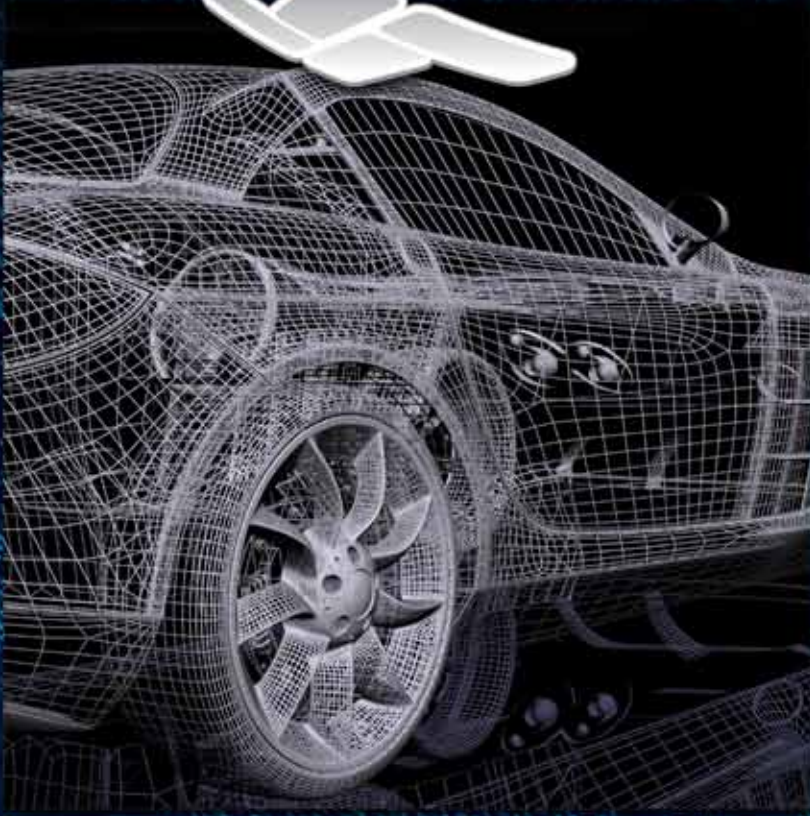




# REVCHEM

## Composites



**SOURCE BOOK** V.2







**SPECIALIZING IN FIBERGLASS  
BOAT CONSTRUCTION,  
WOOD AND FIBERGLASS  
BOAT REPAIR, PLUS A FULL  
SURFBOARD MANUFACTURING  
PRODUCT LINE.**

**CALL TOLL FREE: (800) 281-4975**

# REVCHEM.COM

## OUR MISSION

Revchem Composites is committed to increasing the productivity and profitability of composite fabricators.

## ABOUT US

Revchem Composites offers an extensive selection of materials, supplies and equipment to the composites industry. Our large inventory, technical expertise, on-site support, personalized customer service and fast, flexible delivery makes us a valuable partner to the composites industry.

We carry more than 4,000 products from over 200 suppliers. If we do not already have what you need, then we will promptly source the product you are looking for.

Our 6 west coast distribution centers supply customers throughout North America, South America, Europe and Asia.

Our technical sales team provides expert advice and on-site support. We are focused on meeting your individual needs.

For nearly 40 years, we have helped customers improve their processes as well as grow their businesses. We do what it takes to help keep your business profitable and relevant in today's ever changing environment.

***Revchem Composites has been Delivering Composite Solutions Daily since 1975.***

*A Full Spectrum of World Class Surface Coatings for High Performance Composites.*

# FIERCE GEL COATS.



## DURA-KOTE

### POLYESTER GEL COATS

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**REVCHEM**  
Composites

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## WHY SOURCE FROM US?

Revchem Composites is the West Coast's premier provider of composite materials, supplies, and equipment.

We have 6 West Coast locations to provide fast, and flexible delivery. Orders are often delivered by the next day! We ship products across the country and around the world.

Our technical expertise, sales support, customer service, and extensive product selection enable us to meet all of your composites needs.

Give us a try, you'll be glad you did!

- **RAW MATERIALS**
- **PRODUCTION SUPPLIES**
- **PROCESSING EQUIPMENT**
- **EXPERT TECHNICAL SUPPORT**







## *Adhesives & Tapes, Protective Equipment*

Revchem Composites distributes **3M Manufacturing & Industrial Products.**

- Acrylic
- Epoxy
- Urethane
- Hot Melt
- Cyanoacrylate
- Aerosol Adhesives
- Aerosol Chemicals
- Water-Based General Liquid Adhesives
- Solvent-Based General Liquid Adhesives
- Adhesive Applicators
- Specialty Sealants
- Single-Coated Pressure Sensitive Tapes
- Double-Coated Pressure Sensitive Tapes
- Adhesive Transfer Tapes
- Masking Tape
- Specialty Tapes
- Reinforcing Tapes
- Protective Tapes
- Safety Equipment
- Rubbing Compounds

The Industrial Adhesives and Tapes Division (IATD) design and manufacture extensive product lines for Converter Markets and Bonding Tapes, Specialty, Single-Coated and Masking Tapes, Adhesives, and Protective Equipment.

### **Filtering & Respirators**

Workers in numerous industries require protection from airborne particles and mists.

Sweeping, sanding, grinding, sawing, bagging, and welding – all create a unique set of conditions, especially certain environmental considerations such as heat and humidity.

3M's wide selection of filtering face-piece respirators help you match the respirator to your environment. 3M uses a variety of innovative technologies and features to help you meet your protective and comfort needs.



- Green Resins
- Marine
- Cultured Marble & Solid Surface
- Transportation
- Energy & Infrastructure
- Pultrusion
- Bathware
- Corrosion
- Cast Polymers

**AOC** serves the composites and cast polymer manufacturers with world-class resins, additives, material systems and technical support. As a privately-owned enterprise, AOC achieves success through long-term customer satisfaction. AOC is focused on helping each customer improve quality, increase productivity, and find new opportunities to grow.

AOC manufactures resins for every major composite and cast polymer manufacturing process and end-use market segments. AOC's broad range of resins are designed to meet specific requirements for ease of processing, end-use performance, and regulatory compliance.

AOC products are designed to help create synergistic material systems. Interdisciplinary teams engineer AOC systems for superior chemical compatibility, enabling them to become part of the technical support network that ensures the customer gets the maximum benefit.

Since its inception, AOC has invested more time, money and energy into technology than any other resin manufacturer. AOC uses new technologies that deliver unique benefits. AOC's Polymer Scientists turn opportunity into reality. Development work includes expanding AOC's "green" technologies, that include new resins that incorporate renewable resources. AOC research and development is also sharpening its focus on enhanced process and material technologies for wind energy systems.

