

## Elongation Index HM-926



**HM-926**  
**Length Gauge (Elongation Index)**

### HM-926 OPERATING INSTRUCTIONS

- A. General:** Aggregate particles are elongated when they have a length (greatest dimension) more than 1.8 of their nominal size.

The Elongation Index is determined by separating out the elongated particles and expressing their mass as a percentage of the total mass of the sample tested. The test is not applicable to material passing a 6.30mm sieve or retained on a 50.0mm sieve.

- B. Sample:** The test specimen shall comply with the appropriate minimum mass for sieve analysis, with due allowance for later rejection of particles retained on a 50.0mm sieve and passing a 6.30mm sieve. The sample shall be taken from the laboratory sample by quartering or by means of a specimen 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 1.

Discard all aggregate retained on the 50.0mm sieve and passing the 6.30mm sieve.

Weigh and store the individual size-fractions in separate trays with sizes 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. Under such circumstances, the appropriate correction factor must be applied to determine the mass of elongated particles that would have been obtained 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 length gauge appropriate to the size-fraction (see Table 9) and gauge each particle separately by hand. Elongated particles are those whose greatest dimension prevents them from passing through the gauge.

Combine and weigh all elongated particles ( $M_3$ ).

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

$$\text{Elongation Index} = \frac{M_3 \times 100}{M_2}$$

DIMENSIONS OF THICKNESS & LENGTH GAUGES			
Aggregate Size-Fraction		Hm-926 Length Gauge	Minimum Mass for Subdivision, kg
Test Sieve Nominal Aperture Size¹			
100% Passing	100% Retained	Gap Between Pins, mm	
63.0mm	50.0mm	—	50.0
50.0mm	37.5mm	78.7 ± 0.3	35.0
37.5mm	28.0mm	59.0 ± 0.3	15.0
28.0mm	20.0mm	43.2 ± 0.3	5.0
20.0mm	14.0mm	30.6 ± 0.3	2.0
14.0mm	10.0mm	21.6 ± 0.2	1.0
10.0mm	6.3mm	14.7 ± 0.2	0.5

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

**TABLE 1**

Rev: 07/2019