

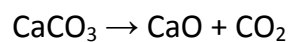
Question

How do you make calcium hydroxide using calcium carbonate?

Answer

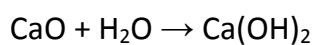
Calcium hydroxide (Ca(OH)₂) is made from calcium carbonate (CaCO₃) in two steps.

1) The first step is thermal decomposition of CaCO₃ to get calcium oxide (CaO) that is called calcination:



The process is accomplished by heating the material to above **825 °C (1,517 °F)**.

2) The second step is CaO treatment with water that is called slaking:



One litre of water combines with approximately 3.1 kilograms (6.8 lb) of CaO.

The process is exothermic, so it is carried out at ambient temperature (and the heat produced is taken away and used).