**Altek**  
GENERAL PURPOSE  
LAMINATING RESINS

**Firepel**  
FIRE RESISTANT RESINS

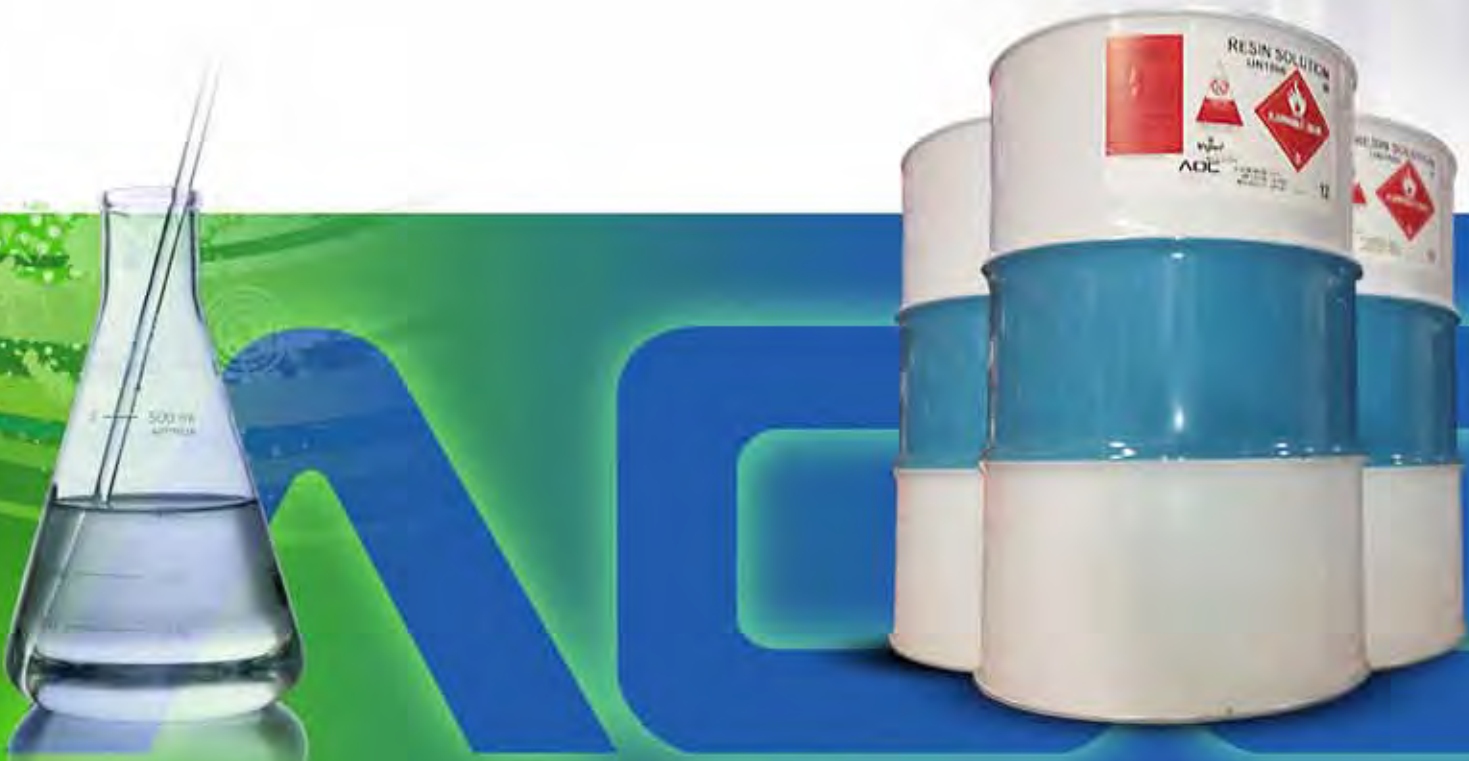
**Vipel**  
CORROSION  
RESISTANT RESIN

**Vicast**  
CASTING RESINS

**Hydropel**  
HIGH PERFORMANCE  
MARINE RESINS

**PulTru**  
PULTRUSION RESINS

**EcoTek**  
GREEN TECHNOLOGIES







# *Composites, Adhesives & Surfacing Solutions*

**Axson** and its' subsidiaries have been leaders in formulating, manufacturing, marketing complex industrial composites, specialty adhesives and polymer coatings since the 1950's.

By adhering to ISO 9001:2000 standards, Axson has established a repeatable model for developing and producing high-quality thermoset polymer systems. Axson has removed the guesswork, assuring customers consistent quality with each on-time delivery.

ADTECH Plastic Systems has a complete line of over 100 precision epoxy, polyester, and urethane plastic systems for Aerospace, Automotive and Marine applications. ADTECH is recognized around the globe for products designed by industry experts who are committed to uncompromising excellence.

Their reputation is built on the ability to provide epoxy laminating systems, polyester adhesives and repair materials, epoxy and polyester fairing compounds and set-fast adhesives. All of these products are effective custom solutions for Tooling, Manufacturing, Automotive, Aerospace and Marine Industries. They are known for innovative, solution-based plastic systems that are formulated to minimize production time while guaranteeing integrity of product and increased profitability.

Revchem carries a large selection of Tool Chemical Composite products which are a line of Axson. TCC is committed to manufacturing technologically advanced products and are fully capable of meeting requirements by computer-assisted design, rapid prototyping, just-in-time inventory and reverse engineering. They are equally committed to manufacturing and distributing products in an environmentally responsible fashion.





# High Performance Fabrics



**BGF Industries** is a leading US manufacturer of high performance fabrics and materials.

## Aerialite

Aerialite sets new heights in board technology. Since its inception, Aerialite has raised the bar for high-performance surf glass. The only fabric developed by board builders, Aerialite took two years of research and development to perfect. The result is a fabric that ensures the high-quality look and finish that surfers expect.

Aerialite displays improved wetout and clarity, which increases the laminate strength and provides a smoother, whiter surface.

## Benefits

- Reduces weight
- Increases impact resistance
- Reduces maintenance
- Incredible strength-to-weight ratio
- Hydrophobic: Does not absorb moisture
- Vibration Dampening: Energy absorbing makes for a smoother ride
- Hydrolytically stable: Resists chemical breakdown in water

## Aerialite X

A strategic partnership between BGF and specialty fiber manufacturer, Innegra Technologies® has produced a brand new Aerialite® innovation called Aerialite X. Aerialite X is designed with a range of fiber combinations from 100% Innegra fiber to Innegra hybrid designs. The latest advancement comprises Innegra fiber co-mingled as part of the fiber matrix in both glass and carbon. Fibers can be custom designed to enhance your product requirements. The result is an extremely durable fabric that withstands most intense conditions.

Available in a variety of weights and fiber combinations. Aerialite X gives products the edge on EXTREME with added flex and durability.



*Aerialite®*



*Aerialite X*



**BJB Enterprises** is a leading manufacturer and supplier of thermosetting polyurethane, epoxy and silicone systems worldwide. They also manufacture and supply hand-held production meter-mix-dispensing equipment, vacuum pump systems, and rotational casting machines, in which all can be customized to suit your needs.

Established in 1970, the main objectives at BJB Enterprises, Inc. have been to provide their customers with innovative product development, consistent quality products, and unsurpassed service. BJB is an ISO 9001:2008 certified company.

BJB products are used by a variety of industries and applications that include:

- Rapid Prototyping
- Production Parts
- Aerospace
- Artists
- Special Effects
- Automotive
- Medical Devices
- Theme Parks
- Foundry/Pattern
- Electronics

Revchem Composites carries BJB's full line of products.

