

Answer on Question #43377 - Chemistry - Other

Question:

What happens if someone mixes calcium carbide with:

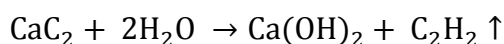
1) Dry Ice ?

or

2) Thermite ?

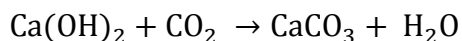
Solution:

- 1) If someone mixes calcium carbide with dry ice the mixture will be frozen because of low temperature of CO₂ sublimation -78.5 °C (-109.3 °F). However, after a time decrease of temperature near the mixture results in water condensation from the air. The result of adding water to calcium carbide is reaction between water and carbide:



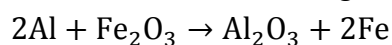
The products are calcium hydroxide and acetylene. The interaction will run slowly because of low temperature in reaction area.

One of the products Calcium hydroxide can interact with dry ice:



The products of this reaction are calcium carbonate and water.

- 2) If calcium carbide is mixed with thermite, the reaction will not start. However, if the mixture is heated to the ignition temperature, the following reaction will occur:



Additionally, some reactions may run between the carbide and oxygen or nitrogen from the air:

