

Bimetallic Strip & Thermostat



Purpose: To demonstrate that strips of dissimilar metals bonded together bend when heated (or cooled) due to different rates of thermal expansion

Location: room 136, shelf O6

CAUTION: Thermostat switch has mercury enclosed in a fragile glass vessel.

The bimetal strip is brass on one side and steel on the other. When heated over a burner the brass expands more than the steel and the strip curves toward the steel side. (When cooled in liquid nitrogen, the strip curves toward the brass side.) The household thermostat, which has a spiral bimetal strip connected to a mercury switch, provides an example of a common application.