## Urethanes

Two component polyurethane resin that range from very soft to stiff, rigid plastics.

- Castable
- Brushable
- Sprayable
- Foams
- Machine castable
- Translucent adhesives
- Coatings

## Silicones

Silicone casting rubbers used for a variety of molding and tooling applications.

- Platinum-based
- Tin-based
- Silicone accessories

## Epoxy

Laminating, surface coats, casting, adhesive, and potting epoxy systems for low and high temperature applications.

- Surface coats
- Laminating resin
- Casting epoxy
- Adhesive
- RTM/VRTM
- Infiltrant/Printed part sealer

## Other Products

Pigments, coatings and release agents as well as equipment.



## Quality Casting and Mold Making Materials



# Foam Boards & Polyurethane

## Precision Board Plus



Since 1973 **Coastal Enterprises** has been an innovator and leading manufacturer of urethane products used for dimensional signage, model making, marine applications and a variety of tooling applications.

Precision Board Plus High Density Urethane (PBLT) is a "closed cell" rigid polyurethane product made specifically for applications up to 200° F of continuous exposure. PBLT High Density Urethane is available in a wide range of standard sheet sizes and standard densities and can be cut or bonded into a variety of shapes for final machining or shaping.

Precision Board Plus High Density Urethane (PBHT) is a "closed cell" rigid urethane foam board made specifically for applications up to 300° F of continuous exposure. PBHT High Density Urethane foam board is available in a wide range of standard sheet sizes and standard densities. It can be cut or bonded into a variety of shapes for final machining or shaping. Precision Board Syntactic Urethane (PBST) is the latest addition to the Precision Board product line. Similar to PBL, PBHT & PBST is a closed cell rigid urethane tooling board that is available in a wide range of densities and sheet sizes.

### Common Applications for High Density Urethane

- Prototype Machining
- Thermoforming
- Prepreg Composite Lay-up Tooling
- Vacuum Form Tooling
- Tool Proofing
- Master Model Making
- Pattern Making
- Soft Tooling-all types
- Indoor & Outdoor Signage
- Sculptures
- Carvings

Coastal Enterprises will fabricate any size and shape to meet your specifications. This allows you to immediately start the machining process on arrival without bonding delay. Custom bonding not only reduces machine time but saves on material costs as well.

**CNC Tools Demand Precision.  
Insist on Precision Board Plus-  
High Temperature Tooling Board.**



*BMW Series 1 full scale concept designed and built by Alm Aladev and his team from the Art Center College of Design in Pasadena CA. Coastal Enterprises donated Precision Board Plus HDU tooling board for this project.*

The tighter cell structure of the new Precision Board Plus formulation has produced improved machining characteristics, resulting in more chips and less dust during cutting and machining, making for a better working environment. It also allows for faster CNC feed rates compared to wood, epoxy or alloy substrates.

Our new Precision Board Plus is made from 23.9% Rapidly Renewable Resources, with a Certified Carbon Footprint of 3:1, so you and your customers can be confident that one of the most dimensionally stable substrates for a variety of tooling applications is also an environmentally friendly one.

#### Ask for Precision Board Plus by name.

- Large inventory - ready to ship
- 15 Densities - 4 - 75 lb./ft<sup>3</sup>
- Large sheet sizes - thicknesses to 24"
- Custom bonded blocks
- International distributors





**Composite Resources** specializes in fiberglass boat construction, wood and fiberglass boat repair, and a full product line for surfboard manufacturing.

## MARINE

**Polyester Marine Lam Resin:** Moisture resistant, laminating/bonding resin for use with fiberglass cloth, woven roving or chop strand fiberglass matting.

### *Iso Marine Laminating Resin:*

ISO/Polyester Marine Laminating Resin is a high strength laminating resin that can be used with fiberglass cloth, woven roving or chop strand fiberglass mat.

## SURFBOARD

### *Clear Surfboard Epoxy Hardener:*

Clear Surfboard Epoxy is a UV resistant, non-blushing, high strength epoxy system designed for construction and repair of surfboards made with EPS and extruded Styrofoam blanks.

### *Polyester Surfboard Gloss Resin:*

Polyester Surfboard Gloss Resin is a blend of polyester resins designed for gloss coats or finish coats for surfboards.

### *Polyester Surfboard Sanding Resin:*

Surfboard Sanding Resin is a clear, UV stable, wax inhibited top coat resin. Ideal for sanding coats on surfboards, ding repair or any application where a clear top coat is required.

### *Polyester Surfboard Lam Resin:*

Polyester Surfboard Laminating Resin is clear and UV stable. Ideal for surfboard construction and repair.

### *UV Cure Polyester Surfboard*

#### *Sanding Resin:*

UV Cure Polyester Surfboard Sanding Resin is a clear, UV stable, wax inhibited top coat resin. Ideal for sanding coats on surfboards, ding repair or any application where a clear top coat is required.

### *UV Cure Polyester Surfboard*

#### *Gloss Resin:*

UV Cure Polyester Surfboard Gloss Resin is a blend of polyester resins designed for gloss coats or finish coats for surfboards.

### *UV Cure Polyester Surfboard*

#### *Laminating Resin:*

UV Cure Polyester Surfboard Laminating Resin is clear and UV stable. Ideal for surfboard construction and repair.

## CASTING RESIN

### *Polyester Clear Casting Resin:*

Polyester Clear Casting Resin is a water clear mass casting resin. It is specifically formulated to cure at a slower rate with less heat which will help to alleviate the stress cracks that can occur with large castings.

## FOAM

### *Polyurethane Foam:*

Polyurethane Foam is a two-part pour in place system. Designed for use by hand mixing, power drill, jiffy mixer, or through plural component polyurethane dispensing equipment.





**Coosa Composites** manufactures structural panels made of high-density, polyurethane foam that reinforced with layers of fiberglass. The no-rot and light-weight advantages of foam combined with the structural properties of fiberglass make Coosa panels an excellent replacement material for wood and other traditional core

materials. Coosa panels are used throughout the marine, industrial and transportation industries in structural and non-structural applications.

Coosa produces panels that range from 4x8 ft to 5x12 ft and can pre-cut kit parts for those that prefer an extra level of customized service.

