**Standard Operating Procedures**

Laboratory Specific

**Chemical:** **Sodium Amide**

Please fill out the form completely.  Print a copy and insert into your

*Laboratory Safety Manual and Chemical Hygiene Plan*.

Refer to instructions for assistance.

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Department:\_­­­­­­­­­­­­­­­­­\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_                     Date when SOP was written: \_\_\_\_\_\_\_\_\_

Date when SOP was approved by the lab supervisor: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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

Internal Laboratory Safety Coordinator/Lab Manager: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Laboratory Phone: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Office Phone: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Emergency Contact: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

*(Name and Phone Number)*

Location(s) covered by this SOP: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

*(Building/Room Number)*

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**Type of SOP:** Process Hazardous Chemical Hazardous Class

**Purpose**

Sodium amide, commonly called sodamide, is a chemical compound with the formula NaNH2. Sodium amide is extremely water reactive. It exists as a white solid when pure, but commercial samples are typically gray due to the presence of small quantities of metallic iron from the manufacturing process. Such impurities do not usually affect the utility of the reagent. NaNH2 has been widely used as a strong base in organic synthesis.

**Use:** (Add a description of what the chemical is used for in the lab)

**Physical & Chemical Properties/Definition of Chemical Group**

CAS# 7782-92-5

Class: **Corrosive, Water Reactive, may form explosive Peroxides**

Molecular Formula: NaNH2

Form (Physical State): White when pure

7782-92-5

Boiling Point: 400 °C (752 °F)

Melting point: 210 °C (410 °F)

**Potential Hazards/Toxicity**

Harmful by skin contact, eye contact, ingestion, and/or inhalation. Material causes skin burns and is harmful if absorbed through skin. Causes eye burns if splashed in eye. It is very harmful if swallowed. It is harmful if inhaled since material is extremely destructive to the tissue of mucous membranes and upper respiratory tract.

**Personal Protective Equipment (PPE)**

**Respirator protection**

Use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls (i.e. no fume hood available). If the respirator is the sole means of protection, use a full-face supplied air respirator.

Respirators should be used only under any of the following circumstances:

* As a last line of defense (i.e., after engineering and administrative controls have been exhausted).
* When Permissible Exposure Limit (PEL) has exceeded or when there is a possibility that PEL will be exceeded.
* Regulations require the use of a respirator.
* An employer requires the use of a respirator.
* There is potential for harmful exposure due to an atmospheric contaminant (in the absence of PEL)
* As PPE in the event of a chemical spill clean-up process

Lab personnel intending to use/wear a respirator mask must be trained and fit-tested by ORS and should contact occhealt@uga.edu. This is a UGA requirement described in more detail in the [UGA Respiratory Protection Plan](https://esd.uga.edu/sites/default/files/respiratoryprotection.pdf) and supported by the [Office of Research Occupational Health and Safety Program](https://research.uga.edu/ohsp/).

**Hand protection**

Type of gloves recommended for **sodium amide**: nitrile, neoprene, or butyl rubber gloves are recommended.

Note: Consult with your preferred glove manufacturer to ensure that the gloves you plan on using are compatible with **sodium amide**.

Refer to glove selection chart from the links below:

<http://www.ansellpro.com/download/Ansell_8thEditionChemicalResistanceGuide.pdf>

OR

<http://www.allsafetyproducts.biz/page/74172>

OR

<http://www.showabestglove.com/site/default.aspx>

OR

<http://www.mapaglove.com/>

**Eye protection**

Safety glasses/goggles and face shield (it is highly important that tightly fitting safety goggles and/or full face shield (8-inch minimum) are worn during activities which pose a splash hazard).

**Skin and body protection**

Complete body suit protecting against chemicals and/or flame retardant protective clothing, The type of protective equipment must be selected according to the concentration and amount of sodium amide at the specific workplace.

**Hygiene measures**

Avoid contact with skin, eyes and clothing. Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

**Engineering Controls**

Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. A fume hood should be used at all times when handling sodium amide.

**First Aid Procedures**

**If inhaled**

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Get medical attention immediately.

**In case of skin contact**

Take off contaminated clothing and shoes immediately and flush skin with plenty of water for at least 15 minutes. Wash clothing and thoroughly clean shoes before reuse. Get medical attention immediately.

**In case of eye contact**

Check for and remove any contact lenses. Immediately flush eyes thoroughly with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention immediately.

**If swallowed**

Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Rinse mouth with water. Get medical attention immediately.

**Special Handling and Storage Requirements**

**Precautions for safe handling**

Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed. A fume hood should be used when handling sodium amide. Keep away from sources of ignition. No smoking.

**Conditions for safe storage**

Keep container tightly closed in a closed, cool, dry, and well-ventilated place. Never allow product to get in contact with water during storage because it is water and air sensitive. Handle and store under inert gas. Cabinets where significant quantities of sodium amide must be labeled with the hazard warning “Corrosive.” All corrosives with concentrations greater than or equal to 1M must be stored in secondary containment at all times.

**Spill and Accident Procedure**

**Chemical Spill Dial 911**

**24-7 On-Call Response to Research, Environment, Health or Safety**

**Concerns Dial 2-5561 from a campus phone or 706-542-5561 from a non-campus line.**

**Spill** – Follow the procedures set out in the [UGA Chemical and Laboratory Safety Manual.](http://research.uga.edu/docs/units/safety/manuals/Chemical-Laboratory-Safety-Manual.pdf)

[If there are any chemical-specific protocols for responding to a spill, insert them here or mark “none”:]

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# **Medical Emergency Dial 911**

**Life Threatening Emergency, After Hours, Weekends And Holidays** – Dial **911** or the emergency phone numbers listed at the beginning of the UGA Chemical and Laboratory Safety Manual

*Note: All incidents that result in an injury or property damage must be reported to ORS / ESD using a University Incident/Accident Report.*

**Non-Life Threatening Emergency** – Follow the instructions in the UGA Chemical and Laboratory Safety Manual.

*Note: All incidents that result in an injury or property damage must be reported to ORS / ESD using a University Incident/Accident Report.*

**Decontamination/Waste Disposal Procedure**

**For general hazardous waste disposal procedures, see Appendix H of the UGA Chemical and Laboratory Safety Manual.**

**Chemical Specific Procedures: [to be inserted or marked as “none”]**

Instruments and benches contaminated with sodium amide should be decontaminated with soap and water. All sodium amide waste and contaminated disposables should be disposed of as hazardous waste.

**Safety Data Sheet (SDS) Location**

UGA personnel can access Online SDS through a link in the upper left corner of the ESD home page (<https://esd.uga.edu>) and logging in by using their UGA email user name and password.

**Protocol/Procedure**

(Add specific description of procedure)

**NOTE**

Any deviation from this SOP requires approval from PI.

**Documentation of Training** (signature of all users is required)

* Prior to conducting any work with sodium arsenate, designated personnel must provide training to his/her laboratory personnel specific to the hazards involved in working with this substance, work area decontamination, and emergency procedures.
* The Principal Investigator must provide his/her laboratory personnel with a copy of this SOP and access to the SDS provided by the manufacturer.
* The Principal Investigator must ensure that his/her laboratory personnel have attended appropriate laboratory safety training or refresher training within the last 12 months.

**Principal Investigator SOP Approval**

Print name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Signature\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Approval Date:

I have read and understand the content of this SOP:

**Name Signature Date**

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