

Magma vs Lava

- Both are molten (melted), liquid rock.
- **Magma**: molten rock from the mantle (underground)
- **Lava**: molten rock erupted onto the surface



Viscosity

- **Viscosity**: a liquid's resistance to flow
- **High viscosity ("sticky")**: liquid flows slowly
- **Low viscosity ("runny")**: liquid flows easily



Basic Magma Types

Magma	Physical Characteristics	Chemical Characteristics	Eruption
Mafic <i>(Basaltic)</i> cools into basalt rock	Hi temp Hi density Lo viscosity (runny)	Lo silica Hi water	Quiet (gentle) forms shield volcanoes
Felsic <i>(Rhyolitic)</i> cools into rhyolite rock	Lo temp Lo density Hi viscosity (sticky)	Hi silica Lo water	Explosive forms composite volcanoes

Basic Lava Types

- **Pahoehoe**: low viscosity, fast moving, "runny" lava. Texture of cooled lava rock is smooth and ropey
- **Aa (Ah-ah)**: high viscosity, slow moving, "sticky" lava. Texture of cooled lava rock is jagged.

