

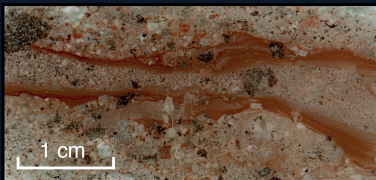
Can tuffisites lower a volcano's stress levels?

What are tuffisites?

Tuffisites are particle filled fractures formed inside volcanoes when mixtures of high pressure gas and ash break open the surrounding rock, in a similar process to fracking. They are injected with bits of magma and the surrounding host rock.

What do tuffisites look like?

Tuffisites can be centimetres to tens of metres long.



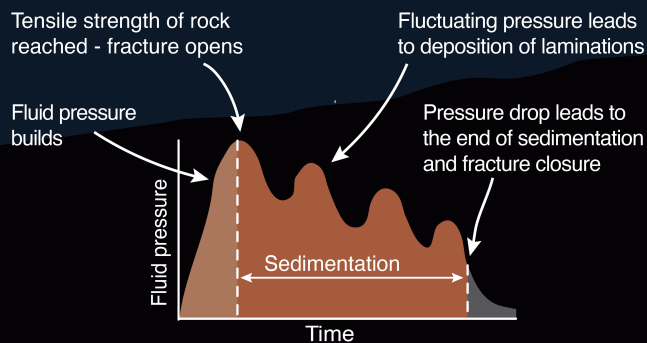
They contain complex structures, including laminations, cross-stratification, internal injections and graded beds.



One big tuffisite

Tuffisites as pressure recorders

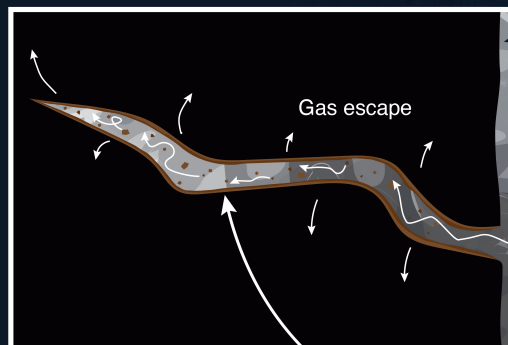
Structures inside tuffisites record the evolution of pressure during their formation.



Tuffisites and explosivity

Pressure drives volcanic eruptions, controlling explosivity. Tuffisites act as degassing pathways, dissipating pressure.

But gas flowing through the tuffisite deposits the particles it is carrying, clogging up the fracture and making it harder for gas to flow.



Particles clog up the fracture through time

Hot particles sinter together through time, reducing the fracture's permeability.

If tuffisites remain permeable for long enough they may lower the explosivity of an eruption.

Want to know more?

Check out the video [here](#)

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