



LHS-2E Lunar Highlands Simulant | Fact Sheet

001-13-001-1223

Simulant Name: Engineering Grade 2mm Lunar Highlands Simulant

Simulant Type: Engineering Grade

Reference Material: Average lunar highlands

Uncompressed Bulk Density: 1.4g/cm³

Median Particle Size: 68µm

Particle Size Range: <0.04 µm – 2000 µm



Geotechnical Properties

Angle of Repose (10g): 45.8°

Angle of Repose (250g): 43.1°

Cohesion: 0.356 kPa

Angle of Internal Friction: 30.5°

Mineralogy

As mixed.

Component	Wt.%
Anorthosite	75.0
*Glass-rich Basalt	25.0

*Glass-rich basalt sourced from Merriam Crater. This is the same source as JSC-1 lunar simulant.

Bulk Chemistry

Relative abundances.
Measured by XRF.

Oxide	Wt.%
SiO ₂	47.10
TiO ₂	0.46
Al ₂ O ₃	26.35
Fe ₂ O ₃	3.44
MnO	0.05
MgO	1.28
CaO	17.47
Na ₂ O	2.36
K ₂ O	0.51
P ₂ O ₅	0.96
Total	100.00



Particle Size Distribution

Using a combination of laser and sieve analysis

