

**COMPOSITES 20**  
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JANUARY 15-17, 2009 • TAMPA, FL

**2009 ACE and Pinnacle Award Winners**

**Awards for Composites Excellence (ACE)**

*sponsored by: AOC and Composites One*

<p><b>WINNER</b>  <b><i>Infinite Possibility</i></b>          Drop-In-Place FRP Bridges by          Composites Advantage</p>	<p><b>WINNER</b>  <b><i>Process Innovation</i></b>          2009 Pontiac Solstice          Coupe Rear Floor          Assembly by MFG</p>	<p><b>WINNER</b>  <b><i>Best of Show</i></b>          X-Flex™ Composite Blast          Protection System by          Berry Plastics Corp.          Tapes &amp; Coatings Division</p>
<p><b>WINNER</b>  <b><i>People's Choice</i></b>          JDWW 8030 Hood Assembly by          Ashley Industrial Molding</p>	<p><b>WINNER</b>  <b><i>Most Creative          Application</i></b>          Recyclable Panel for          Temporary Shelters by          AEWComposites Center</p>	<p><b>WINNER</b>  <b><i>Technical Innovation for          Corrosion Application</i></b>  <i>sponsored by: Ashland, Inc.</i>          FRP Abrasion/Corrosion          Resistant Blind Flange by          Kenway Corp.</p>
<p><b>WINNER</b>  <b><i>People's Choice The          Innovation in Green          Composites Technology</i></b>  <i>sponsored by: Ashland, Inc.</i>          by Bradley Express MG-2          Lavatory System, Bradley Corp.</p>		

**Pinnacle Award Nominees**

*sponsored by: Reichhold*

<p><b>WINNER</b>  <b><i>Best of Show – People's          Choice</i></b>          Flowstone Elite-Quarried Granite          solid surface by APPLAUS          Creative Solid Surface</p>	<p><b>WINNER</b>  <b><i>Most Sustainable Market          Growth &amp; Attractiveness</i></b>          Ice Cream Parlor (cultured          marble) by Classic Cultured          Marble</p>	<p><b>WINNER</b>  <b><i>Most Creative Application</i></b>          Swimming Pool Spillway by          Classic Cultured Marble</p>
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**WINNER**

**Best Installation**

Cultured Onyx Bathroom  
by Classic Cultured Marble

## Awards for Composites Excellence (ACE)

### X-Flex™ Composite Blast Protection System by Berry Plastics Corp.



X-Flex™ is an advanced composite film tape on rolls up to 48 inches wide for retrofit of CMU, brick and other interior surfaces of external walls to mitigate effects of catastrophic events (such as a bomb blast wave and flying debris from hurricanes or tornados) to protect occupants inside the structure. Constructed of an aramid scrim fabric sandwiched between two layers of an extruded polyurethane film, X-Flex features a peel-n-stick adhesive applied to one surface of the film with the adhesive designed to absorb significant energy during a blast event in conjunction with the overall flexibility of the material system.

### Drop-In-Place FRP Bridges by Composites Advantage



CA has developed and installed the first integrated drop-in-place FRP bridge system. Unlike conventional FRP decks on steel or concrete beams, CA's bridge superstructure consists of prefabricated panels with integrally molded beams and deck. CA uses a proprietary infusion process. This system eliminates the connection joints between deck and beams since structural issues occur where parts are joined. Because the system prefabricates more bridge components into one piece, cost premiums for composites are reduced. Road closure times and detour costs are reduced since the system can be delivered and placed quicker. System uses include vehicle, pedestrian or portable bridges.

### 2009 Pontiac Solstice Coupe Rear Floor Assembly, MFG



The rear floor is more commonly referred to as the trunk on this vehicle. It is a one-piece compression molded composite trunk. A specific gravity of 1.5 is achieved by utilizing Nano technology. The sheet molding compound is 073305-032. Corrosion resistance is critical due to exposure on underside of vehicle to environmental elements. Exceptional performance during three life cycle durability testing. (Gravel, Pothole, Thermal, Torsion, Water seal etc.) The rear floor provides storage, attachments points for outer body panels, hardware

attachments for electrical components and air ducts. The one piece composite structure replaces multiple metal stampings, thus reducing mass and tooling costs. Mass reduction improves fuel efficiency.

