Standard Operating Procedure

**Ethylene glycol ether acetate**

*This is an SOP template and is not complete until: 1) lab specific information is entered into the box below 2) lab specific protocol/procedure is added to the protocol/procedure section and
3) SOP has been signed and dated by the PI and relevant lab personnel.*

 Print a copy and insert into your
*Laboratory Safety Manual* and *Chemical Hygiene Plan*.
Refer to instructions for assistance.

|  |  |
| --- | --- |
| **Department:** | Click here to enter text. |
| **Date SOP was written:** | Click here to enter a date. |
| **Date SOP was approved by PI/lab supervisor:** | Click here to enter a date. |
| **Principal Investigator:** | Click here to enter text. |
| **Internal Lab Safety Coordinator/Lab Manager:** | Click here to enter text. |
| **Lab Phone:** | Click here to enter text. |
| **Office Phone:** | Click here to enter text. |
| **Emergency Contact:** | Click here to enter text. |
| *(Name and Phone Number)* |
| **Location(s) covered by this SOP:** | Click here to enter text. |
| *(Building/Room Number)* |

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

**Purpose**

Ethylene glycol ether acetateis a flammable liquid or vapor. It may form explosive peroxides. It may be harmful if inhaled, ingested, or absorbed through the skin. It may cause irritation to the respiratory tract, skin, and eyes. It is a presumed reproductive toxicant. Ethylene glycol ether acetate is used as a solvent for nitrocellulose, oils, and resins and in the treatment of textiles and leathers. It is also a component of varnish removers and wood stains.

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

CAS#: 111-15-9

Class: **Flammable, combustible, toxic, teratogen, reproductive toxin**

Molecular Formula: C6H12O3

Form (physical state): Liquid

Color: Colorless

Boiling point: 156 °C

**Potential Hazards/Toxicity**

Ethylene glycol ether acetateis a flammable liquid or vapor. May form explosive peroxides. It may be harmful if inhaled, ingested, or absorbed through the skin. It may cause irritation to the respiratory tract, gastrointestinal tract, skin, and eyes. Symptoms of exposure include nausea, vomiting, diarrhea, headache, chemical conjunctivitis, dermatitis, central nervous system depression, burning sensation, pulmonary edema, unconsciousness, coma, and death. It is a presumed reproductive toxicant. It may damage fertility or the unborn child. Ethylene glycol ether acetate has a permissible exposure limit (PEL) of 540 mg/m3.

**Personal Protective Equipment (PPE)**

**Respirator Protection**

Use a full-face respirator with multi-purpose combination (US) respirator cartridges.

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**

Handle with gloves. Nitrile gloves are recommended.

NOTE: Consult with your preferred glove manufacturer to ensure that the gloves you plan on using are compatible with ethylene glycol ether acetate.

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**

ANSI approved, tight-fitting safety glasses/goggles. Face shields are recommended.

**Skin and Body Protection**

Flame-resistant lab coat preferably made of antistatic material, long pants, and closed-toe shoes.

**Hygiene Measures**

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

**Engineering Controls**

Chemical fume hood with adequate exhaust ventilation. Electrically grounded lines and equipment.

**First Aid Procedures**

**If inhaled**

Move person into fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Consult a physician.

**In case of skin contact**

Wash skin with soap and water for at least 15 minutes while removing contaminated clothing and shoes. Consult a physician.

**In case of eye contact**

Flush eyes with plenty of water for at least 15 minutes. Consult a physician.

**If swallowed**

Do not induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

**Special Handling and Storage Requirements**

**Precautions for safe handling:** Avoid contact with skin, eyes, and clothing. Avoid inhalation. Avoid heat, flames, sparks, and other sources of ignition- No smoking. Use spark-proof tools and explosion-proof equipment. Prevent build-up of electrostatic charge.

**Conditions for safe storage:** Keep container tightly closed in a cool, dry, and well-ventilated area. Opened containers must be carefully resealed and kept upright to prevent leakage. Store in flammables area. Store protected from light and air. Containers should be dated when opened and tested periodically for peroxides. Avoid strong oxidizing agents, nitrates, plastics, rubber, coatings, strong acids, and strong bases.

Always date peroxide forming chemicals with the date of receipt and the date of opening the chemical. Please completely use or dispose of the chemical within one year of the opening/receipt date.

**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”]**

Wearing proper PPE, decontaminate equipment and bench tops using soap and water. Absorb spills with inert material. Dispose of the used chemical and contaminated disposables 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 lab specific Protocol/Procedure here)**

Click here to enter text.

**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 ethylene glycol ether acetate, 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:

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| **Name** | **Signature** | **Date** |
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