



**JENIKE®**  
& JOHANSON

## Jenike Sifting Segregation Tester

ASTM Standard D6940-12

The Jenike Sifting Segregation Tester measures the tendency of a powder or granular material to segregate by the sifting segregation mechanism during interparticle motion.

Sifting is the most common mechanism causing particle size based segregation. It occurs when smaller particles move through a matrix of larger ones, or as more mobile large particles tumble down the surface of a forming pile. This commonly occurs when interparticle motion is enabled by filling or transfer operations, and is more pronounced in free flowing materials with a range of particle sizes.

The Sifting Segregation Tester simulates the lateral separation of fine and coarse particles. It provides a trend through one or multiple fill and discharge cycles and allows the comparison of one material or production batch to another utilizing a standardized approach for repeatable, operator-independent results.

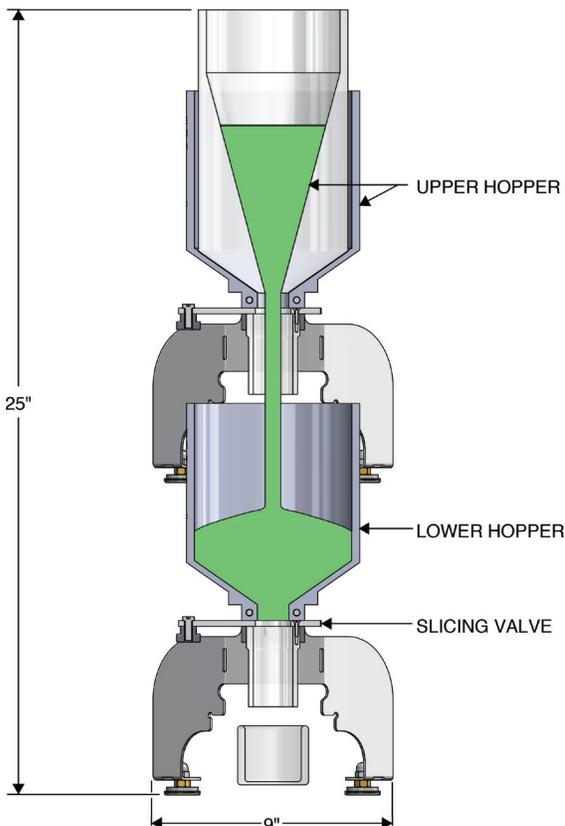


### General testing procedures

A 1-liter sample (3 mm maximum particle size) of the material is placed into the steep-walled upper hopper of the assembled tester and is subsequently discharged into the shallow-walled lower hopper. The sample is then discharged from the lower hopper into jars for analysis with a collection valve.

A variation on this test method is to recirculate the material until a steady-state is reached. The tester is specially designed to make this procedure easy. By recirculating the material, the signal strength of the material's segregation tendency is intensified, and the initial state of the blend is less critical.

A collection valve is used to dispense the sample into multiple jars and can operate in two modes: a "unit dose" mode collecting approximately 1.8cc of powder per withdrawal, as well as a standard valve withdrawal of approximately 55cc. This allows higher resolution sampling at the start and end of sample collection, and faster sample withdrawal between.



### Primary components

- 1 Acrylic steep-walled upper hopper
- 1 Acrylic shallow-walled lower hopper with slide gate & stainless steel legs
- 1 Acrylic shallow-walled lower hopper with slicing valve
- Glass jars & lids for sample collection (1 pkg of 24)

### Professional services

Our test equipment is invaluable if your company handles numerous materials in various applications, needs data for quality control purposes, or if you continuously develop new materials. However, if you need to analyze a limited number of materials or solve a specific handling/segregation problem, we can help.

Jenike & Johanson is a specialized engineering firm whose primary focus is to provide a means for companies to obtain reliable bulk solids handling. We offer a range of services in the area of bulk solids flow technology, including consulting, testing, engineering design, and equipment supply.