Thickness Gauge Flakiness Index

LT-A0044 | Thickness comparison of coarse aggregate particles

Seven measuring slots • Fixed openings • Mechanical operation



6.3-63 mm

TEST PARTICLE SIZE RANGE

0.6 ×

LIMIT RELATIVE TO MEAN SIEVE SIZE

BS 812-105.1 • Coarse aggregate flakiness index method

LT-A0044

Photograph and Gauge Components

Seven slots, size-fraction markings and handling grips

LT-A0044 checks coarse aggregate particles separated into sieve fractions against a thickness limit. Use the relevant slot for each fraction. Collect and weigh flaky particles passing through the appropriate opening.

LARGE SLOTS

Used to check the thickness of larger size fractions. Select the relevant opening for each one.

SIZE-FRACTION MARKINGS

Markings above the slots help identify the measuring position for the specimen fraction.



HANDLING GRIPS

Upper and lower grips assist handling and positioning of the gauge.

SMALL SLOTS

Check smaller size fractions through their separate openings. Keep fractions distinct.



Upper slots and size-fraction markings



Lower slots and Liya product label

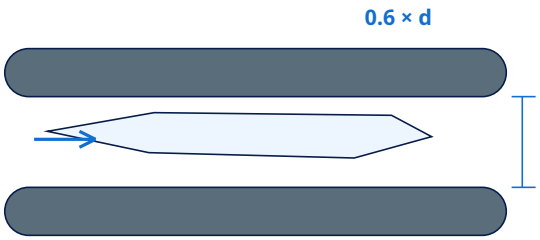
LT-A0044

From Particle Thickness to Flakiness Index

Sieve • Select slot • Check thickness • Weigh and calculate

SLOT SECTION AND FLAKY PARTICLE COMPARISON

THICKNESS LIMIT = 0.6 × d



t < 0.6 × d: FLAKY PARTICLE

d = (lower sieve + upper sieve) / 2

CHECK THE SMALLEST PARTICLE DIMENSION

A SEPARATE SLOT FOR EACH SIEVE FRACTION

mf: FLAKY MASS • M: MASS TESTED

FI (%) = 100 × mf / M

REPRESENTATIVE SLOT SECTION • NOT TO SCALE

Classify the Sample

Prepare the sample by the method and separate seven size fractions. Record the mass tested.

Separate Flaky Particles

Check thickness through the relevant opening. Collect particles that pass through.

Weigh and Calculate

Weigh flaky particles. Express their mass as a percentage of the total mass tested.

Particle thickness is its smallest dimension. A particle is flaky when this is less than 0.6 times the mean sieve size of its fraction. Particles passing the relevant slot are collected. Flakiness index is based on their mass percentage rather than particle count.

Size Range and Slot Selection

The method excludes material passing the 6.3 mm sieve or retained on the 63 mm sieve. Prepare applicable fractions separately and use the relevant slot for each one.

Check the smallest particle dimension. Do not force particles through or break them during classification. Keep sieve and thickness records together and prevent mixing between fractions.

Mass Records and Aperture Checks

Record total mass tested and flaky particle mass in the same units. Prevent specimen loss and assess the result against the applicable method and project specification.

Check slot edges for bending, wear and residues. Remove particles and dust after use. Protect the gauge against impacts that could change the opening geometry.

LT-A0044

Technical Specifications and Slot Dimensions

LT-A0044 • Seven slots, size range, overall dimensions and weight

Technical Specification	Value / Description
Product Code	LT-A0044
Test Method	BS 812-105.1
Test Particle Size Range	6.3-63 mm
Measuring Slots / Size Fractions	7
Overall Dimensions	310 × 130 × 10 mm
Approximate Weight	0.4 kg

Slot	Narrow Opening (mm)	Slot Length (mm)
1	4.9	30
2	7.2	40
3	10.2	50
4	14.4	60
5	19.7	80
6	26.3	90
7	33.9	100

Check Thickness by the Applicable Method

The gauge is mechanical and requires no power supply. The flakiness criterion is t < 0.6 × mean sieve size. Check each fraction through its relevant slot and weigh passing particles using a suitable balance.

From Coarse Aggregate to Flakiness Index

01
Sieve
Prepare the seven applicable size fractions.

02
Check
Assess each fraction at the relevant slot opening.

03
Separate / Weigh
Collect and weigh passing flaky particles.

04
Calculate
Calculate the flaky particle mass percentage.

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