

# Volcano Glossary II

Modified from  
<http://volcanoes.usgs.gov/Products/Pglossary/pglossary.html> (USGS)

## **'A'a:**

Lava flows that are made up of rough and broken rock fragments.

## **Ash:**

Fragments of rocks, minerals and volcanic glass that are smaller than 2 mm in diameter. Ash is created during an explosive volcanic eruption from volcanic gas pressure or from the interaction of magma with external water (groundwater or surface water). Ash can rise very high during an eruption and forms a very dense cloud.

## **Caldera:**

A large and generally circular depression near the peak of a volcano.

## **Crater:**

A circular depression at the peak of a volcano that is smaller and deeper than a caldera.

## **Effusive Eruption:**

An eruption where lava pours rather than explodes out onto the ground.

## **Eruption Cloud:**

Large amounts of tephra and gas pile up downwind of an eruption. Often dark brown to gray in color, eruption clouds can drift thousands of kilometers from the volcano and travel around the Earth in a few days. Eruption clouds also are called ash clouds.

## **Lava:**

Magma at the Earth's surface.

**Magma:**

Molten rock beneath the Earth's surface.

**Mineral:**

Naturally occurring and inorganic compounds. Minerals have an orderly internal structure of characteristic chemical compounds, crystalline structure and physical properties such as density and hardness.

**Pahoehoe:**

Lava flows that have a smooth or ropy surface.

**Phreatic Eruptions:**

Steam driven explosions that result when water beneath the ground is heated by magma, lava or hot rocks. After the water is heated and rapidly converts to steam, it generates explosions of steam, water, ash and rock fragments.

**Plinian Eruption:**

Large volcanic explosions that form dark columns of tephra, gas and ash clouds extending into the stratosphere.

**Pumice:**

Light, porous volcanic rock formed during explosive eruptions as dissolved carbon dioxide is erupted with the magma. Pumice is composed of a network of bubbles and volcanic glass and minerals. Pumice can be formed from all types of magma.

**Pyroclastic Flow:**

A cascade of hot ash, pumice, rock fragments and volcanic gas that travel down the side of a volcano similar to an avalanche. Pyroclastic flows can travel up to 100 km/hour.

**Rock:**

Naturally occurring mixtures of minerals and organic material. The three main types of rock are sedimentary, metamorphic and igneous. Sedimentary rocks are formed by weathering and mechanical sorting on the surface. Metamorphic rocks are formed when any kind of rock is transformed under high temperature and pressure. Igneous rocks are formed of melted material from the inside of the Earth that has cooled, either inside the Earth or on its surface.

**Shield Volcano:**

Volcanoes characterized by broad, gentle slopes built up by eruptions of basaltic lavas. Shield volcanoes tend to be enormous low angle cones with lava flows extending tens of kilometers away from an erupting vent. The name originates from the fact that these volcanoes resemble a warrior's shield.

**Stratovolcano:**

Steep cone shaped volcanoes built by eruptions of lava flows, tephra and pyroclastic flows. These volcanoes also are called composite cones.

**Strombolian Eruptions:**

Occasional explosions or fountaining of basaltic lava from a single vent or crater. Each explosion is caused by the release of volcanic gas and can happen very rapidly, within minutes.

**Tephra:**

Fragments of volcanic rock ejected into the air by explosions and carried by hot gases in eruption clouds. Tephra includes all size fragments from large dense blocks to small light pumice and ash.

**Tsunami:**

A wave (or series of waves) generated by a large underwater disturbance. They are typically caused by Earthquakes, landslides and volcanic eruptions.

**Vent:**

Openings in the Earth's crust where magma and volcanic gases escape. Vents can be circular or elongated cracks in the ground.

**Volcano:**

A vent at Earth's surface through which magma and gases escape, as well as the associated cone build by effusive and explosive eruptions.

**Vulcanian Eruption:**

An explosive eruption that ejects new lava fragments that do not become rounded while in the air.