### FRP Abrasion/Corrosion Resistant Blind Flange, Kenway Corp.



This FRP Blind Flange is part of an FGD project. With a thickness of 5 3/8", the part warps significantly during open-molding, resulting in costly machining. So Kenway turned to vacuum infusion technology. Previously, infusing this thickness was not practical without compromising physical properties. This flange, however, is infused with Hetron 922 in a single operation, using nano-technology additives to control the exotherm. With CNC-kitted E-glass stacked in a proprietary temperature controlled mold, the flange is then infused at elevated temperatures in just 19 minutes. No post-machining is needed, as the flange exceeds the flatness tolerance of 0.0625".

### JDWW 8030 Hood Assembly, Ashley Industrial Molding



The hood assembly, four pieces, is made from a soy based SMC material, manufactured by CSP. The hood top, left and right side, and inner are all compression molded.

The design, and usage, of SMC hood provides the end user with a hood that possess greater heat resistance, versus an injection hood, and lighter weight and greater styling capabilities than one made from metal. The hood also allows for a simpler and less time consuming process of assembly.

## Recyclable Panel for Temporary Shelters by AEWComposites Center, Univ. ME



The AEWComposites Center at the University of Maine has developed a composite panel for temporary shelters that can be recycled when the structures exceed their expected useful life. In its initial application, the wood, glass fiber and polymer panels provide blast and disaster protection in temporary structures. When these buildings reach the end of their planned service life, the glass fiber-reinforced thermoplastic materials can be removed, chopped and formed into moldable panels used to make new products. The use of a thermoplastic polymer permits the recycled composite material to be shaped at relatively low energy-efficient temperatures.

## Bradley Express MG-2 Lavatory System, Bradley Corp.



The Bradley Express MG-2 lavatory system is an easy to install, easy to use, and easy to clean “green” hand washing solution. No touch infrared activation sensor promotes water conservation and cleanliness. The nDite technology uses photovoltaic cells to power the unit without batteries or electricity. The molded solid surface material, Terreon RE, is eco-friendly using 25% pre-consumer recycled material and bio-based resin.

## Pinnacle Award Winners

### Flowstone Elite-Quarried Granite by APPLAUS Creative Solid Surface



Designers are in love with granite, therefore, so is the consumer. Unfortunately, with granite comes health issues, maintenance and concerns about possible cancer causing radon. Building "green" has surpassed being just-a-catch phrase and is quickly becoming the industry standard. Now is the time for Flowstone Elite "Quarried Granite." Non-porous, maintenance-free, and radon-free, it also provides the elegance and warmth of granite. Flowstone Elite "Quarried Granite" is the essence of "green" and "consumer friendly."

### Swimming Pool Spillway by Classic Cultured Marble



Traditionally ceramic tiles or small marble pieces are used to create a spillway for a swimming pool. For this pool, solid surface material was used to fabricate the spillway from the template of the actual space available. This product has many advantages over the traditional spillway as solid surface products hold up well against pool chemicals, and do not fade in color. Most importantly, it can be fabricated in any shape and size to accommodate the requirement of the pool owner.

### Ice Cream Parlor by Classic Cultured Marble



The owner of the ice cream parlor wanted something non-traditional to decorate the base front of their counter top. They wanted a handmade appearance to enhance the atmosphere of their in-house mixing of ice cream and requested vibrant colors to coordinate with ice cream colors. We custom poured the 24-inch diameter shapes in various colors and applied to the base front. The edging around the base was done from trims made out of cultured marble. We also made a vessel bowl in an ice cream color to hold miscellaneous items on the counter. Small table tops were made out of cultured marble material. On entering the ice cream parlor, customers are astonished by the vibrant colors of cultured marble that catch their eyes. The attractive cultured marble product when applied to meeting specific needs of the customer in commercial applications has the potential for sustainable market growth.

### Cultured Onyx Bathroom by Classic Cultured Marble



This bathroom has a drop-in tub as the centerpiece surrounded by bullnose edge deck and vanity tops at different levels, including a windowsill, a shower pan and walls.