

## Foundry Safety

1. Even trace amounts of MOISTURE and MOLTEN METAL don't mix!!! Steam explosions are the #1 cause of death in foundries.
2. Wear safety gear!! This includes, but is not limited to, leather shoes, leather apron, proper gloves, face shield, safety glasses and a hat. A leather foundry hat is the best choice
3. NEVER put water on a metal fire. This can cause a HUGH EXPLOSION!!!.
4. Have a sand bed under all areas. The sand bed should be at least 3 inches thick. This will help in containing metal spills and will help protect flooring.
5. Never pour over wet ground. Remember, even TRACE AMOUNTS of MOISTURE can cause EXPLOSIONS.
6. Molten metal spilled on concrete will cause the concrete to explode. Use a thick sand bed over concrete.
7. Always use clean metal as feedstock. Combustion residues from some lubricants and paints can be very toxic.
8. Always operate in a well ventilated area. Fumes and dusts from combustion and other foundry chemicals, processes and metals can be toxic.
9. Always use a NIOSH rated dusk mask. Dusts from sand, parting dusts and chemicals can be hazardous or cancer causing. Protect your lungs!
10. Always use safety glasses. Even minor mishaps can cause blindness.
11. Never use a crucible that has been damaged or dropped. Imagine what would happen if a white hot crucible of brass crumbled as you were carrying it!
12. Always charge crucibles when cold. Adding metal to a hot crucible is really dangerous. If there is moisture on the metal, even just a haze, the metal can cause the entire contents of the crucible to explode.
13. Spilled molten metal can travel for a great distance. Operate in a clear work area.
14. Think about what you are doing at all times. Focus on the job at hand and the next step. Have all moves **planned and rehearsed** prior to any operation.
15. Always wipe your feet before exiting the foundry area.
16. Never start the furnace without the instructor's approval.
17. Never leave the furnace unattended while in operation.