## **NAUTICAL SERIES**

- High-density, polyurethane foam reinforced with layers of continuous strand fiberglass
- Nautical 15: Lightweight glass-reinforced coring panel that is highly economical. Thickness available 1/2" up to 2"
- Nautical 20: Economic alternative in the Nautical line that offers low stress semi structural strength Thickness available 1/4" up to 2"
- Nautical 24: One of Coosa's stronger and stiffer panels that can be used in low stress structural applications. Thickness available 1/4" up to 2"

## **BLUEWATER SERIES**

- High-density, polyurethane foam reinforced with layers of woven roving and continuous strand fiberglass
- Bluewater 20: Typically used as a semi-structural component Thickness available 1/4" up to 2"
- Bluewater 26: Ultimate high strength-to-weight ratio Thickness available 1/4" up to 2"

## **CFR SERIES**

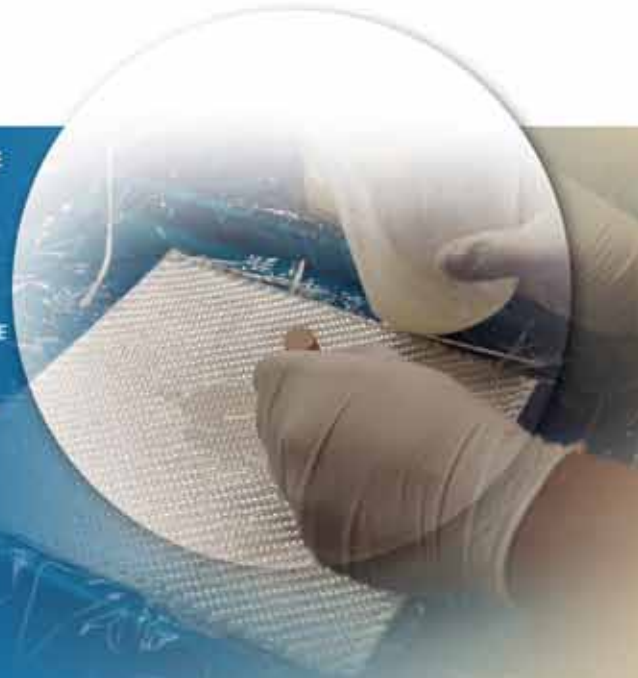
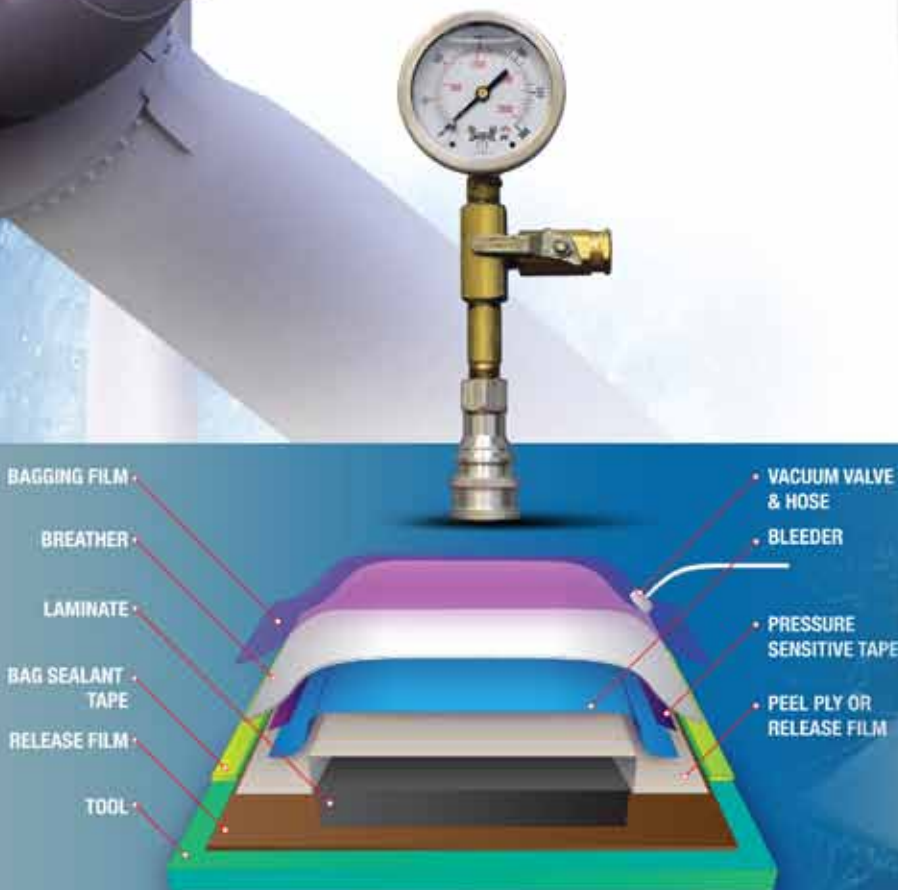
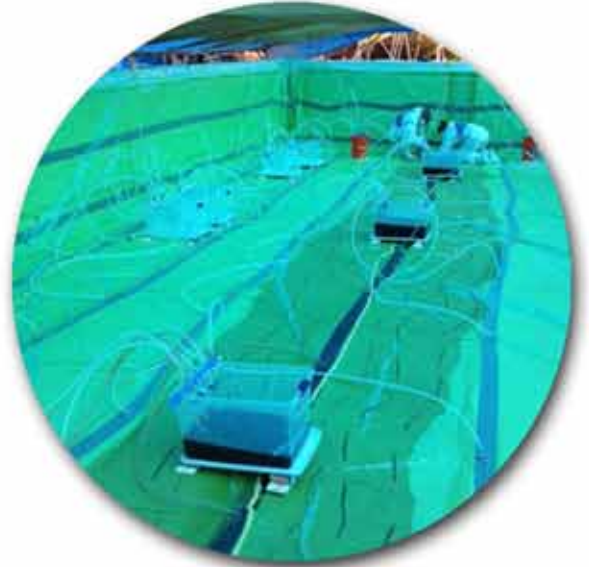
- UL94HB fire-rated approved. Panels are 40% to 60% lighter than plywood with water absorption less than 1.5% additionally; the panels are resistant to insect infestation and will not rot.



**Cytec Industries Inc.** is a global specialty chemicals and materials company focused on developing, manufacturing and selling value-added products. Cytec products serve a diverse range of markets including aerospace, adhesives, automotive, industrial coatings, inks, mining and plastics.

### Infusion & Vacuum Bagging

Vacuum Infusion is a fabrication technique that uses vacuum pressure to drive resin into a laminate. Vacuum Bagging is a technique that uses vacuum pressure on a composite laminate during the cure cycle. Pressurizing a composite lamination serves several functions. First, it removes trapped air between layers. Second, it compacts the fiber layers for efficient force transmission among fiber bundles and prevents shifting of fiber orientation during cure. Third, it reduces humidity. Finally, and most important, the vacuum bagging technique optimizes the fiber-to-resin ratio in the composite part.





# Polymer Foam & Balsa Structural Core Materials



The **DIAB** structural core materials range has been progressively developed and refined to meet the many and varied requirements of its worldwide customer base.

Three Factors Influencing Finishing Selection:

Analyzing the three main influencing factors:

1. Success Criteria
2. Manufacturing Process
3. Geometric Curvatures

As you begin to evaluate and make decisions based on these factors, it is important to understand that they relate in unique ways depending on the type of application - meaning that each factor can influence the others.

Despite their high strength performance in service, all DIAB core materials are particularly easy to work using conventional woodworking tools. They can be drilled, milled, turned and sawn to close tolerances. In addition to flat sheets, DIAB core materials are available in a wide variety of forms including

grid-scored materials for female mould construction and kits.

With ISO 9001 accredited manufacturing facilities in the United States, Sweden and Italy plus operating subsidiaries in eight countries, we are able to offer an unrivalled level of support irrespective of where they or their project are located.

