



Flammable Solids

Version: May 2020

A flammable solid is defined as a solid which is readily combustible or which may cause or contribute to fire through friction. They can be powdered, granular, or pasty chemicals which can be ignited after brief contact with an ignition source and if the flame spreads rapidly.



Examples include paraformaldehyde and cerium powder.

Personal Protective Equipment & Personnel Monitoring



Lab Coat

Standard lab coats are required. Flame resistant lab coats should be considered if handling large amounts.



Gloves

Nitrile gloves typically provide adequate protection. Consult with your PI or supervisor to determine whether any materials involved in your process require alternative hand protection.



Eye Protection

ANSI Z87.1-compliant safety glasses or safety goggles.

Labeling & Storage

Flammable solids should be stored in a cool, dry location and separated from oxidizers and incompatible corrosives. It is advisable to keep them in a flammables cabinet or in a refrigerator rated for flammables storage.

Engineering Controls, Equipment & Materials

Fume Hood

It is advisable to use a fume hood when working with these materials. If the use of a fume hood is impossible or impractical, please contact the Office of Research Safety (ORS) to determine whether additional respiratory protection is required.



Housekeeping

Spills

Notify others in the area of the spill, including your supervisor. Eliminate all ignition sources and clean using spark proof tools. Laboratory personnel should refer to the Spill Control Guidelines document for additional information.

Decontamination

Decontamination methods vary based on the materials handled and equipment being used. Please review the chemical Safety Data Sheet for guidance on cleaning materials.

Any waste from this chemical class should be disposed of through the UGA Hazardous Waste Program. For assistance with arranging a waste pickup, you may contact the Environmental Safety Division (ESD) at 706-542-5801. Prior to pickup, any container used to hold hazardous waste should be labeled with the following:

- "Hazardous Waste"
- Chemical contents: Enough detail should be provided so that the full contents of the container are readily apparent. Labeling may include any of the following:

Waste

- Percentages (Ex: 70% water, 30% hydrochloric acid)
- Volumes (Ex: 1L of acetone, 500mL of water)
- Chemical classes (Ex: halogenated solvents)
- Method (Ex: EPA 515.1 Herbicide Extraction Solvent Waste)
- Referenced Log (Ex: See Laboratory Waste Log, Volume 2)
- Utilizing Chematix waste profiles
- Any other labeling method providing enough detail to accomplish this requirement
- One or more of the following waste characteristics recognized by EPA: Ignitable, Corrosive, Reactive, or Toxic.



First Aid & Emergencies

Fire	Use a dry chemical or CO ₂ extinguisher (ABC or BC) to put out a small fire.
Skin or Eye Contact	First aid measures will vary greatly based on the individual chemicals hazard properties. Consult the specific chemical's manufacturer's SDS and, when necessary, a medical professional for the appropriate first aid procedures.
Inhalation	Move person into fresh air. If symptoms persist, get medical attention.
Ingestion	First aid measures will vary greatly based on the individual chemicals hazard properties. Consult the specific chemical's manufacturer's SDS and, when necessary, a medical professional for the appropriate first aid procedures.

References

Prudent Practices in the Laboratory: Handling and Management of Chemical Hazards, National Research Council, 2011

NFPA 45: Standard on Fire Protection for Laboratories, National Fire Protection Agency, 2015

Code of Federal Regulations, Occupational Health and Safety Standards, 29 CFR, 1910.1200: Hazard Communication

Contacts

Office of Research Safety: 706-542-5288

Environmental Safety Division: 706-542-5801

