**THIS IS A TEMPLATE/BASIC STARTING POINT. CUSTOMIZE THIS TEMPLATE WITH INFORMATION PERTINENT TO YOUR SETUP AND THE PROCEDURE YOU WILL BE USING/YOUR GROUP’S PERSONAL USE.**

STANDARD OPERATING PROCEDURE

|  |  |
| --- | --- |
| **Procedure Title** | Acetone |
|  |  |
| **Dept** |  |  | **Bldg/Rm** |  |  | **Supervisor** |  |

**Procedure Overview**

Commonly used to clean residue from compatible chemicals and prep surfaces for adhesives, resin, and other processes. Clear colorless liquid with a ketone odor.

**Health and safety information for materials used**

Always read and understand the safety data sheet (SDS) for a chemical before use or storage.

**General Hazards:**

Causes eye irritation. May cause respiratory irritation in areas with little to no air flow or use in high amounts. Highly flammable liquid and vapor. May cause drowsiness or dizziness. Avoid using over large areas as it greatly increases the fire and health risks. Use on smaller areas of larger projects to minimize this hazard.

Use only in area with adequate ventilation – a chemical fume hood is the best option, if available. If no fume hood is available, use in an area with mechanical airflow or outside. In areas where airflow is insufficient, a respirator is required.

**Storage & Handling:**

Keep away from heat, sparks, open flames, and hot surfaces. Use only non-sparking tools. Keep container tightly closed when not in use. Store in a cool, dry place out of direct sunlight. Avoid contact with acids, aldehydes, alkalis, amines, ammonia, oxidizing agents, reducing agents, and chlorine compounds.

**Fire Fighting Measures:**

In the event of a fire, use a Class ABC fire extinguisher. Vapors are heavier than air and may spread along floors. Decomposition may produce carbon monoxide, carbon dioxide, and other asphyxiants.

**Hazard Control Measures**

(Lab coat, eye and hand protection, and fully enclosed shoes must be selected as required by Section D of the ISU Laboratory Safety Manual.)

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| [ ]  | Latex gloves | [ ]  | Insulated gloves | [ ]  | Face Shield | [x]  | Respirator\* |
| [x]  | Nitrile gloves | [ ]  | Safety glasses | [x]  | Lab Coat | [x]  | Fume hood |
| [ ]  | Neoprene gloves | [ ]  | Vented goggles | [ ]  | Apron | [ ]  | Biosafety cabinet |
| [ ]  | Vinyl gloves | [x]  | Splash goggles | [ ]  | Dust mask | [ ]  | Glove box |
| [x]  | Fully enclosed shoes | [ ]  | Flame resistant lab coat |

 **\*Black, Yellow, or Olive filters when airflow or ventilation is inadequate**

**Waste Disposal Procedures**

[customize for your lab/group]

**First Aid Procedures**

Inhalation:

Inhalation of the vapor may cause dizziness, headache, watering eyes, drowsiness, nausea, irritation of the respiratory tract, and numbness in the arms and legs. Remove to fresh air and allow time to rest. Seek medical attention if the individual does not improve.

Skin Contact:

May cause skin irritation. Prolonged or repeated skin contact can lead to defatting, drying, redness, and blistering of the area. Wash affected area with large amounts of water and soap. Remove contaminated clothing. Seek medical attention if irritation persists.

Eye Contact:

Causes itching, burning, redness, and tearing. Immediately flush eyes with water for 15 minutes, remove contact lenses if able to do so and continue rinsing. Seek medical attention.

Ingestion:

Causes irritation in the gastrointestinal tract and match symptoms seen in Inhalation. Do not induce vomiting if swallowed. Seek medical attention immediately.

**All accidents and injuries occurring at work or in the course of employment must be reported to the employee's supervisor as soon as possible (even if no medical attention is required). Report all incidents and exposures here:** [**https://www.ehs.iastate.edu/services/occupational/accidents-injuries**](https://www.ehs.iastate.edu/services/occupational/accidents-injuries)

**Spill/Release Containment, Decontamination, and Clean Up Procedures**

Clean up: Keep unnecessary people away; isolate hazard area and deny entry. Stay upwind, out of low areas, and ventilate closed spaces before entering. Shut off ignition sources. Use proper bonding and grounding methods for all equipment and processes. Keep out of waterways and bodies of water. Be cautious of vapors collecting in small enclosed spaces: sewers, low lying areas, confined spaces, etc.

Small spills: Take up with sand, earth or other noncombustible absorbent material. Sweep up the absorbent and place into waste container with orange tag – request EH&S pickup.

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| **Written By** |  |  | **Date** |  |
|  |  |  |  |  |
| **Approved By** |  |  | **Date** |  |

 (PI or Lab Supervisor)

**HAZARD ASSESSMENT**

Use the hierarchy of controls to document the hazards and the corresponding control measure(s) involved in each step of the procedure.

Consider *elimination or substitution* of hazards, if possible.

***Engineering Control(s):*** items used to isolate the hazard from the user (i.e. fume hood, biosafety cabinet).

***Administrative Control(s****):* policies/programs to limit the exposure to the hazard (i.e. authorizations, designated areas, time restrictions, training).

***Required PPE***: indicate PPE including specific material requirements if applicable (i.e. flame resistant lab coat, type of respirator or cartridge).

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| --- | --- | --- | --- |
| **Hazard** | **Engineering Control(s)** | **Administrative Control(s)** | **Required PPE**  |
|  Eye Irritation |  Use handled tools. Work in fume hood with sash as low as possible.  | Require training for chemical use. Fume hood training. |  Safety Glasses/splash goggles/face shield. |
|  Skin Irritation |  Use handled tools for mixing/applying chemical mixture. | Require training for chemical use. |  fully enclosed shoes, long pants, long sleeves, gloves, laboratory coat |
|  Respiratory Irritation |  Mechanical Ventilation | Require training for chemical use. |  Respirators\* where airflow is insufficient |
|  Ingestion |  Use handled tools. | Require training for chemical use. |   |
| Flammable |  Work in fume hood. Store in flammable cabinet.  |  Do not use around open flame/sparks |  |
| **INSERT SPECIFIC HAZARDS/CONTROLS HERE** |  |  |  |

 \***Black, Yellow, or Olive filters when airflow or ventilation is inadequate**

**TRAINING RECORD**

Use the following table to record the training associated with this Standard Operating Procedure.

|  |  |  |  |
| --- | --- | --- | --- |
| **Print Name** | **Signature** | **Trained By** | **Date** |
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