plasticstoday.com
Home of Modern Plastics and Injection Molding
News Feed

Today's Headlines

October 26, 2009

RF welding of polyolefins? Yes, you can

A proprietary technology that enables the joining of plastics previously deemed impossible to RF weld without plasticizers or additives will now be available for license. Genesis Plastics Welding, a leading contract manufacturer of radiofrequency (RF) welded products, is now offering the proprietary ecoGenesis plastics-sealing technology it developed in house to the broader plastics public. The company says ecoGenesis can allow processors to choose materials other than polyvinyl chloride (PVC) and polyurethane, since traditional RF welding has been limited to such polymers due to their high dielectric loss factors. With ecoGenesis, low-loss polymers like polyethylene and polypropylene can be used since they'll react to the new RF welding just as PVC would.

"Traditional RF welding has been limited to the use of polymers with high dielectric loss factors, such as PVC and PU," explains Tom Ryder, vice president of sales and marketing for the company. "ecoGenesis actually causes more eco-friendly low-loss polymers, like polyethylene and polypropylene, to react to RF welding just like PVC."

For more than 30 years, Genesis has offered thermoplastics welding, specializing in the development and licensing RF technologies that can join polar and non-polar plastics. The company operates 25,000 ft^2 of production space with more than 18 RF welding systems. Genesis says an RF machine equipped with ecoGenesis technology is capable of joining materials thinner than .0055 inch, getting as thin as .00025 inch. With its proprietary technology, instead of a buffer, a mechanical catalyst makes RF energy visible to non-polar materials and weldable in a number of substrates, including film, foam, wovens, non-wovens, and more, eliminating the need for additives.

Ryder added, "ecoGenesis allows manufacturers to meet changing market demands, address environmental concerns, potentially lower their manufacturing costs, and increase product performance while using their existing RF systems." Manufacturers with RF sealing equipment can apply for a license to employ ecoGenesis in their own facilities.

The company says the technology is adaptable to existing, stabilized RF machines (27.12 Mhz), thus expanding the use and life-cycle of most RF sealing equipment.