## Divinycell

The Divinycell range of polymer foam cores is the most comprehensive available. Each grade has been developed so that it meets a specific set of performance criteria. This allows designers, engineers and composite manufacturers to select the most appropriate material for their specific application. If you need excellent FST (fire smoke and toxicity) properties then look no further than Divinycell F or P. Each grade is available in a range of densities so that you can fine tune your selection. All grades are also available in a range of finishes to facilitate installation, enhance component quality and to meet process requirements. For series production, all Divinycell cores can be supplied in ready-made construction kits.



Dura-Kote gel coats are among the most vibrant and durable gel coats available to the composites industry.

Dura-Kote has engineered their gel coats to make your life easier and your products even more appealing. They are focused on your need for quality, simplicity, speed, and outstanding technical support.

Dura-Kote makes selecting your gel coat effortless. If you require a color they do not offer in the standard color guide, they will develop the custom color you need matched perfectly. Time is valuable, and Dura-Kote has the technology and experience to fulfill your orders quickly and accurately.

Dura-Kote is an industry leader in custom color matching and they have very fast turn around time. To find out more about our custom color matching program, contact your Revchem Technical Sales Representative for details.



Registered  
to ISO 9001





# Sealers, Primers and Topcoats for Manufacturing Professionals



The Duratec Product Line is famous for providing unique surfacing options for composites production.

Duratec Sealers, Primers and Topcoats have defined quality for plug and pattern surfacing for more than thirty years. The product range includes:

- Polyester products for fast cure, easy sanding and great glossy surfaces
- Vinyl ester products provide heat stability up to 300°, plus great gloss transfer to tooling gelcoat

Duratec is an alternative to sanding gelcoat. Duratec primers, used in-mold, provide benefits by:

- Eliminating porosity
- Reducing part weight
- Providing an in-mold surface for epoxy laminated parts
- Duratec in-mold primers reduce surface defects and simplify necessary repairs

Duratec also provides unique products for resurfacing composite molds. The Duratec Vinyl Ester Primer and Topcoat provide a “better than new” surface for molds made with polyester, vinyl ester or epoxy laminate.

The Duratec Vinyl Ester Primers and Putties are easy-sanding fairing options for Marine Construction. The Duratec Marine System features tremendous water resistance, heat stability, and sanding advantages.

Other Duratec specialty products include:

- High Gloss Clear Polyesters for Interior Wood
- StyroSafe Resin for EPS foam
- Other air-cure products where high performance demands premium quality and performance



**Eteco, Inc.** is a producer of wide spectrum low, medium and high-density polyurethane flexible foams ("F" Series), flexible foams for prosthetics ("PF" Series) as well as specialty polyurethane flexible foams for shock absorption, noise and vibration dampening ("FD" Series). Also available in a spray version for sound and noise insulation polyurethane flexible foams ("SP F" Series). Eteco flexible polyurethane foams are widely used for seating, sound insulation, head rest, arm rest, head liners, instrument panels, sporting goods and toys.

## Rigid Polyurethane Pour Foams

Eteco provides various rigid polyurethane pour foams ("HP" Series) designed for processing through plural components low or high-pressure pour equipment as well as processing by hand-pour techniques. Rigid polyurethane pour foams are used for void filling, decorative and architectural parts, picture frame and molds, foam boards for tooling, roto molding and high-temperature resistant foam.

## Reaction Injection Molding (RIM) and Cast Elastomers

RIM and cast polyurethane elastomers are formulated and produced to the highest standards utilizing the highest grades of raw materials with a goal to provide superior physical mechanical properties, including excellent tensile and flexural strength, excellent chemical and abrasion resistance, toughness, tear strength and weather resistance. Our cast elastomers ("CE" Series) come in a wide range of hardness from 40 Shore A to high 82 Shore D with customized reaction profile to specification per customers request.

## Spray Elastomers and Coatings

Polyurethane elastomers, polyurea elastomers and coatings are formulated to the highest standards providing VOC free, low cost, high performance, superior protection, chemical resistance, water proofing, excellent abrasion and impact resistance. Our spray elastomers and coatings are used in applications such as truck bed liners, tank coatings, waterproof liners, secondary containments liners, architectural coatings, floor joint sealants, pipeline coatings, railcar coating, fire resistant coatings and many others.

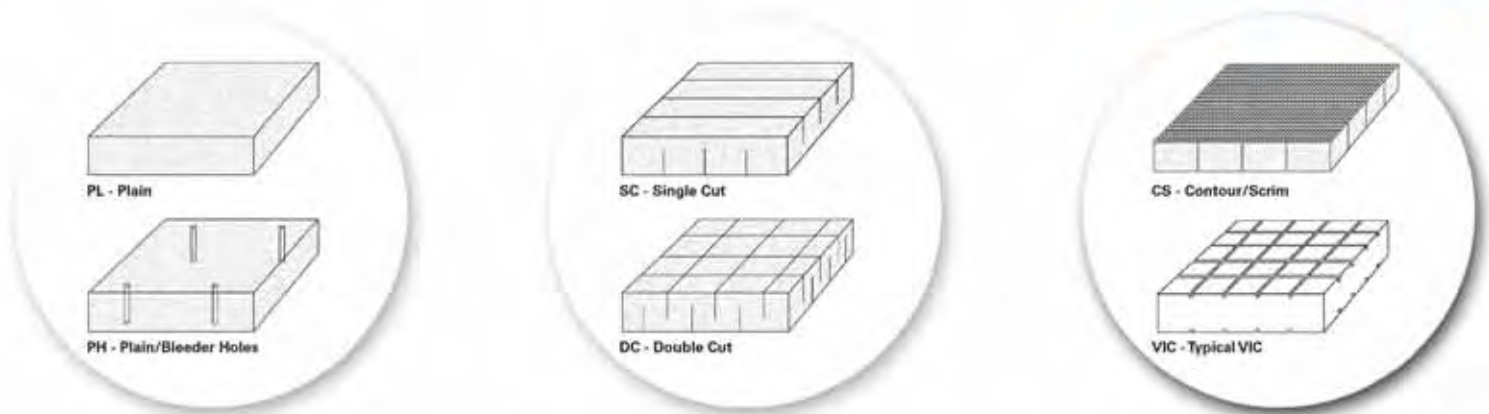
## Packaging Polyurethane Pour Foams

Eteco, Inc. provides low density, good shock damping, shrink free packaging polyurethane pour foams ("LP" Series) designed for processing through most plural components & dispensing equipment. Packaging polyurethane pour foams are used for pour-in-place custom made packaging or pre-molded packaging inserts.





# Core Materials for the Marine Industry



**Gurit:** Lighter, Stronger, Faster – three qualities that are more important than ever in a world increasingly focused on higher performance. Gurit has been delivering those qualities for over 30 years working alongside the world's top boat designers.

Gurit is a leading manufacturer and supplier of composite materials to the global boat building market – integrating structural design, materials science, manufacturing technology and process engineering to ensure a solution tailored to individual specifications and needs. The expertise and products of Gurit are now used in more of the world's top performance boats than any other manufacturer.

- Structural Design
- Materials Science
- Manufacturing Technology
- Process Engineering

This unique offering and turnkey solutions for the build of performance boats has made Gurit one of the leading developers and manufacturers of composite materials in this market.

