Plastic Limit Test Set

LT-S0045 | Plastic limit determination of fine-grained soils

Glass rolling plate • Reference rod • Moisture tins



Ø3 mm

REFERENCE ROD DIAMETER

4 tins

MOISTURE-CONTENT SPECIMEN TINS

ASTM D4318 • AASHTO T90 • TS 1900-1

LT-S0045

Photographs and Set Components

Glass plate, reference rod, moisture tins and preparation tools

The LT-S0045 is a hand-rolling set for determining the plastic limit of fine-grained soils. Roll the specimen into thin threads on the glass plate, then determine the moisture content of material reaching the specified crumbling condition.

GLASS PLATE

A 300 × 300 × 5 mm glass plate provides the working surface for hand rolling.

MOISTURE TINS

Four Ø55 × 35 mm tins hold specimens collected for moisture-content determination.



REFERENCE ROD

The Ø3 × 100 mm rod supports comparison of the soil thread diameter.

DISH AND SPATULA

The porcelain dish and flexible spatula support specimen preparation and transfer.



Ø3 mm reference rod and glass plate



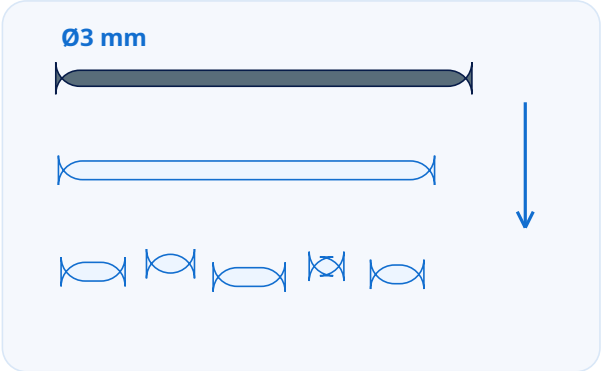
Moisture tins and lids

LT-S0045

Rolling, Crumbling and Moisture Content

Prepare • Roll • Observe crumbling • Determine moisture content

SOIL THREAD + CRUMBLING + MOISTURE



REFERENCE: Ø3 mm ROD

OBSERVE: METHOD-DEFINED CRUMBLING

RESULT: MOISTURE CONTENT AT THE LIMIT

Calculate plastic limit using the applicable method

REPRESENTATIVE HAND-ROLLING DIAGRAM • NOT TO SCALE

Prepare the Specimen

Prepare soil according to the method. Place a small portion on the clean glass plate.

Roll and Observe

Form thin threads. Compare diameter with the reference rod and observe crumbling.

Determine Moisture Content

Collect suitable fragments in a tin. Determine moisture content by weighing and drying.

Hand rolling reduces the specimen to a thin thread on the glass plate. When an approximately 3 mm thread crumbles under the method-defined conditions, collect the material for moisture-content determination. Evaluate plastic limit from the moisture content at this consistency boundary.

Diameter Comparison and Rolling

The Ø3 mm reference rod allows visual comparison of thread diameter. Apply rolling pressure, speed and repetitions according to the method; assess crumbling together with the specimen's drying and deformation behaviour.

Keep the glass plate clean and maintain consistent specimen preparation and rolling technique for repeated determinations.

Moisture Content and Plasticity Index

Transfer material at the crumbling condition into a moisture tin and prepare it for weighing while limiting moisture loss. Moisture-content determination uses a suitable laboratory balance and drying equipment.

Plastic limit supports soil classification together with liquid limit. The plasticity index is the difference between liquid and plastic limits; report results according to the applicable method.

Technical Specifications and Set Contents

LT-S0045 | Glass plate, reference rod and preparation components

Technical Specification	Value / Description
Product Code	LT-S0045
Test Type	Plastic limit determination by hand rolling
Moisture Tins	4 pieces • Ø55 × 35 mm
External Dimensions / Weight	360 × 370 × 180 mm • Approximately 3 kg
Relevant Methods	ASTM D4318 • AASHTO T90 • TS 1900-1

Component Code	Description
LT-S0045/1	Glass plate • 300 × 300 × 5 mm
LT-S0045/2	Reference rod • Ø3 × 100 mm
LT-G0152	Moisture tin • Ø55 × 35 mm
LT-G0761	Porcelain dish • Ø120 mm
LT-G0310	Flexible spatula • 100 mm

Link Crumbling Observations with Moisture Records

Record specimen identification, tin number and weighing values. Evaluate rolling observations together with moisture-content calculations and report plastic limit according to the method.

Plastic Limit Test Workflow

01
Prepare
Prepare soil in the dish and take a small portion.

02
Roll
Form thin threads on the glass plate.

03
Collect
Collect material at the specified crumbling stage.

04
Determine
Calculate moisture content and report the result.

Product Page | liyatest.com.tr/en/urun/plastic-limit-test-set/