Hess Perlite Grade 190E

EXPANDED PARTICLE SIZE SPEC GRADE 190E

SIZE		ALLOWABLE PERCENT PASSING
MICRON	U.S. MESH	
2380	8	85-100
1190	16	40-85
595	30	20-60
297	50	5-25
149	100	1-10

TEST METHOD: C29

EXPANDED LOOSE BULK DENSITY GRADE 190E

5-6 lbs/per cubic foot

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 Granules, 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," up to 20 times its original volume upon being 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.

GRADE APPLICATIONS

Used for: horticultural soils and soilless grow media, masonry loose fill insulation, lightweight insulating concrete and plasters, high-temperature insulating applications, cryogenic applications.

PACKAGING OPTIONS

- Plastic Bags (4 cubic feet)
- Super sacks (55 or 118 cubic feet)

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