Standard Sand for Density Tests

LT-S0020 / LT-S0021 | Test sand with controlled particle-size ranges

300-600 µm • 600 µm-1.18 mm • 1000 g packs



2 Grading Options

SELECT TO MATCH THE TEST METHOD

1000 g

PACK QUANTITY FOR EACH PRODUCT OPTION

Supports test-hole volume measurement and in-situ soil density testing

Product Photograph and Application Features

Packaged test sand, two sieve fractions and field volume measurement

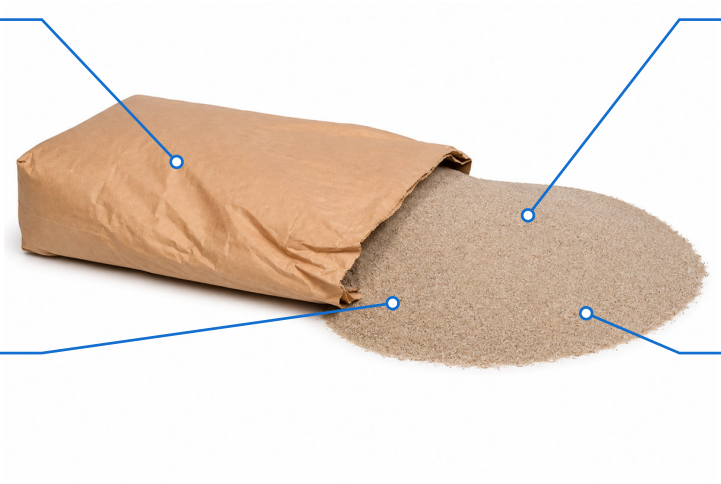
Standard Sand for Density Tests fills the excavation in the sand replacement method. The previously determined bulk density of the sand and the net mass filling the test hole allow the excavation volume to be calculated.

1000 g PACK

Both LT-S0020 and LT-S0021 are supplied in 1000 g packages.

LT-S0021 OPTION

600 µm-1.18 mm: passes the No.16 sieve and is retained on the No.30 sieve.



LT-S0020 OPTION

300-600 µm: passes the No.30 sieve and is retained on the No.50 sieve.

SAND REPLACEMENT

Used with a suitable sand density apparatus to determine test-hole volume.



Packaged product and sand discharge area



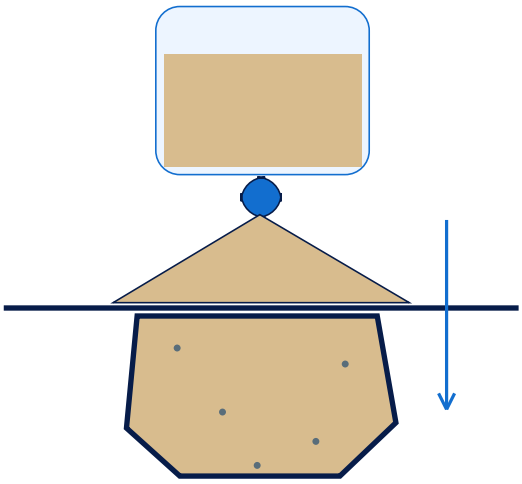
Close-up of the test sand in the product photograph

LT-S0020 / LT-S0021

From Sand Mass to Test-Hole Volume

Calibrate sand • Excavate soil • Fill the hole • Calculate volume

VOID VOLUME FROM CALIBRATED TEST SAND



V = NET SAND MASS IN THE HOLE / ρsand

ρsand = CALIBRATED SAND BULK DENSITY

Deduct sand filling the cone and base spaces

Wet soil density = excavated wet soil mass / V

REPRESENTATIVE SAND REPLACEMENT DIAGRAM • NOT TO SCALE

Calibrate the Sand

Determine sand bulk density and the apparatus filling correction using the selected method.

Fill the Test Hole

Collect all excavated soil. Transfer calibrated sand into the hole with suitable equipment.

Calculate Volume

Deduct the apparatus correction from total sand used. Divide net hole sand mass by density.

Initial and final apparatus masses give total sand consumption. Deduct sand filling the cone and base spaces to obtain the mass in the test hole. Calibrated sand bulk density converts this net mass into excavation volume.

Grading and Product Selection

LT-S0020 is the 300-600 µm fraction between the No.30 and No.50 sieves. LT-S0021 offers the coarser 600 µm-1.18 mm fraction between the No.16 and No.30 sieves.

Both products are supplied in 1000 g packs. Match the sand grade to the test method, apparatus and calibration arrangement. Maintain consistent sand conditions throughout the test series.

Density Calculation and Sand Handling

Use test-hole volume with excavated wet soil mass to calculate wet density. Determine representative water content separately for dry density: dry density = wet density / (1 + w), where w is dry-mass-based water content expressed as a decimal.

Keep the sand dry and clean. Prevent moisture, contamination or grading changes from affecting the calibration value.

Technical Specifications and Sand Options

LT-S0020 / LT-S0021 | Two controlled particle-size ranges

Parameter	Description / Specification
LT-S0020 Particle Size	300-600 µm
LT-S0020 Passing Sieve	No.30 • 600 µm
LT-S0020 Retaining Sieve	No.50 • 300 µm
LT-S0020 Pack Quantity	1000 g
LT-S0021 Particle Size	600 µm-1.18 mm
LT-S0021 Passing Sieve	No.16 • 1.18 mm
LT-S0021 Retaining Sieve	No.30 • 600 µm
LT-S0021 Pack Quantity	1000 g
Application Method	In-situ density by sand replacement
Volume Calculation Input	Calibrated sand bulk density

Maintain the Same Sand Conditions in Calibration and Field Testing

Record grading, sand bulk density and the apparatus filling correction. Use only the net sand mass filling the test hole for volume calculation.

Sand Replacement Test Workflow

01
Calibrate
Determine sand density and apparatus correction.

02
Excavate
Collect removed soil for weighing.

03
Fill
Transfer calibrated sand into the hole.

04
Calculate
Find volume from sand and density from soil.

Product Page | liyatest.com.tr/en/urun/standard-sand-for-density-tests/