University of Nebraska Lincoln

Safe Operating Procedure

(Revised 12/19)

DOOR POSTINGS FOR POTENTIALLY HAZARDOUS LOCATIONS

This SOP describes door placard procedures and methods for UNL locations that are potentially hazardous. Laboratory door postings are similar but not identical to door postings for non-laboratory spaces. Standardized icons that depict certain hazards (pictograms) are used on door postings for both laboratory and non-laboratory spaces. Door postings for non-laboratory spaces also depict the National Fire Protection Association (NFPA) diamond placard. An example of each type is shown. Figure 1 is an example of a door posting for a laboratory space. Figure 2 is an example of a door posting for a non-laboratory space.

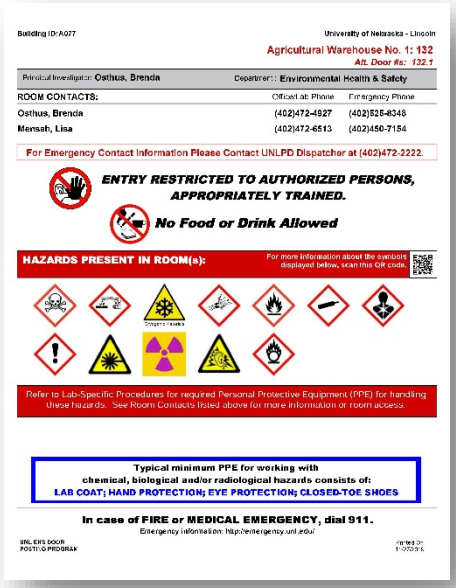

Figure 1 Laboratory Posting

Purpose

Door placards support routine hazard communication and facilitate response actions during an emergency.

Obtaining a Posting

EHS will conduct a hazard assessment or verify/update a previous assessment and provide a door posting as part of the routine work area survey process. A door posting can be obtained independent of the work area survey process upon request. Following evaluation of the hazards in the room, EHS will send a door placard in electronic form, hard copy, or both. Place a hard copy in the holder provided (or a page protector, if no holder is provided) on the latch side of the door from the hall or public space leading into the room.

IMPORTANT: Printing in color is required for all placards as the NFPA requires the diamond to be color-coded and OSHA requires the red diamond outline for the hazard pictograms.

Review door postings at least annually. If hazards or room contacts change, contact EHS to generate a revised door posting. Door postings are not a substitute for a chemical inventory.

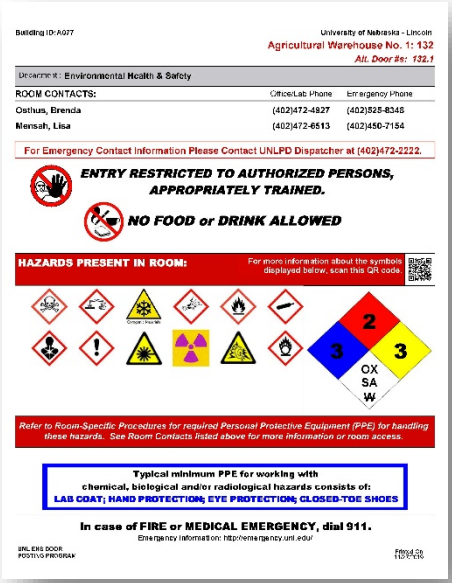

Figure 2 Non-laboratory Posting

Hazard Information

Following is an explanation of information that may be conveyed through a door posting. Additional instruction on chemical hazards is provided in the EHS Chemical Safety Training module.

Access Restrictions

All persons entering a placarded area should be authorized to do so and those working within should be appropriately trained considering the hazards located in the room. Additional entry restrictions may be indicated in accordance with department policy and/or specialized hazards.

Personal Protective Equipment (PPE)

The posting directs persons entering a room to consult with the room contacts for lab-specific procedures related to the required PPE for entering and/or working in a particular room. Typical minimum PPE for people working with chemical, biological, or radiological lab hazards is given in the blue box at the bottom of the posting. This includes: long pants to cover the legs, a lab coat, protective eyewear, hand protection, and closed-toe shoes. Additional PPE may be required based on specific area or task hazards.

