

# Hess Grades (General)

## PARTICLE SIZE SPECIFICATION GENERAL

SIZE			ALLOWABLE PERCENT PASSING
MICRON	MM	U.S. MESH	
—	—	—	Varies with Grade
TEST METHOD: ASTM C136-06			

## LOOSE BULK DENSITY GENERAL

**35 to 60 lbs/per cubic foot [560.6 to 961.1 kg/per cubic meter]**, depending on grade (ASTM C29)

## CHEMICAL ANALYSIS AND PHYSICAL PROPERTIES

**Chemical Name:** Amorphous Aluminum Silicate

### TYPICAL ANALYSIS

- Silicon Dioxide: 76.2%
- Aluminum Oxide: 13.5%
- Ferric Oxide: 1.1%
- Ferrous Oxide: 0.1%
- Sodium Oxide: 1.6%
- Potassium Oxide: 1.8%
- Calcium Oxide: 0.8%
- Titanium Oxide: 0.2%
- Magnesium Oxide: 0.05%
- Moisture: <1.0%
- Crystalline SiO<sub>2</sub>: None Detected

### GENERAL PROPERTIES

- Appearance: White powder
- Hardness (MOHS): 6
- pH: 7.2
- Radioactivity: None
- Softening Point: 900 degrees C
- Water Soluble Substances: 0.15%
- Loss on Ignition - 5%
- GE Brightness: 84
- Specific Gravity: 2.4
- Reactivity: Inert  
(except in the presence of calcium hydroxide or hydrofluoric acid)

## DESCRIPTION

Amorphous (non-crystalline) in structure and composed primarily of aluminum silicate, pumice is a naturally calcined volcanic glass foam consisting of highly vesicular strands permeated with tiny air bubbles. It is these frothy, friable glass vesicles that, when carefully refined to various grades, give pumice its unique and infinitely useful qualities.

## GRADE USES

**Concrete**—lightweight aggregate and sand, concrete pozzolan (SCM).

**Abrasives**—sand blast grit, shaped pumice scrubbing and exfoliating stones, polishing and tumbling grit.

**Lightweight Aggregate**—lightweight concretes, precast stone veneers, plaster sand, mortar sand, geotechnical fills, concrete masonry units (CMUs).

**Exfoliants**—cosmetics, hand cleaners.

**Filtration**—Water treatment filtration media, engineered biofiltration soils.

**Horticultural**—soil amendment, soilless grow media, compost amender.

**Texturizing Grit**—in-suspension grit for primers, paints, and industrial coatings.

**Livestock and Pets**—dust bathing, chew stones, shaped grooming stones, confined-space moisture control.

**Functional Filler**—non-crystalline silica (micronized) for paints, coatings, rubber compounds.

## PACKAGING OPTIONS

- 1 to 55 lb [0.45 to 25 kg] bags, boxes, pails, jars—depending on grade
- Up to 2200 lb [998 kg] super sacks (palletted)
- Bulk shipped in rail car or tractor trailer



(208) 766-4777 x111 • email: rd@hesspumice.com  
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