Gurit offers unrivaled solutions to make boats stronger, lighter and faster. This combination of industry-leading, innovation and durable composites products with superior in-house technical expertise ensures best-in-class results.

The versatility and durability of Gurit products and the in-depth engineering knowledge deliver performance individually tuned to your specifications and needs. As a result, Gurit products are used in the majority of the world's high-performance boats.





## *Carbon Fiber & Reinforcements*

**Hexcel** has 40 years experience in carbon fiber manufacturing, with a vast Aerospace database and manufacturing facilities in the USA and Europe. Hexcel is an Intermediate Modulus fiber technology leader with an in-house Polyacrylonitrile (PAN) domestic supply and dedicated R&T facilities for both precursor and carbon fiber development.

Hexcel manufactures an unrivaled range of composite materials and engineered products. From carbon fibers and reinforcement fabrics that we convert into preregs – to adhesives, honeycomb materials and HexTOOL® tooling system.

### **HexTow® Carbon Fibers**

Standard Modulus and Intermediate Modulus fibers for weight-saving, stiffness and strength.

### **HexForce® Reinforcements**

A complete range of reinforcements for composites in carbon, glass, aramid and hybrids.

### **HexPly® Prepregs**

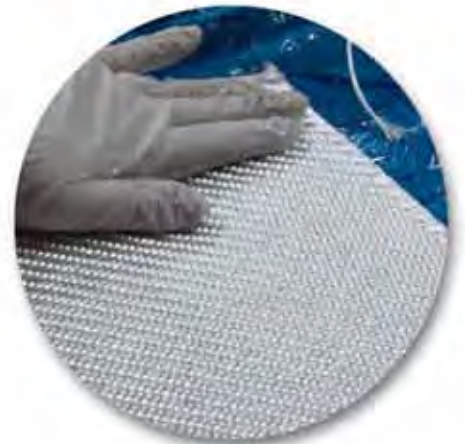
Resin-impregnated reinforcements for high strength, toughness and structural performance at low weight.

### **HexWeb® Honeycomb**

Metallic and non-metallic cores for exceptional stiffness with virtually no added weight.

### **HexTOOL® Tooling Material**

For light weight and high tolerance accuracy machinable tooling.





## *HexPly® Prepreg Technology*

**Hexcel HexPly® Prepreg Technology** Prepregs are specially formulated resin matrix systems that are reinforced with man-made fibers such as carbon, glass, and aramid. Hexcel has its own in-house supply of carbon fiber and world class weaving facilities for the development of optimum reinforcement technologies to complement the prepreg resin formulations.

Prepreg is the ultimate composite material. The thermoset resin cures at elevated temperature, undergoing a chemical reaction that transforms the prepreg into a solid structural material that is highly durable, temperature resistant, exceptionally stiff and extremely lightweight.

In the early 1980's prepregs were considered specialty materials, accounting for around 5% of an aircraft design and used only for non-critical secondary structures. Today prepregs are baseline for aircraft primary structures and constitute more than 50% of the airframe of some passenger jets. The growth in aerospace and other industries including energy, automotive, sports, and industrial machinery has followed. More recent applications benefiting from prepreg include subsea tubes for oil and gas exploitation and high pressure vessels. This growth in the use of prepreg composites over metal has been driven by higher strength to weight performance, better fatigue strength and greater freedom of design.



**Silmar® Resins** was acquired in 1993 by Interplastic Corporation and has been formulating isophthalic and orthophthalic polyester resins for over forty years. Silmar is the brand recognized as the leader in today's casting resin market. They also have a complete line of panel and molding resins.

The Thermoset Resins Division supports the Fiberglass Reinforced Plastics (FRP) and Cast Polymer/Solid Surface industries by directing all its technical inventiveness and manufacturing resources at FRP and Cast Polymer applications. Technical experts and their laboratory testing facilities work with you to formulate resins for new applications or troubleshoot manufacturing issues.

When combined with the extensive CoREZYN® brand products in Interplastic's Thermoset Resins Division, they are able to offer customers an impressive product line that can support nearly any FRP application. All products are supported by the most professional, well-trained distribution network in the industry.

The Thermoset Resins Division is a leading manufacturer of unsaturated polyester, vinyl ester, and specialty resins and gel coats marketed under the CoREZYN® and Silmar® brand names. These products are especially designed for the rigors of modern applications and closed molding manufacturing techniques. They meet the stringent standards of MACT and the EPA where necessary.

### Applications

- Automotive
- Bowling Balls
- Corrosion Resistant
- Cultured Marble/Onyx/Granite Effect/Engineered Stone
- Cured-In-Place Pipe (CIPP)
- Deburring Chips
- Fire Resistant
- Marine/Pool/Spa
- Sanitary Ware/Bathware
- Solid Surface
- Surfboard
- Transportation

### Products

Isophthalic Resins  
Low VOC Resins  
Orthophthalic Resins  
Putty  
Resins and Low Profile/ Low Vinyl Ester Resins  
Volume Enhancing Resins

### Process

Casting  
Laminating  
Panel  
Pultrusion







**IPS Polymer Systems, Inc.** has over 30 years experience at the forefront of polyurethane technology. With over 5,000 proprietary formulations, you can choose from one of their existing products, or we can help custom formulate to meet your specific needs.

## The Polyurethane Advantage

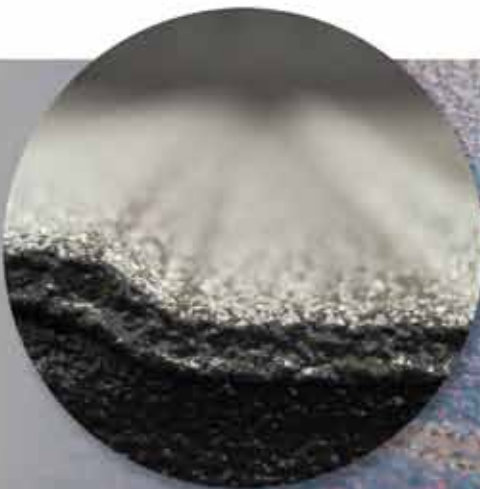
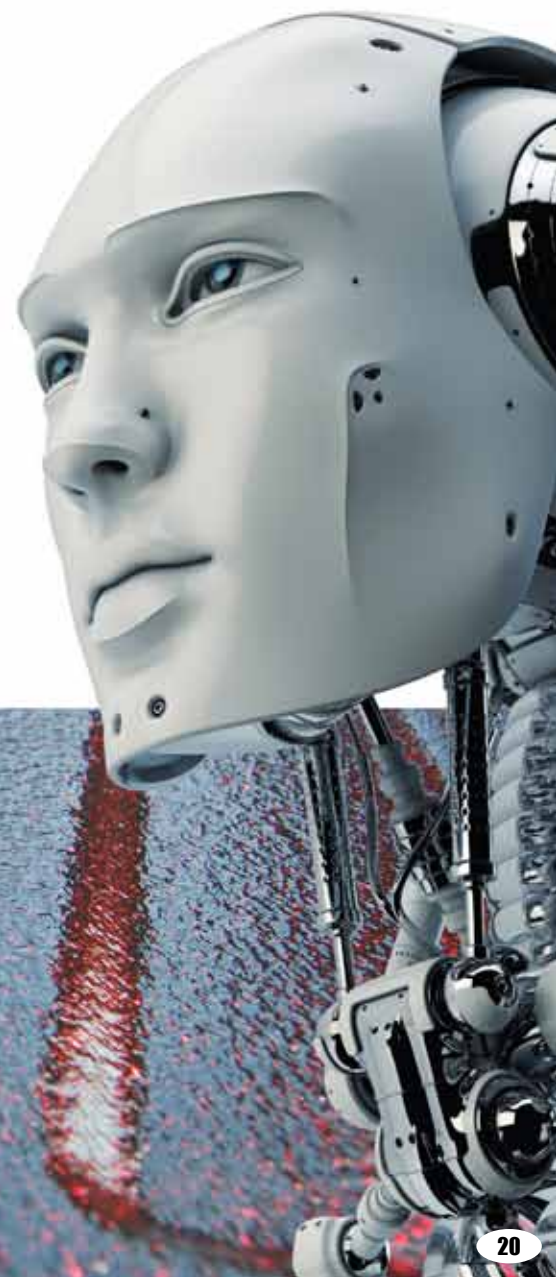
Polyurethane, a petrochemical-based material that substitutes for fiberglass, rubber, latex, silicone, epoxy, and many other natural and synthetic materials, is preferred in various applications for its high performance characteristics, reasonable price, environmental compliance, and manufacturing efficiency. In an increasingly competitive global economy,

