

Method of Test for Pulverization of Clay Additive for Granular Material

1. Scope:

This test determines the approximate percentage of pulverization obtained on undried clay used as admixture for granular material.

2. Apparatus:

- 2.1 Scale or balance having the capacity to weigh any sample which may be tested utilizing this procedure and readable to the nearest 0.1 gram.
- 2.2 Container. Pails or pans of sufficient size for transporting and testing the sample.
- 2.3 Sieve. Standard square opening, conforming to ASTM E11.
- 2.4 Pans, scoops, brushes, etc., for handling materials.

3. Procedure:

- 3.1 Obtain a representative sample from the belt feeding clay to the plant.

NOTE: Obtain and handle samples with care to prevent breakdown of oversize material. Reduce the sample to size using the quartering method. Do not use a sample splitter.

The sample shall be of sufficient size to yield test specimens having a minimum weight as shown below.

Maximum sieve size	Minimum weight of sample, grams
3/8"	1000
1/2"	2500
3/4"	3000

- 3.2 Weigh the sample to the nearest 0.1 g and record as total weight of sample on form DOT-26.
- 3.3 Hand sieve the sample using sieves necessary to determine compliance with the specifications. Consider the thoroughness of sieving satisfactory when not more than 0.5% of the weight of the material on the sieve will pass through it in 1 minute of shaking. The particles must not be turned or manipulated through the sieve by hand.

NOTE: When sieves are shaken individually (Not in a stack), care must be taken to ensure all material passing the sieve is introduced on the next sieve in the series being used.

- 3.4 Weigh and record the material retained on each sieve to the nearest 0.1 gram.
- 3.5 Reintroduce the weighed material to the largest sieve for re-screening.

In making this separation, thoroughly wash material through each sieve. Continue washing until all soil and fine particles have been removed and only the rock remains on each sieve.

NOTE: When unpulverized clay cannot be washed through a sieve, but can be broken down or otherwise identified as unpulverized clay, discard the pieces; however, be careful not to discard the rock.

- 3.6 After blotting with a soft cloth or absorbent paper to remove excess moisture, weigh the material on each sieve and record to the nearest 0.1 gram.

4. Report:

- 4.1 The percent of unpulverized clay will be recorded on a DOT-26 to the nearest 0.1% calculated as follows:

Percent unpulverized soil retained on a sieve =

$$\frac{\text{Weight unpulverized soil retained on a sieve}}{\text{Total weight of soil after rock is removed}} \times 100$$

- 4.2 Report to the nearest whole percent.

5. References:

ASTM E11
DOT-26