Thermoset Food Service Platter

Molder: Plastic Craft Inc.

Moldmaker: Eagle Precision Tool

Material Supplier: Bulk Molding Compounds, Inc.

Designer: Keith Nybakke - Nuhill Technologies Inc.

OEM: Service Ideas

Product Description

This unique food service tray provides the restaurant industry with a product solution that will reduce the risk of heat transfer from extremely hot skillets, onto the server's hands. In addition to the safety aspect, this product is light weight, has an upscale look, and will out perform the traditional wooden serving trays in harsh commercial dishwashing environments many times over. This product performance has resulted in considerable performance and cost advantage for today's restaurant owners.

Why is the product innovative?

The Service Ideas' "Hot Solutions", Food Service Tray was developed in response to the difficulties and risks involved with serving a meal that requires a hot, cast iron skillet be placed on a table in front of restaurant patron. Any ‘respectable fajita presentation' is commemorated by sizzling sounds, delicious aromas, and the appearance of a rising cloud of steam."The heat in the cast iron must be high enough to support the sizzle for several seconds while the food travels from the kitchen to the table. That amount of heat can be dangerous to people and damaging to tables", stated Keith Nybakke (http://www.nuhill.com/), the inventor of this innovative fajita solution."When the meal is complete and the service items return to the kitchen, everything must then be sanitized in preparation for the next patron who orders a fajita.These factors present us with ‘the fajita problem'." The common solution has been a plywood under-liner for the cast iron skillet. Unfortunately, plywood does very little to hold heat in the cast iron, nor does it adequately protect tabletops from excessive temperature. In fact, testing showed that work surfaces can reach in excess of 150°F within a minute of initial contact.Many varnishes are damaged at these temperatures and tables may remain dangerously hot to the touch after service items are removed. Adding to the ‘fajita problem' is the fact that plywood under-liners scorch when in contact with heated cast iron and will break down and delaminate when repeatedly soaked in hot water and dishwashing reagents. This accelerated rate of degradation drives replacement requirements and elevates costs. According to reports, restaurants are getting about a month of high volume service from plywood under-liners. The Service Ideas ‘Hot Solutions' Food Service Tray was the innovative answer to ‘the fajita problem'.A specialized molding process was developed to allow food contact safe, melamine free BMC 1000 and the newly developed, thermally insulative BMC 845 to be molded together into a single, food service solution (see inset photo). BMC 845 provides exceptionally low thermal conductivity (.12 W/m °C, approximately 1/8 that of typical thermoset composites). BMC 845's unique insulative properties are derived from its low molded density, which is less than half that of water. In addition, BMC 845's heat capacity, the amount of heat needed to raise temperature by one degree, is also very low. As a result of both properties, a molded block of BMC 845 material heated to 250°F in an oven can be picked up bare handed without causing a burn. Melamine free BMC 1000 provides FDA Title 21 food contact safety. The molded part design constrains the hot cast iron without creeping or scorching, effectively protecting both the server and the patron from contact with the skillet. The low density of the BMC 845 (BMC 845 is securely molded into a "pocket" designed into the bottom of the melamine free BMC 1000 under-liner) resists the transfer of heat to the tabletop. Simultaneously, BMC 845's specific heat properties protect

servers' fingers while in contact with the multi-material, skillet holder. This ‘BMC sandwich' can be repeatedly exposed to the high-temperatures, steam and reagents associated with commercial dishwashers without degrading its engineered properties. BMC maintains its high gloss aesthetic while providing a less expensive ‘product life option' to the traditional plywood underliner it replaced. This unique technology offers the food service industry a safe, durable answer to ‘the fajita problem'. The BMC 1000/BMC 845 over-molding technique earned the ‘Innovation in Thermoset Processing' Durability Award during the Society of Plastics Engineers' (SPE) Annual Thermoset Conference held in Madison, Wisconsin. The ‘Innovation in Thermoset Processing' category evaluates a technique or process that reduces cost, improves product quality or creates unique fabrication options. This process was developed and is performed by Plasticraft Corporation (http://www.plasticraftcorp.com/) for Service Ideas (www.serviceideas.com).