

# Hazardous materials chemistry for emergency responders

[Science](#), [Chemistry](#)



In order to avoid hazards that may cause skin burn it is necessary to wear gloves while handling phosphorus. Thus, not only gloves but also other equipment along with protective measures are also necessary while handling phosphorus (Lenntech, 1998).

Phosphorus slowly reacts with water and forms phosphine. It should be noted that Phosphine is a poisonous gas that is released when solids like phosphorus are exposed to water. Therefore, phosphorus becomes a water reactant. When this poisonous gas is exposed to water, it can contribute to the danger to the firefighters because the basic element that they use while extinguishing a fire is water. Thus, water can release oxygen from the water-reactive materials and can add to the fire causing the fire to aggravate rather than extinguish. In order, to reduce the fire and finally extinguish it, it is necessary to use dry sand rather than water to reduce the risk of aggravation of fire. Thus, it is advisable for the firefighters to use dry sand while extinguishing the fire that is ignited due to red phosphorus (Burke, 2002).