



# PULVERIZED RESIN QUALITY

THE ROLE IT PLAYS IN  
MANUFACTURING ROTOMOLDED PARTS



Pulverizing is one of the key considerations in manufacturing Rotomolding resins and is arguably one of the greatest factors in determining whether a molder is successful at producing excellent quality parts or not. At Entec, we are focused on consistently producing the best particle size distribution with tight tolerances in order to supply our customers the absolute best pulverized resins in the market. We take pride in knowing that we are providing our customers with a product that will help them to be successful.

The majority of the rotomolding market prefers a 35 mesh resin to manufacture their parts with. This provides a good distribution of particle sizes to cover a wide range of part designs and complexities. At Entec we believe that we have our pulverizing processes down to a science. Blade design, blade gaps, manufacturing hours on blades, mill temperatures, speeds, and preventive maintenance schedules all play a major role in our success.

If any of the pulverizing processes are lacking discipline or if the pulverizer isn't being maintained properly it will greatly affect the grind quality of the resin and in turn create issues in the Rotomolding process.

Resin particle shape is very important to the success of producing a first quality part. Having the incorrect blade gap and/or dull blades/knives can produce what we call tails and hairs on the resin particles. Particle shape will start to look like a comma [🐟].

These tails will cause the resin to clump together and create flow/fill issues.

Tails will cause things such as bridging, surface porosity, and voids in the parts as well reduced impact strength and longer cycle times.

At Entec we sample multiple retains from each Lot during pulverizing and test our grind quality several ways to ensure we are always providing the very best product to our customers. We believe that the flowability test is one of the most important tests a Rotomolder can perform in their facility on their resin. The equipment is inexpensive, and the test takes less than 5 minutes to perform. Below is an illustration of a 10mm funnel that should be used to perform the test. This simple test will quickly tell you if your resin flows well or not, which is a good indication of the grind quality from your supplier.



Properly pulverized resin should flow out in 30 seconds or less.  
Typical Range is 22 - 30 seconds.

The basic test consists of pouring 100 grams of room temperature pulverized resin into the funnel in a circular motion while holding the opening of the funnel closed with flat object like a credit card. At the exact same time, open the funnel and start a stopwatch. Stop the stopwatch when powder has left the funnel completely.

