

Principal Investigator: \_\_\_\_\_

Date Approved: \_\_\_\_\_

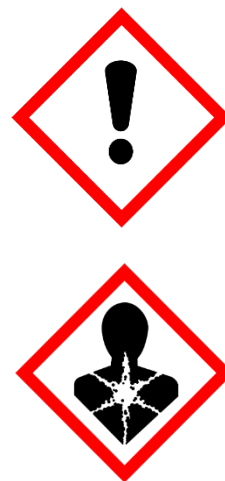
**This document covers basic chemical safety information for respiratory and skin sensitizers. The use of any sensitizers is subject to pre-approval by the Principal Investigator (PI) and/or Supervisor. DO NOT USE RESPIRATORY OR SKIN SENSITIZERS UNTIL YOU HAVE OBTAINED THE NECESSARY PRE-APPROVAL.**

## Respiratory or Skin Sensitizers

Refer to the University of Arkansas Chemical Hygiene Plan for a description of chemicals that will be considered as a Particularly Hazardous Substance (PHS) Respiratory or Skin Sensitization.

Chemicals that meet the definition of a PHS respiratory or skin sensitizers must be used only in a designated area where limited access, special procedures, knowledge, and work skills are required. A designated area can be the entire laboratory, a specific laboratory workbench, or a laboratory hood. Designated areas must be clearly marked with signs that identify the chemical hazard and include an appropriate warning; for example: WARNING! PARTICULARLY HAZARDOUS SUBSTANCE (SENSITIZERS) WORK AREA

A sensitizer (allergen) is a substance that causes exposed individuals to develop an allergic reaction in normal tissue after repeated exposure to the substance. Examples of sensitizers include diazomethane, chromium, nickel, formaldehyde, isocyanates, arylhydrazines, benzylic and allylic halides, and many phenol derivatives. Sensitizer exposure can lead to all of the symptoms associated with allergic reactions, or can increase an individual's existing allergies. Respiratory sensitizers are indicated under GHS by the health hazard pictogram and the hazard statement "May cause allergy or asthma symptoms or breathing difficulties if inhaled". Skin sensitizers are indicated under GHS by the exclamation mark pictogram and the hazard statement "May cause an allergic skin reaction."



## Exposure, Signs and Symptoms and Chemical Properties

Review the appropriate sections of the chemical specific Safety Data Sheet (SDS) for information on ways to detect exposure, appropriate exposure limits, signs and symptoms of exposures and chemical properties. If data is lacking in any area, refer to the following sites for additional information:

<https://pubchem.ncbi.nlm.nih.gov/>

<https://druginfo.nlm.nih.gov/drugportal/>

<https://toxnet.nlm.nih.gov/index.html>

<http://web.doh.state.nj.us/rtkhsfs/indexfs.aspx>

Always use the smallest amount of chemical that is consistent with the requirements of the work performed. Understand the chemical properties and what are the likely routes of exposure based on those properties and the procedures to be performed. Use containment devices (e.g., fume hood, glove box) when substance can volatilize, when the substance is manipulated, whenever aerosols or particulates may be produced, or when an action may result in an uncontrolled release.

Contact Environmental Health and Safety (EHS) if there are any questions (479-575-5448).

## Personal Protective Equipment (PPE) & Personnel Monitoring



**Lab Coat**

Chemical/Flame resistant



**Gloves**

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



**Eye Protection**



**Face Shield**

ANSI Z87.1-compliant safety goggles, or face shield if a splash hazard is present.

## Labeling & Storage

Store away from other materials that are chemically incompatible. Each container's label must include an appropriate corresponding pictogram and identify the material as a sensitizer. Containers must be stored in leak-proof secondary containment within a Designated Area. The secondary container's label must include an appropriate pictogram and identify the material as a sensitizer. Also, if not plainly visible (e.g. through a cabinet window), labeling must be applied to storage locations where these are stored to avoid an inadvertent encounter.

## Engineering Controls, Equipment & Materials

### Fume Hood

Use a fume hood (or equivalent) to keep exposure to toxins as low as possible. If your protocol does not permit the handling of such materials in a fume hood, contact EH&S (479-575-5448) to perform an exposure assessment to determine whether alternative engineering controls or additional respiratory protection is required.

## Housekeeping

### Spills

Notify others in the area of the spill, including your supervisor. Evacuate the location where the spill occurred. Call 911 and report any exposure to EHS (479-575-5448). Remain on-site (at a safe distance) to provide detailed information to first responders.

### Decontamination

After each use (or day), wipe down the immediate work area and equipment to prevent accumulation of chemical residue. Decontaminate workspace with appropriate materials (refer to the SDS). When finished wash hands and arms with soap and water and properly dispose of all wastes. Contaminated items (e.g., solid and liquid materials and PPE) should be discarded as hazardous waste.

### Waste

Refer to the UA Chemical Hygiene Plan for details and contact EHS (479-575-5448) for specific disposal instructions.