manufacturers who can reduce their production, handling, or material cost even slightly while retaining or improving product performance can gain an advantage sufficient to increase market share.

Polyurethane products, including polyurea, polyaspartic, and other subcategories, are increasingly found to be cost-effective due to their durability and physical properties, and the demand for this versatile family of materials is growing.

Polyurethane chemical composition can be altered to achieve specific physical properties necessary to satisfy product design requirements. The liquid chemical compounds are sprayed, poured, or cast into molds, and the heat

generated by the chemical reaction fuses them into polyurethane products of various densities, textures, and strengths.



**PRO-SET®**

## *Laminating, Infusion & Tooling Epoxies*

**PRO-SET Epoxy** products are designed and formulated for manufacturing synthetic composite structures. There are both Standard and Custom products.

### **Laminating Resin**

Laminating resin may be combined with any PRO-SET Laminating hardener to create a "custom" epoxy blend. PRO-SET Laminating hardeners range from fast to extra slow and may be blended to provide even greater versatility with your custom processes.

### **Infusion Epoxies**

Infusion Epoxies accommodate a vast range of process needs with a single resin (also available in fire retardant) and four hardeners. PRO-SET Infusion hardeners range from fast to extra slow, and may be blended to provide even greater versatility with your custom processes.

### **Tooling Epoxies**

The state-of-the-art chemistry behind PRO-SET Tooling Epoxies makes them easy to use, saving on labor and yielding high-quality results. They blend quickly, spread easily, shrink minimally and cure within eight hours.

### **Assembly Adhesives**

Assembly Adhesives based on PRO-SET 175 Resin are paired with Fast (273), Medium (275) or Slow (277) hardener. They are suitable for most composite bonding applications.

### *ADV-176/276 SuperToughened*

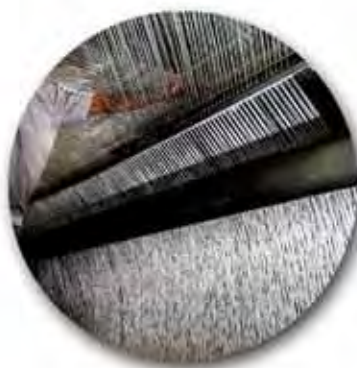
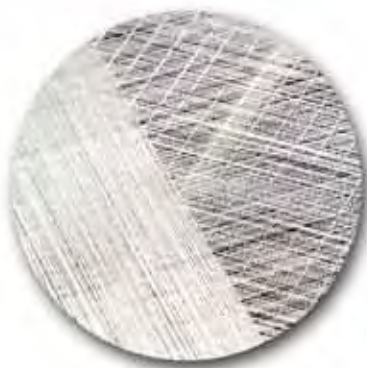
Adhesive delivers toughness and superior peel strength for heavily loaded applications and difficult-to-bond substrates including pre-preg, SMC, metals and most plastics.

*All PRO-SET Assembly Adhesives are packaged in cartridges, pails or drums, are available in Black (BK), Natural (NC) and Quality Control Green (QC) and are competitively priced.*

# THE NEW STANDARD







## *The Basis For Success –*

### *The Raw Materials For Saertex Fabrics*

**SAERTEX®** fabrics, also known as NCF (non-crimp fabric), are distinguished by their stretched fibers inside the individual layers, which optimally absorb mechanical forces such as pressure and tension.

SAERTEX® fabrics are available as stitch bonded constructions. Depending on the fiber type, surface load and layer combination, various resistances can be produced.

An optimized layer construction reduces production time and material requirements.

SAERTEX® Unidirectional complexes – in both 0° and in 90° direction. This stitchbonded material is produced with reinforcing threads, with a csm or fleece.

Possible widths: 30 – 3600 mm

SAERTEX® Bidirectional complexes in 0°/90° direction. As an option, a csm or fleece can be stitched onto the upper or lower side.

Possible widths: 30 – 3600 mm

SAERTEX® Multiaxial complexes with various weights, variable directions and arrangement of the individual layers. Angles between 22.5° and 90° possible.

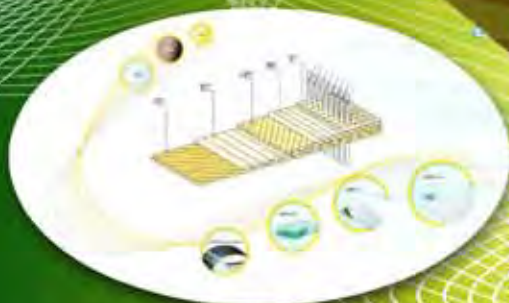
Possible widths: 30 – 2540 mm

SAERTEX® Chopped Strand Mat (CSM) made of cut glass fibers, without binder and chemicals with random fibre orientation. Stitchbonding gives these fabrics an excellent drapability.

Possible widths: 30 – 3600 mm

SAERcore® Stitchbonded, glued or needled sandwich complexes with any desired core materials, e.g. polypropylene as resin flow zonewich Complexes.

Possible widths: 30 – 3600 mm



**United Initiators** is a leading manufacturer of ketone (MEKP) and diacyl peroxides.

## **Ketone Peroxides**

These products are the workhorse organic peroxides of the ambient temperature cure processes. Included are Methyl Ethyl Ketone Peroxides (MEKP), Acetyl Acetone Peroxide (AAP), and Methyl Isobutyl Ketone Peroxide (MIBKP). These formulations enable almost every type of cure process.

## **Organic Peroxide Mixtures**

Some difficult cure applications require a blend of ketone peroxide (MEKP, AAP or MIBKP) with other organic peroxides, such as hydroperoxides, peroxyesters, and peroxyketals. We currently offer a range of commercial mixtures for ambient and elevated temperature cure organic peroxides.

