

## **Fiber Abrasive Deburring Improves Quality and Productivity for Manufacturer of Medical Plastics Products**

Fiber abrasive brushes are typically used to deburr extrusions and castings made from aluminum and other metals. Now these alternatives to wire and other highly abrasive brushes are being used to deburr molded plastic pieces for the medical products industry.

Abtex Corporation is supplying its Bradex® fiber abrasive brushes to a company that manufactures plastic trays for surgical and medical kits. These trays are thermoformed using medical grade thermoplastics that can be sterilized before packaging. Previously, removing the burr that results from the molding process had been a hand operation. This was time consuming and the quality depended on operator skill. Today, the company uses Bradex 2" diameter, maximum density, hex-drive, disc brushing tools at a speed of 1,500 RPMs. Trays are deburred, as a final step in the CNC machining process, at a feed rate of 100 inches/minute.

Fiber abrasive brushes are filaments of heat stabilized nylon, which has been co-extruded with an abrasive grit. The grit is impregnated throughout the filament, as well as being exposed on the external surfaces. As the filament wears, new abrasive grit is exposed. The filament is, in effect, self sharpening. Abrasive action occurs on both the tip and the sides of the filament. As the fiber strikes and wipes against the surface, the flexible fibers break the edges, even of irregularly shaped objects.

Abtex's unique anchoring system imbeds the fibers in a resin body. This increases the tool's durability without compromising its integrity. "We are pleased," says Abtex Corporation's Mark Fultz, "to have an opportunity to share metal manufacturers' deburring secret with the plastics industry. We look forward to contributing to the bottom line of more plastics companies with the expansion of this application."

Abtex operates an in-house applications laboratory to which customers and potential customers submit work piece samples for evaluation. An Abtex application specialist processes the parts to determine the best deburring method. A results report and, usually, the physical samples are returned to the customer for consideration. This testing allows customers and potential customers to see the end results first hand. Abtex offers this service at no charge. Besides providing customers with a completely engineered process, this service allows Abtex to engineer and fabricate abrasive products to meet many unique requirements.

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