



## Resonant Acoustic® Mixing Highly Loaded Polymers

### Background

Resodyn Acoustic Mixers has developed a novel mixer product line that uses low-frequency, high-intensity sound energy for mixing. The mixer technology, trademarked as ResonantAcoustic® Mixing, is applicable to a broad range of mixing classes that include liquid-gas, liquid-liquid, liquid-solid and powder-powder systems. Highlighted in this bulletin is: **Loading Corn Syrup with Powdered Sugar and Sand**. This demonstrates the common practice of loading viscous liquid polymers with solids.

### Loaded Polymer Blending

Powdered sugar and sand was blended with corn syrup. The image on top and lower left show the starting materials while the image in the lower right shows the results after mixing. The starting materials were 50g of corn syrup, 80g of powdered sugar and 20g of colored sand. The materials were mixed at 20°C with the corn syrup exhibiting a viscosity of 2100cP.

The materials were blended using the LabRAM® mixer. After 30 seconds of mixing the materials were thoroughly blended with all solids loaded into the corn syrup. Final viscosity of the mixture was 350,000cP.

The use of RAM™ technology is perfectly suited for loading of solids into polymers and mixing highly loaded polymers once combined. Mixing in the end container allows for quick batch cycle and no clean up of the mixing equipment.



Starting Materials



Starting Materials



After 30 Seconds Mixing

### ResonantAcoustic® Mixer Benefits

- Easy cleaning
- Fast mixing times
- Can mix in the shipping container
- Breaks loose agglomerations
- Safe for hazardous materials
- Can combine processing steps such as coating and mixing



**LABRAM**



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