

Questions

What are the precautions when heating calcium carbonate?

And after step two what do you expect to see? A solid or liquid type? What color?

Answers

Calcium carbonate decomposes smoothly (it is not an explosion), so the only precaution is to be careful when handling with equipment heated to 900°C. Besides, when the calcination is carried out in restricted area (closed oven), excessive pressure arises. So the oven should be pressure resistant or the excessive pressure should be bled-off.

Calcium oxide is white powder and calcium hydroxide is white powder too. Both are almost insoluble in water. Water is taken in excess. So when slaking dry white powder of calcium oxide we get white slurry of calcium hydroxide. The slaking reaction is strongly exothermic, so it is accompanied by heating. Solid calcium hydroxide may be isolated from the slurry by filtration or centrifugation followed by drying (at mild temperatures) or simply by vaporization until dry state.