## **Hydroperoxides**

Cumene Hydroperoxide (CHP), Dicumyl Peroxide (DCP) and t-Butyl Hydroperoxide (70%) are organic peroxides that have applications in composites curing, vinyl polymer polymerization and crosslinking.

## **Diacyl Peroxides**

Benzoyl peroxide (BPO) is an organic peroxide known for its unusual stability and performance in applications such as auto body fillers, specialty ambient and elevated temperature cure composites processes, and styrene polymerization. Products come in granular (water-wet), paste and liquid suspension forms, and all paste and liquid suspension formulations are free of any phthalate ester diluents (plasticizers).

## **Peroxyesters, Peroxyketals and Peroxydicarbonates**

An extensive line of these organic peroxide products are available from United Initiators for elevated temperature curing of polyester resin composites. (Availability varies by country and region due to transportation regulations.)

## **Hand Lay-Up & Spray Gun Lamination**

The most widely used manufacturing technique to produce reinforced composites parts in the construction, marine, and corrosion resistant markets, as well as a myriad of other end-use applications.

## **Cast Polymer**

Processes used to produce polymer concrete, synthetic marble, solid surface and other durable products for building and construction.

## **Filament Winding**

A process of glass fiber reinforcement for maximum strength attainment in the manufacture of pipe, tanks and other similar products.

## **Vacuum Infusion**

This process employs a vacuum to move resin into a laminate. It is used for aircraft wings, wind-turbine blades, large marine hulls and decks and other parts.

## **Pultrusion**

A continuous, automated process of pulling reinforcing fibers through a resin and into a heated die. Pultrusion is cost effective for producing high volumes of complex cross-sectional parts.





# Mold Release & Surface Care



**TR Industries** was founded to provide mold release products for manufacturing of fiberglass, reinforced plastic and cultured marble. From the initial plug to the mold and onto the finished part, the complete line of TR professional quality compounds, releases, polishes and related products are designed to produce the best finish possible at maximum efficiency and minimum cost. In response to the manufacturers' requests for after sale care, TR developed a line of surface care products. Expanding this to accommodate Marine and Recreational vehicle needs, TR further expanded its product offering to meet the needs of surface care in the 21st century lifestyle.

- Semi Permanent Release System  
Multi-Pull 900, 910, 920, 930
- Mold Prep Cleaner
- Sealer Glaze
- White Release Wax
- External Liquid Release
- Hi Temp Liquid Release
- Regular Compound
- Mold Release
- Fine Finish
- Super Duty Buffing Compound





## ADDITIVES & FILLERS

Aluminum Trihydrate  
Brominated Powder  
Calcium Carbonate  
Fish Eye Eliminator  
Fumed Silica  
Granite Chips  
Hemp  
Hi-Fibe  
Microballoons  
Surfacing Agent  
Talc



## ADHESIVES

Cyanoacrylate  
Epoxy  
Methacrylate  
Polyester  
Urethane



## CATALYSTS, INITIATORS & SOLVENTS

Acetone  
Heat Active Peroxide  
BPO (Benzoyl Peroxide)  
Cobalt  
Curing Agents  
Cumyl Hydroperoxides  
Lacquer Thinner  
MEKP (Ketone Peroxides)  
MMA  
Styrene  
UV Cure  
IPA

## COATINGS, GEL COATS & PIGMENTS

*Custom Color Formulations Available*

Acrylic Modified  
Epoxy  
ISO-NPG  
Hi-Gloss (Clear & Pigmented)  
Primers  
Sanding  
Vinyl Ester Fairing & Priming  
Tooling  
Vinyl Ester  
Pigment Dispersions  
Titanium Dioxide  
Translucent

## CORE MATERIALS & REINFORCING STRUCTURES

Balsa  
Core Mat  
Extrusions  
Flat Stock Laminates  
Honeycomb  
PVC Foam  
Reinforced Urethane  
Skinned Panels (Balsa, Foam, Honeycomb)

## TOOLING & MODELING BOARD

High Temp & Low Temp  
Epoxy  
Foam (EPS, Urethane)  
Urethane





# Solutions... Delivered Daily

## EQUIPMENT

Agitators  
Air Tools  
Chopper Guns & Blades  
Dispensing Systems  
Foam Dispensers  
Fluid Heaters  
Gel Coat Systems  
Mixers  
Pumps & Pressure Pots  
Resin Transfer Systems  
Spray Guns  
Spray Booths

## PUTTIES

Bonding  
Fairing  
Fillet  
Tooling

## REINFORCEMENTS

*Fiberglass (E-glass & S-glass),  
Carbon, Aramid (Kevlar) & Prepreg*

A/R (Alkaline Resistant)  
Chopped Strand  
Chopped & Continuous Strand Mat  
Gun Roving  
Milled Fibers  
Surface Veil  
Woven Roving  
Woven Fabric  
Multi-Axial Fabrics  
Uni-Directional  
Prepreg

## RESINS

*Epoxy, Polyesters (DCPD, Isophthalic,  
Orthophthalic), Vinyl Ester*

Casting  
CIPP  
Cultured Marble  
Custom Formulations  
Fire Retardant  
Flex  
High Temp/Room Temp  
Infusion/RTM  
Polymer Concrete  
Surfboard  
Tooling  
UV Cured

## SILICONE

Additives  
Platinum Base  
Tin Base  
Tooling  
Spray, Brush, or Pour

## URETHANE

Casting  
Clear Casting  
Elastomers  
Foam  
Hard Coat  
Hybrid  
Portable Spray Kits  
Pour & Spray

## SUPPLIES

Abrasives  
Brushes & Squeegees  
Buffing Pads  
Compounds  
Containers  
Drum Openers & Pumps  
Filters  
Gloves  
Grinding Disks  
Mixers  
Mold Releases  
Paper (Masking & Floor)  
QC Tools  
Rags  
Rollers  
Respirators  
Safety Equipment  
Solvents  
Scissors & Knives  
Tapes  
Tyvek Suits

## VACUUM BAGGING & INFUSION

Bagging Films  
Bleeders & Breathers  
Hoses & Valves  
Peel Ply  
Release Films  
Flash Tapes  
Sealing Tapes







# Composite Solutions... Delivered Daily

## 6 WESTCOAST DISTRIBUTION LOCATIONS

- ★ TACOMA WASHINGTON (253) 305-0303
- ★ PORTLAND, OREGON (503) 563-5117
- ★ STOCKTON, CALIFORNIA (209) 983-0236
- ★ SAN FERNANDO, CALIFORNIA (818) 988-6120
- ★ COSTA MESA, CALIFORNIA (949) 548-0292  
\*FORMERLY CRYSTALINE
- ★ RIALTO, CALIFORNIA (909) 877-8477



STOCKTON, CA

SAN FERNANDO, CA

COSTA MESA, CA

RIALTO, CA



Corporate Office: 2720 South Willow Avenue #B | Bloomington, CA 92316  
800.281.4975 Toll Free [www.Revchem.com](http://www.Revchem.com)

