Executive Summary MULTI-PORTION STATIC MIXER<br>PARISE RESEARCH TECHNOLOGIES<br>Suffield, Connecticut<br>Contact: Ronald J. Parise, Ph.D.<br>Phone: (860) 668-4599<br>riparise@hotmail.com

Static mixers are a widely used disposable plastic device for blending multi-component resins, epoxies, dental impression materials, medical casting compounds, etc. This new device has four mixing blades instead of the standard two-bladed mixers that are available today. This new product mixes the components in half the mixing length, causing less waste of sometimes very expensive materials (typically those used in the medical field, where doctors may be reluctant to use the old device). Reduced waste will increase the demand for the product because hand mixing is used in many cases to save expensive components.

The new mixers are produced in a continuous process while the current mixers are made in a labor-intensive batch process. The static mixer manufactured in the continuous process is a better product for automatic assembly in secondary operations needed for as-sold finished product. And the continuously produced static mixer is less expensive to make than the batch produced item.

This is a compact, disposable item with tens of millions ( 40 MM to 50 MM ) of units used annually, then discarded. The mixing of resins (dual components) is more efficient for a given number of mixing stages. The number of mixing stages is reduced and the length of the mixing tip of the as-sold finished product is reduced; therefore the amount of waste resin is reduced.

The utilization of the static mixer goes across a broad spectrum of users such as medical professionals (MDs and dentists), homeowners, tradesmen (builders), industrial workers (automotive), and electronics firms - many people and professions use the device, hence the demand for the product is continual and very high.
U.S. Patent Nos. 5,936,193 and 6,162,985.

Will license/sell technology to build a split-die set and radially driven extrusion head to manufacture the multipaddle static mixer.

## EXTRUSION HEAD with SPLIT DIE SET and CONTROLLER



