Micro-Deval Testing Machine

LT-A0067 | Controlled drum abrasion of aggregates

Stainless steel drums • Digital revolution counter • Automatic stop



100 ± 5 rpm

DRUM ROTATION SPEED

4 drums

FRAME CAPACITY • 2 DRUMS AS STANDARD

EN 1097-1 • EN 13450 • Aggregate wear testing with water and steel balls

LT-A0067

Photograph and Machine Components

Stainless steel drums, support rollers, upper cover and metal frame

LT-A0067 assesses aggregate resistance to wear with water and steel balls. A digital counter tracks the target revolutions and stops the machine at the end of the cycle. Standard delivery includes two stainless steel drums.

STAINLESS STEEL DRUMS

Closed drums contain the aggregate, water and steel-ball charge.

UPPER COVER

The opening upper cover provides access for placing and removing the drums.



SUPPORT ROLLERS

The drums rotate on support rollers. Check their seating before starting a test.

METAL FRAME

The frame supports the drums and drive section. The system accommodates up to four drums.



Stainless steel drums and end-cover detail



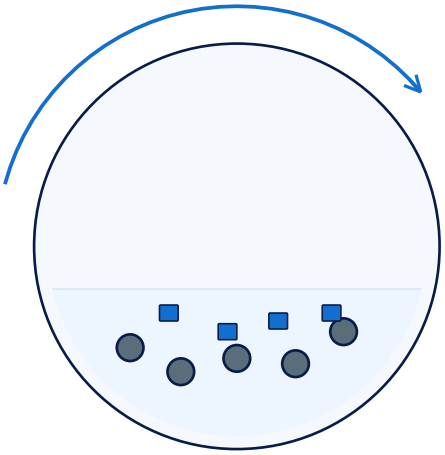
Drum support rollers and working area

LT-A0067

Controlled Wear with Water and Balls

Prepare sample • Load the charge • Rotate • Determine mass loss

AGGREGATE + WATER + STEEL BALLS



100 ± 5 rpm

ABRASION IN WATER

SAMPLE: AGGREGATE PREPARED BY THE METHOD

RESULT: MICRO-DEVAL COEFFICIENT

OPERATING PRINCIPLE • REPRESENTATIVE DRUM SECTION • NOT TO SCALE

Prepare the Sample

Select the prescribed size fraction. Record initial mass and prepare the water and steel-ball charge.

Set the Revolutions

Close and position the drum. Enter target revolutions; the counter stops the machine when the cycle is complete.

Determine Mass Loss

Remove, wash, sieve and dry the sample. Calculate the micro-Deval coefficient from the final mass.

As the drum rotates, aggregate particles contact steel balls, other particles and the drum surface. Fine material generated during the cycle is assessed through subsequent separation steps. Keeping specimen preparation and cycle conditions consistent allows comparisons between aggregate sources.

Method and Sample Preparation

EN 1097-1 covers aggregate wear resistance using the micro-Deval method. EN 13450 concerns the properties of aggregates for railway ballast.

Select size fraction, sample mass, water quantity, ball charge and total revolutions according to the applicable test method. Different sample types may require different test conditions.

Results and Post-Test Care

A lower micro-Deval coefficient indicates greater wear resistance under the same method conditions. Evaluate the result together with aggregate grading and the requirements of its intended application.

Clean drums and balls after each cycle. Check lid fastenings, drum interiors and ball condition before testing the next specimen.

LT-A0067

Technical Specifications and Test Workflow

LT-A0067 • Machine, stainless steel drum and abrasive ball options

Technical Specification	Value / Description
Machine Code	LT-A0067
Test Method / Related Standard	EN 1097-1 / EN 13450
Drum Rotation Speed	100 ± 5 rpm
Maximum Drum Capacity	4
Standard Delivery Drums	2 stainless steel drums
Revolution Control	Digital counter / automatic stop at target count
Drum Code	LT-A0067/1
Drum Dimensions	Ø200 × 154 mm
Ball Set Code	LT-A0067/2
Standard Ball Charge	Ø10 mm steel balls / 5.5 kg
Overall Machine Dimensions	64 × 120 × 35 cm
Machine Weight	150 kg
Power Supply	220 V, 50–60 Hz, single phase

Two Drums as Standard and Capacity for Four

The standard set includes two drums and 5.5 kg of Ø10 mm balls. Plan additional drums for four-drum use and adjust each test charge to the applicable method.

From Aggregate to Micro-Deval Result

01
Prepare
Select the fraction and record initial sample mass.

02
Load
Add sample, water and balls; close the drum.

03
Rotate
Set target revolutions and start the test cycle.

04
Evaluate
Wash, sieve, dry and calculate the wear coefficient.

Product Page | liyatest.com.tr/en/urun/micro-deval-testing-machine/