

Hess Perlite Ore Grade IM•130

CRUDE ORE PARTICLE SIZE SPEC GRADE IM-130

SIZE		ALLOWABLE PERCENT PASSING
MICRON/MM	U.S. MESH	
4760/4.76	4	100
2380/2.83	8	30-70
1190/1.19	16	0-15
595/0.595	30	0-10

TEST METHOD: C29

CHEMICAL COMPOSITION AND PHYSICAL PROPERTIES

Chemical Name: Sodium Potassium Aluminum Silicate

TYPICAL ANALYSIS

- Silicon Dioxide: 76.5%
- Aluminum Oxide: 13.5%
- Potassium Oxide: 4.65%
- Sodium Oxide: 3.34%
- Iron Oxide: 1.18%
- Calcium Oxide: 0.89%
- Titanium Oxide: 0.8%
- Chlorine: 0.5%
- Barium Oxide: 0.18%
- Magnesium Oxide: 0.12%
- Bound Water: 3.0%

GENERAL PROPERTIES

- Appearance: White Powder, Odorless
- Refractive Index: 1.5
- Hardness (MOHS): 5.5
- pH: Neutral
- Fusion Point: 1260 degrees C (2300F)
- Flash Point: Non-flamable
- Specific Gravity: 2.33
- Solubility:
 - Negligible in water and weak acids
 - Soluble in hot concentrated alkali and HF
 - Moderately soluble (<10%) in 1N NaOH
 - Slightly soluble (<3%) in mineral acids (1N)
- Thermal Conductivity (at 75°F/24°C):
 - Conductivity: 0.3332 Btu·in/ft²·hr·°F
 - Resistivity (R-per-inch): 3.001 ft²·hr·°F/Btu·in

DESCRIPTION

Perlite ore is a glassy volcanic rock with a vitreous, pearly luster and a characteristic concentric or perlitic fracture. Closely related to pumice, it differs from other volcanic glasses principally in its combined water content, which produces the unusual characteristic of expanding, or “popping” when exposed to rapid, controlled heating. Rapidly heating perlite ore to temperatures of about 900°C (1,700°F) softens the volcanic glass, causing entrapped water molecules in the rock to turn to steam and expand the particles like popcorn. The resulting expanded particles—actually clusters of minute glass bubbles—are spherical in shape, usually fluffy or frothy, highly porous due to a foam-like cellular internal structure, and have a very low density.

Unexpanded perlite ore has industrial applications: as a slag coagulant and insulative topping in the foundry industry and as an angular, sharp-edged sandblasting grit.

PACKAGING OPTIONS

- Bulk shipped in rail cars or tractor trailers



(208) 766-4777 x111 • email: info@hessperlite.com
www.hessperlite.com