and knowledge to deliver value to customers through technical advice and problem solving.



PULTRUSION FOR FIBRE OPTIC CABLE RODS

URETHANE ACRYLATE TECHNOLOGY

Pultruded FRP rods play an important role in fibre optic cable applications, offering essential support and protection.

Our urethane acrylate resin, Crestapol 1214, with specialised UV curing additives, is perfectly suited for fibre optic applications, achieving line speeds in excess of 50 metres per minute whilst saving energy and costs compared to Epoxy Acrylates.

Compatibility

Suitable for all types of glass fibre rovings, including carbon and aramid, making it a versatile and easy-to-use material.

Enhanced productivity

Excellent wettability significantly reduces the 'loose fibre' defect commonly seen in pultrusion lines.

FST performance

The resin can be filled to impart high levels of FST performance for critical applications.

Secondary bonding

Crestapol 1214 facilitates easier secondary bonding to dissimilar substrates, eliminating the need for post-applied coatings for bonding to cable sheathing.

SOME OF OUR MOST POPULAR PRODUCTS:

PRODUCT	DESCRIPTION
Unsaturated polyester chemistry	
Crystic 199	Isophthalic resin with high HDT. Good chemical resistance meeting UL1316 3rd edition accreditation.
Crystic 1503.6	Isophthalic resin. High elongation.
Crystic 3061	Isophthalic resin. Good chemical and mechanical performance.
Urethane Acrylate chemistry	
Crestapol 1212	Good mechanical performance, low viscosity, and excellent FST performance with addition of filler.
Crestapol 1214	Good mechanical and FST performance with the addition of filler.
Crestapol 1250	Excellent mechanical performance with fast cure speed and compatible with carbon fibre.
Crestapol 1255	Good mechanical performance with very fast cure speed.
Vinylester chemistry	
Crystic VE671	Epoxy bisphenol A type. Excellent resistance to chemicals, corrosion and heat.

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