



Simulant Name: LSP-2 Lunar South Pole Simulant

Simulant Type: General purpose

Reference Material: Lunar South Pole

Uncompressed Bulk Density: 1.45 g/cm³

Median Particle Size: 106 μm

Particle Size Range: <0.04 μm – 2000 μm



Geotechnical Properties

Angle of Repose (10g): 44.9°

Angle of Repose (250g): 41.2°

Cohesion: 0.324 kPa

Angle of Internal Friction: 31.7°

Mineralogy

As mixed.

Component	Wt.%
Anorthosite	90.0
*Glass-rich Basalt	10.0

*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.%
SiO₂	47.13
TiO₂	0.16
Al₂O₃	27.96
FeO	1.24
MnO	0.02
MgO	0.71
CaO	17.50
Na₂O	4.02
K₂O	0.42
P₂O₅	0.83
Total	100.00



Particle Size Distribution

Using a combination of laser and sieve analysis

