

PARTICLE SIZE TEST FOR RESINS

Application

This procedure is used to determine by sieve analysis the uniformity of particle size of powdered resins which are used in Foundry practice in the shell molding process.

Apparatus Required

Sieves

U.S. Standard, Sieves Nos. 100, 200 and 325.

Balance

Analytical type.

Conditioning and Test Conditions

All test values indicated herein are based on material conditioned in a controlled atmosphere of 23 +/- 2 °C and 50 +/- 5 % relative humidity for not less than 24 h prior to testing and tested under the same conditions unless otherwise specified.

Procedure

1. Weigh 20 +/- 0.05 g of the powdered resin and transfer quantitatively to a No. 100 sieve.
2. Brush the powder over the screen, then alternately rotate and tap while holding the screen in a slightly inclined position so that the test sample will be evenly distributed over the sieve. Continue until no more material passes through the screen.
3. Transfer the portion remaining on the No. 100 sieve to the balance pan and weigh.

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2001 03 20		Editorial – no technical change A. Cockman
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4. Repeat the operations with the portion passing a No. 100 sieve to determine how much remains on a No. 200 sieve. Repeat on a No. 325 sieve.

Calculate the percentage passing each sieve as follows:

$$\% \text{ passing a No. } ___ \text{ sieve} = 100 \text{ minus } \frac{(\text{weight of resin retained} \times 100)}{(\text{weight of sample})}$$

Chemicals, materials, parts, and equipment referenced in this document must be used and handled properly. Each party is responsible for determining proper use and handling in its facilities.