



Resonant Acoustic[®] Mixing Blending Dissimilar Powders

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: **Blending Sand With Fumed Silica**. This demonstrates the common application of blending dissimilar powders.

Powder Blending

Fumed silica was blended with sand. The image on the left depicts the starting materials while the image on the right shows the results after mixing. The starting materials were 100g of sand (blue) and 10g of fumed silica.

The materials were blended using the LabRAM[®] mixer. After only eight seconds of mixing the low bulk density 0.25 micron particle size fumed silica was completely blended with the 250 micron particle size sand. No dust was generated during mixing. Post mixing samples exhibited no airborne fumed silica. This demonstrates an extreme case of uniform blending at the particle scale.

The use of RAM[®] technology is well suited for blending of powders. Mixing in the end container allows for quick batch cycle and no clean up of the mixing equipment.



Starting Materials



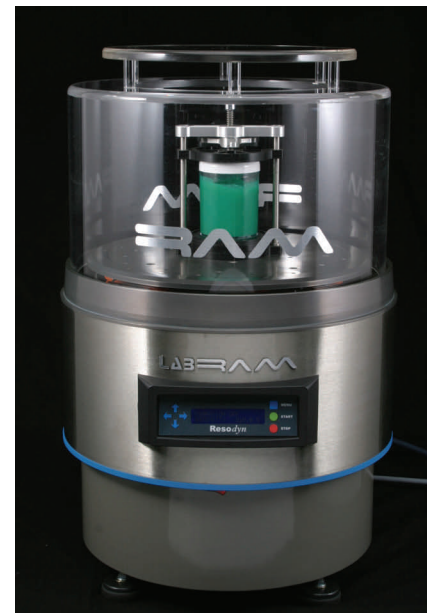
After 8 Seconds Mixing

ResonantAcoustic[®] Mixer Benefits

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

Contact

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LABRAM