

BASALT



Lava pouring out of Kilauea Volcano on the Big Island of Hawaii

Wowser!

Kilauea may be the most active volcano in the world. Lava has been erupting from this volcano since 1983. It's produced enough lava to fill 1.5 million swimming pools!

ROPES OF ROCK

Twisty black “ropes” cover much of Hawaii’s largest island, known as the Big Island. But these ropes are made of rock! The rock is called *basalt*.

How do these ropes of rock form? Imagine squeezing a tube of toothpaste with the lid on. What would happen when you opened it? Liquid would ooze from the tube in a stream. In the same way, hot lava flows out from openings in Earth’s surface. When the streams of liquid lava cool, they form solid, nonliving basalt ropes.

On the Big Island, lava spills out of Kilauea (kil-uh-WAY-uh) Volcano. This type of lava is called *pahoehoe* (puh-HO-ee-HO-ee). It is thin, so it flows easily. The lava moves smoothly downhill in narrow sections that look like strands or coils of rope when they cool.



pahoehoe basalt

WHAT'S IN THERE?

Take a good look at basalt. The first thing you'll notice is its dark color. Basalt is made of many minerals, and most of them are dark in color.

If you study basalt with a hand lens, you won't see any large crystals. That's because basalt forms from lava. Lava cools quickly on Earth's surface. In fact, it cools so quickly that large crystals don't have time to form. So basalt only has small crystals. If you want to see them, you'll need a microscope!



Do You Know?

Basalt is the most common rock in Earth's upper layer, or *crust*. Most of the ocean floor is made up of basalt.

Volcano Circle

Hawaii isn't the only place you can find basalt. It forms in nature wherever lava flows from volcanoes.

Earth's volcanoes are only found in certain places. Some are at the edges of continents. Others are on the ocean floor. Volcanoes often form where huge pieces of Earth's surface, called *plates*, push together, pull apart, or slide past each other.

There are over 450 volcanoes around the edges of the Pacific Ocean. They form a circle known as the Ring of Fire.



Many volcanoes (red dots) occur along the edges of the Pacific plate, forming the Ring of Fire.