



## Reducing Explosion Hazards

*If your work area contains explosive devices, reactive chemicals or pressure vessels, the risk of explosion exists. Prevention begins with understanding what materials in the workplace can explode the factors that can trigger an explosion.*

### How to Reduce Explosion Risk



### What Causes Explosions?

An explosion is a rapid expansion of gases. Many explosions occur when gases are exposed to a heat source- such as fire, sparks, or even static electricity- or an increase in pressure. Chemical reactions can also cause explosions. For instance, when two or more incompatible substances are combined, they may explode. Some chemicals can even explode if exposed to air or water.

### Know Your Materials

Learn about the materials used in your work area.

Find out which ones can explode and under what circumstances. Read labels; flammable liquids and explosives are usually identified. If you're unsure whether a substance might explode, assume it can. Treat it as a possible explosive.

Read your safety data sheets. They'll tell you if a substance can explode and what to do if something goes wrong. The keywords—FLASH POINT and FLAMMABILITY LIMITS- tell you the chemical's safety levels. Be alert to any changes in temperature or pressure that could mean a change in explosion risk.

- Keep explosives from heat.
- Use only approved storage and transfer containers.
- Make sure containers are grounded and bonded before transferring flammable liquids.
- Report equipment malfunctions immediately.
- Make sure the ventilation equipment is working properly. Monitor the air when using explosive materials in confined spaces.
- Clean up spills quickly and get rid of oily rags daily.
- Keep your work area clean. Dust can trigger an explosion.
- Stay alert for leaks and other danger signals.
- Observe "No Smoking" signs.
- Keep aisles clear so that emergency equipment can be moved quickly.
- Know where fire-fighting equipment is stored and how to use it.

### If there is an explosion:

- Follow UCI's emergency plan.
- Report the explosion. Leave the area immediately, closing windows and doors behind you to contain the problem.
- Notify everyone in the area and keep upwind from the explosion. If you have to fight the fire, wear a respirator and protective clothing.

Safety Moment:

**Reducing Explosion Hazards**

I have reviewed and understand the contents of this Safety Moment document.

Name <i>(Print First and Last)</i>	UCInetID	Signature	Date