

Flakiness Index & Elongation Index HM-925

INTRODUCTION

NOTE: The procedure outlined here follows general recommendations of BS 812. The user is responsible for determining and following the appropriate procedures for their particular application.

HM-925 OPERATING INSTRUCTIONS

- A. General:** Aggregate particles are flaky when they have a thickness (smallest dimension) less than 0.6 of their nominal size. The Flakiness Index is determined by separating the flaky particles and expressing their mass as a percentage of the total mass of the sample. The test is not applicable to material passing a 6.30mm (1/4in) sieve or retained on a 63.0mm (2-1/2in) sieve.
- B. Sample:** The test specimen shall comply with the appropriate minimum mass for sieve analysis, with due allowance for 63.0mm sieve and passing a 6.30mm sieve. The specimen shall be taken from the laboratory sample by quartering or by means of a sample divider. Before testing, it shall be brought to a dry condition by standard methods.
- C. Procedure:** Carry out a sieve analysis using the sieves shown in Table 9. Inquire for ISO 565 sieves from Gilson.

Discard all aggregate retained on the 63.0mm sieve and passing the 6.30mm sieve.

Weigh the individual size-fractions retained on the sieves, other than the 63.0mm sieve, and store them in separate trays with their size marked on the trays.

Where the number of particles in any size fraction is excessive (more than the mass given in Table 9), the fraction may be split using standard methods. Under such circumstances, the appropriate correction factor must be applied to determine the mass of flaky particles had the entire size-fraction been gauged.

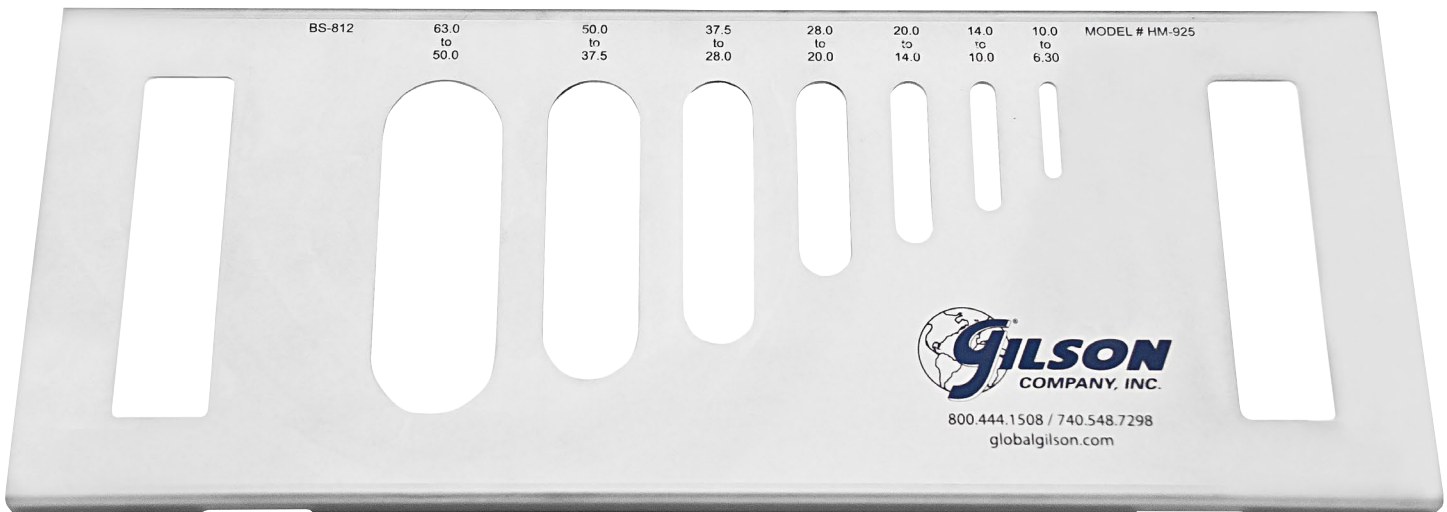
From the sum of the masses of the fractions in the trays (M_1), calculate the individual percentage retained on each of the various sieves. Discard any fraction of which the mass is 5% or less of mass M_1 . Record the mass remaining (M_2).

Gauge each fraction by selecting the thickness gauge appropriate to the size-fraction under test (see Table 9) and gauge each particle separately by hand.

Combine and weigh all the particles passing the gauges (M_3).

- D. Calculating & Reporting (Flakiness Index):** The Flakiness Index shall be reported to the nearest whole number. The sieve analysis obtained in this test shall also be reported.

$$\text{Flakiness Index} = \frac{M_3 \times 100}{M_2} \quad (\text{Continued on back.})$$



**HM-925
Thickness Gauge (Flakiness Index)**

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DIMENSIONS OF THICKNESS & LENGTH GAUGES			
Aggregate Size-Fraction		Hm-925 Thickness Gauge Width of Slot, mm	Minimum Mass for Subdivision, kg
Test Sieve Nominal Aperture Size¹			
100% Passing	100% Retained		
63.0mm	50.0mm	33.9 ± 0.3	50.0
50.0mm	37.5mm	26.3 ± 0.3	35.0
37.5mm	28.0mm	19.7 ± 0.3	15.0
28.0mm	20.0mm	14.4 ± 0.15	5.0
20.0mm	14.0mm	10.2 ± 0.15	2.0
14.0mm	10.0mm	7.2 ± 0.1	1.0
10.0mm	6.3mm	4.9 ± 0.1	0.5

¹Test sieves shown comply with ISO 565, ASTM E11, and are available from Gilson.

TABLE 9