

# Evaluation of Mechanical Properties of Mortar Generated by using Lunar Soil Simulant

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**Abstract:** *This study investigates the mechanical properties of mortar produced using lunar soil simulant, with the aim of assessing its suitability for construction in extraterrestrial habitats. Various tests including fineness test, specific gravity, standard consistency and compressive test were conducted to evaluate the performance of the mortar. Factors such as particle size distribution, binder type, curing conditions and environmental influences were scrutinized to gain comprehensive insights into the material's suitability for construction purposes. The findings provide insights into the feasibility of utilizing lunar soil simulant based mortar for future space missions and lunar colonization efforts.*

**Keywords:** *LSS: Lunar Soil Simulants, JSC 1 A and LMS-1: Johnson space centre, Lunar Mare Simulant, LHS-1 : lunar highland simulant, CHENOBI: These are the soil simulant sample tests made by, AGK-2010: Polish lunar simulant, FARO: Frasier and Raab orthopedics*