For non-lab and shop areas, the typical minimum PPE should be appropriate to the task; (e.g., hand, skin and eye protection for working with chemicals; eye, hand and body protection for working with certain machinery). Additional PPE may be required based on specific area or task hazards.

Icons and Warning Words

The table below summarizes the hazard(s) that may be denoted by certain pictograms/icons. As discussed in detail in EHS Chemical Safety Training, pictograms are not unique to a single hazard classification. Additional information about the specific hazard class(es) within the room can be determined by reviewing the chemical inventory and associated Safety Data Sheets.

Category	Description	Pictograms/Symbols
No Food or Drink Allowed	Food or drink for human consumption is not allowed in an area characterized by chemical, biological, or radiological hazards. Food or beverages used for experimentation should be clearly indicated as "Not for Human Consumption."	
Health Hazard Pictogram		
Aspiration Toxicity	Chemicals or mixtures of liquids or solids that can damage the respiratory system if inhaled (i.e., aspirated) by mistake.	

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Category	Description	Pictograms/Symbols
Carcinogen	A chemical or mixture that will induce cancer or increase its incidence.	
Germ Cell Mutagenicity	Chemicals that will cause mutations to germ cells of humans that can be transmitted to progeny.	
Reproductive Toxicity	Chemicals or mixtures that affect sexual function and fertility and/or developmental toxicity from conception through birth.	
Specific Target Organ Toxicity Single/Repeated Exposure	Chemicals and mixtures that have demonstrated to cause non-lethal but both reversible and irreversible damage to specific organs.	
Respiratory or Skin Sensitization	A substance that will lead to hypersensitivity of the airways or allergic responses to the skin following inhalation/contact.	
Acute Toxicity **Skull & Crossbones Pictogram**	Chemicals that have the potential to cause death if inhaled, ingested, or absorbed through the skin in relatively small amounts.	
Corrosion Pictogram		
Corrosive to Metal	A substance or a mixture, which will materially damage, or even destroy metals or cause irreversible damage to the skin.	
Skin Corrosion/Burns	A substance or a mixture, which will cause irreversible damage to the skin.	
Serious Eye Damage	Chemicals or mixtures that produce irreversible tissue damage or serious physical decay of vision.	
Exclamation Mark Pictogram		
Irritants (Skin & Eye)	A substance that causes reversible changes to the eye or skin.	
Skin Sensitizer	A substance that causes an allergic response following skin contact.	
Toxicity	A substance that exhibits acutely harmful effects if swallowed, has contact with the skin, or inhaled.	
Narcotic Effects	A substance that may cause drowsiness, dizziness, lack of coordination, vertigo, reduced alertness, or similar condition.	
Respiratory Tract Irritant	A substance that may cause redness, cough, pain, or similar effect on the respiratory tract.	

Category	Description	Pictograms/Symbols
Oxidizers	Substances that generally by yielding oxygen cause or contribute to the combustion of other materials.	
Gases Under Pressure	Gases under a pressure of 200 kPa (29 psi, 2 atm) or more or which are liquefied or liquefied and refrigerated.	
Exploding Bomb Pictogram		
Explosives	A solid or liquid substance (or mixture of substances), which is in itself capable of extremely violent decomposition.	
Self-Reactives (Type A or B)	Thermally unstable liquid or solid chemicals liable to undergo a strongly exothermic decomposition even without participation of oxygen (air) when heated and which may result in explosion or fire.	
Organic Peroxides (Type A or B)	Thermally unstable chemicals, which may undergo exothermic self-accelerating decomposition and which may be sensitive to impact or friction, explosive decomposition, or explosive reaction with other substances.	
Flame Pictogram		
Pyrophorics	A liquid, solid, or gas which is liable to ignite shortly after coming into contact with air, even in small quantities.	
Flammable Aerosols	Any non-refillable receptacle designed to eject components at least one of which is a flammable gas, liquid, or solid.	
Flammable Gas	A gas at 20° C and standard atmospheric pressure that has a flammable range in air.	
Flammable Liquids	A liquid having a flashpoint of not more than 93° C (199.4° F).	
Flammable Solids	A solid that is readily combustible, or may cause or contribute to fire through friction.	
Emits Flammable Gas	Solids or liquids that are liable to become spontaneously flammable or give off flammable gases in dangerous quantities when in contact with water.	

