



## **IGLOO PRODUCTS CORPORATION GRABS HOLD OF SOFT GRIP HANDLE SUCCESS WITH GLS CORPORATION TPES**

### ***Ice Cube Marine Cooler Integrates Challenging Logo and Comfortable Grip Into Handle Redesign***

**Katy, TX (June 7, 2005)** - When the cooler industry's leading market share holder, Igloo Products Corporation of Katy, TX launched their latest product, the new Ice Cube Marine cooler, they partnered with GLS Corporation of McHenry, IL to gain an aesthetic and tactile advantage over the competition. To many manufacturers, making a simple overmolding change to a product's carrying surfaces is just a matter of course. But in the case of the Ice Cube Marine cooler, engineers and designers from Igloo, GLS, and toolmaker and processor Stellar Plastics of San Marcos, TX, were challenged to integrate a complex overmolding shape and very specific feel to the handle component of the Ice Cube Marine product line.

The Ice Cube franchise was introduced by Igloo Corporation in 2003, and was met with nearly instant success by a huge segment of the consumer market. Features of the freshly designed product include a compact cube shape, high capacity, legendary Igloo quality and the ability to keep perishable items cool for extensive periods of time. But, a market leader knows that a company cannot rest on the laurels of just one new product success; they realize that growth and further market penetration require forward-thinking innovative design enhancements.

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***Making the Ice Cube Better***

Mr. Marq Sanchez, Product Manager for Igloo Corporation, saw that it was time to update the Ice Cube line. Sanchez met with Igloo's New Product Development Team to see what options they had to make another splash in the consumer marketplace, and to enhance the product. The company always keeps close tabs on industry trends and what other players in the general market are doing. The team sensed that an opportunity lay in making enhancements to how the cooler felt and operated while in use, thus reinforcing the Igloo brand and quality.

Igloo Products Corporation went forward making a materials and design innovation to the Ice Cube Marine cooler's handles to enhance the comfort when the product is being moved, as well as to highlight the company's name. Since this is a primary point of contact for the user and an opportunity to add value to the product, the team opted to make the part more aesthetically desirable while also offering enhanced functionality. Since the Ice Cube Marine cooler has an all-white finish, the addition of a color to complement the clean lines and shape of the product was desired as well. Characteristics like a softer feel to the handle when loaded, a durable and UV resistant finish, coupled with an elegant logo placement were the desired outcomes for the project.

The team tested a number of TPE materials from a range of suppliers, and decided to partner with GLS Corporation owing to several factors. According to Sanchez, they included the service that GLS offered during the new product R&D phase and the geographic proximity to the

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materials and area technical service team. The final ‘tipping point’ was the new technology resume that the company offered and a deep client list of brand leaders that currently utilize GLS TPEs in their most successful products. Of course, elements like overmolding adhesion and the ability to fine-tune the Shore A softness to the hard substrate were important as well. And since the part required a detailed overmolded cutaway section in a deep blue, almost black finished color molded with a very smooth finish “hand”, the TPE’s physical properties were very important to the outcome of the project.

***Choosing a Distinct Material***

The soft thermoplastic elastomer grade Igloo Corporation chose, a KRATON® G7705-9001-01 material, is an easy-to- process, general-purpose polymer that offers a 44 Shore A hardness rating. The TPE is known for good overmolding adhesion to polypropylene (PP) substrates, and offering good ozone and UV stability properties, essential for products that will be used outdoors in bright sunlight and salt water environments. The KRATON material also has a very stable processing window, offering consistent melt and processing characteristics for easy use by the molder.

Having identified the soft touch materials they liked, and the design feature that would impart the most value and ‘pop’ to the product, Igloo Corporation’s next step was to coordinate with a toolmaker and processor. To obtain the best possible end product, Igloo chose to work with Stellar Plastics, Inc. of San Marcos, TX. Stellar is known for the ability to take a product from ‘art to

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part', with the capability to start with a design concept, make CAD design models, engineer and cut complex mold shapes, and then run the molds in the company's processing operation. The molder operates 10 traditional presses and 2 vertical presses, ranging from 22 to 300 tons. Brought on board early in the design phase of the project, the team at Stellar Plastics was able to impart their expertise and experience to solve what turned out to be a challenging overmolding application.

The tricky element in the handle design was the TPE section of the part. Ordinarily, this would have been a simple matter of matching overmolding adhesion to the substrate and then 'dialing in' the tool to impart a smooth surface finish to the end product. But, in this case, Igloo wanted to utilize the TPE in an innovative way: as a showcase for the Igloo brand logo.