Category	Description	Pictograms/Symbols
Self-Reactives (Type C – F)	Thermally unstable liquid or solid chemicals liable to undergo a exothermic decomposition even without participation of oxygen (air) when heated and which may result in fire (but not explosion).	
Organic Peroxides (Type C – F)	Thermally unstable chemicals, which may undergo exothermic self-accelerating decomposition and burn rapidly or react with other substances to cause fire.	
Cryogenic Material	Cryogenic materials exist as solids, liquids, or gases at a range of temperatures (-60°C to -270°C). Sometimes they are under high pressure. Hazards include frostbite, cold contact burns, asphyxiation or fire/explosion	 Cryogenic Materials
Human Biohazard	The universal **biohazard** symbol is used to denote the potential for human biohazardous materials. Additional information is also added to the placard as applicable by specific regulation or standard. See the EHS SOP ***Biohazard Door Postings*** for details about door placards for locations with human biohazards.	
Ionizing Radiation	The radiation tre-foil symbol is used to denote the potential for **ionizing radiation** that is subject to licensing/registration. The Radiation Safety Officer (RSO) will specify additional required postings specified by regulation or standard.	
Lasers	The **laser** symbol is used to indicate the presence of Class IV laser(s) that have the potential for operating in an open beam configuration. Viewing of the direct beam or reflection is likely to cause serious eye injury. Additional hazards may include skin burns or fire.	
Noise	The **noise** symbol is used to demarcate areas where an employee's exposure to noise is expected to exceed occupational limits (115 dBA at any time; or greater than 85 dBA when expressed as an 8-hour TWA).	

NFPA Diamond

The NFPA diamond is used to convey chemical hazards. There are four sections of the diamond. The top section is colored red and conveys relative fire hazard. The right hand section is colored yellow and conveys relative reactivity hazard. The left hand section is colored blue and conveys relative health hazard. The bottom section is colored white and is used to convey special hazards. The NFPA system uses a relative ranking system of 0 to 4. An explanation of the ranking for each NFPA diamond section follows.

Health (blue)	
4	Materials that, under emergency conditions, can be lethal.
3	Materials that, under emergency conditions, can cause serious or permanent injury.
2	Materials that, under emergency conditions, can cause temporary incapacitation or residual injury.
1	Materials that, under emergency conditions, can cause significant irritation.
0	Materials that, under emergency conditions, would offer no hazard beyond that of ordinary combustible materials.

Flammability (red)	
4	Materials that will rapidly or completely vaporize at normal atmospheric pressure and normal ambient temperature, or that are readily dispersed in air and will burn readily.
3	Liquids and solids that can be ignited under almost all ambient temperature conditions. Materials in this degree produce hazardous atmospheres with air under almost all ambient temperatures or, though unaffected by ambient temperatures, are readily ignited under almost all conditions.
2	Materials that must be moderately heated or exposed to relatively high ambient temperatures before ignition can occur. Materials in this degree would not under normal conditions form hazardous atmospheres with air, but under high ambient temperatures or under moderate heating could release vapor in sufficient quantities to produce hazardous atmospheres with air.
1	Materials that must be pre-heated before ignition can occur. Materials in this degree require considerable preheating, under all ambient temperature conditions, before ignition and combustion can occur.
0	Materials that will not burn under typical fire conditions, including intrinsically noncombustible materials such as concrete, stone, and sand.

Instability/Reactivity (yellow)	
4	Materials that in themselves, are readily capable of detonation or explosive decomposition or explosive reaction at normal temperatures and pressures.
3	Materials that in themselves are capable of detonation or explosive decomposition or explosive reaction, but that require a strong initiating source or that must be heated under confinement before initiation.
2	Materials that readily undergo violent chemical change at elevated temperatures and pressures.
1	Materials that in themselves are normally stable, but that can become unstable at elevated temperatures and pressures.
0	Materials that in themselves are normally stable, even under fire conditions.

Special Hazards (White Section at bottom of Diamond)	
~~W~~	Water reactive
OX or **OXY**	Oxidizer
SA	Simple Asphyxiant

(Created 5/04; Revised 3/05, 9/06, 10/07, 3/08, 6/09, 4/11, 5/13, 8/13, 3/15, 8/16, 9/16)