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***Branding the Handle***

When a company puts its brand on a product, it is showing the world the product's marque of distinction. Thus, it was vital that the Igloo brand, done with a TPE overmold, be absolutely flawless. Stellar Plastics President and owner, Fred Smith, remarked that the challenge of the logo in the handle presented an "ingenious thing to accomplish", and a tough task for any processor to pull off successfully. Smith notes that Stellar Plastics had experience working with GLS TPEs before, in a large volume molding operation, so they were confident that the materials would work well with the PP substrate. Since the logo is displayed in relief, or cut away on the PP substrate, making sure that the bonding and adhesion characteristics were very strong was important. Owing to the logo cut out element in the handle, the TPE would have a tendency to slip or roll, so mechanically anchoring the overmolded section to the handle was critical to the design. Stellar concentrated on making the logo feature a highlight of the product, and designing a tooling and processing solution to showcase the overmolded TPE logo.

The Stellar company team began by focusing on engineering quality molds for the project. They designed the tool to prevent marring, thereby preventing damage to the part- an important consideration since the handle required a high polish finish. During initial tests, the part displayed some flashing, so Stellar changed the shutoff in the mold to prevent this and thereby stopped the TPE migration into the substrate. The shape and configuration of the Igloo logo was sacrosanct, so the company modified the radius and shutoffs in the mold- plus engineered an angle into the part design that met the aesthetic goals for the project.

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Despite these precautions, there were additional difficulties while ramping up for production. The part requires a 4-cavity tool, with both a substrate tool and a separate overmolding tool to mold the handle properly. Stellar had to do some tweaking and fixes to get the substrate tool, which was producing dimensionally stable parts from the PP, to 'mesh' with the overmolding tooling that places the Igloo brand, in TPE, on the handle. Because the time-to-market constraints were tight on the project, Stellar was simultaneously designing tooling, debugging molds, and making the adjustments needed to get into production quickly. Making the final touches to the handle molds took some time, but in the end the entire project took just under 3 months from conception to going into production. This was inefficiency in the initial going, but once the tooling was squared away things went smoothly. "Whatever it takes to support a customer, we do," Smith noted. Although there were tight timeframes, lots of design details, and the concept, materials sourcing, and toolbuilding took place almost simultaneously, production and part quality goals were met. Adding to the timing challenge was the product release in December, which left Stellar working during short weeks and personnel vacations. They prevailed, and the end product was, as Igloo Corporation's Sanchez described, "an elegant accent that made the cooler more comfortable to carry and proudly displayed the company brand in a subtle and sharply contrasted layout."

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***Strong Seller in a Tough Market***

Smith attributes the success of the project to the overall cooperation between Igloo, GLS, and his team of engineers. He notes that GLS Corporation has proved itself to be a “very service oriented company that provides a product that is very consistent and easy to run”.

Sales exceeded expectations at Igloo Products Corporation when they released the new line of Ice Cube Marine coolers to the market in March 2004, at a \$29.99 MSRP. In the months after the launch, consumers reacted favorably to it, setting record sales levels. Sanchez attributes the strong response to the Ice Cube Marine to numerous features. The black TPE and the subtle branding of the product displayed on the store shelves offer something new with different details and benefits as compared to other coolers. The handle remains comfortable in the hand even with a full load versus other brands. As a result of the benefits that the GLS TPEs brought to this project, Igloo Products Corporation is increasing the volume of their order for 2005 and into 2006.

Igloo Corporation, found in 1947, is the world’s leading manufacturer of personal ice chest, beverage coolers, soft-sided coolers, and thermoelectric coolers. Igloo is owned by Weststar Capital, a California-based venture capital firm. For more information on Igloo coolers, contact Sales at Igloo Products Corp., 777 Igloo Road, Katy, TX 77494, Tel: 713-584-6665. Fax: 713-584-6007. E-mail: [sales@igloocorp.com](mailto:sales@igloocorp.com). Web: [www.igloocoolers.com](http://www.igloocoolers.com).

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GLS Corporation has supplied elastomeric materials to the industry since 1979. In 2001, the firm formed a strategic alliance with TPV manufacturer DSM. Later, in 2002, GLS entered into another alliance with GE Plastics to market a new line of Softfx™ hard engineering resin/soft TPE overmold combinations. And, in the Fall of 2002, they developed a series of specialty rubberized TPU alloys to be sold under the VERSOLLAN™ trade name. Other GLS products offered for molding and extrusion include KRATON® thermoplastic rubber compounds; DYNAFLEX® thermoplastic elastomer compounds; VERSAFLEX® TPE alloys, and new generation VERSALLOY® elastomer alloys, which exhibit enhanced performance properties. Applications for these materials are found in medical, sports and leisure, automotive, lawn and garden, appliance, kitchen tool, power tool, personal care and industrial markets, among others.

For more information on KRATON G7705-9001-01 or other GLS Corporation TPE products, contact: Marketing Department, GLS Corporation 833 Ridgeview Drive, McHenry, IL 60050-7050. Telephone: (815) 385-8500 or (800) 457-8777. Fax: (815) 385-8533.

E-mail: [info@glscorp.com](mailto:info@glscorp.com) Web Site: [www.glscorp.com](http://www.glscorp.com).

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VERSOLLAN is a trademark of GLS and contains high performance thermoplastic urethanes.**



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