



# Standard Operating Procedure for Machine Lubricants

WD-40

## Section 1 – Lab-Specific Information

**Building/Room(s) covered by this SOP:**

Paul G. Allen Center for CSE, CSE 615

Bill & Melinda Gates Center for CSE,  
CSE2 G15

**Unit or department:**

Paul G. Allen School of CSE

**Chemical Hygiene Officer Name:**

Alexander Lefort

**Chemical Hygiene Officer Signature/Date:**

 2024/05/07

**This SOP was created by (if not PI):  
Name/Title**

Alexander Lefort  
Fabrication Research Lab Manager

## Section 2 – Hazards

Components:

Aliphatic Hydrocarbons

Petroleum Base Oil

LVP Aliphatic Hydrocarbon

Hazards:

Flammable Liquid Category 3

Aspiration Toxicity Category 1

Specific Target Organ Toxicity Single Exposure Category 3 (nervous system effects)

Hazard Statements:

Flammable liquid and vapor.

May be fatal if swallowed and enters airways.

May cause drowsiness or dizziness.

Precautionary Statements:

Keep away from heat, sparks, open flames, and hot surfaces. – No smoking.



Keep container tightly closed.

Ground and bond containers and receiving equipment.

Use explosion-proof electrical equipment.

Use only non-sparking tools.

Take precautionary measures against static discharge.

Avoid breathing mists or vapors.

Use only in a well-ventilated area.

Wear eye protection.

Response Statements:

IF SWALLOWED: Immediately call a POISON CENTER or physician. Do NOT induce vomiting.

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.

IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or physician if you feel unwell.

In case of fire: Use water fog, dry chemical, carbon dioxide or foam to extinguish.



### Section 3 – Engineering Controls and Personal Protective Equipment (PPE)

#### Engineering controls

Generally, ventilation within the Fabrication Research Lab is sufficient for the safe use of this product without additional engineering controls. If using a large quantity (e.g. more than just spraying a part or surface for cleaning, which may result in puddling of chemical), contact the lab manager to assist with additional ventilation controls.

#### Hygiene measures

Avoid contact with skin, eyes, and clothing. Wash hands after removing PPE, before breaks, and immediately after handling the chemical. Any potentially exposed body parts should be washed immediately.

PPE is required when spraying WD-40 and wiping down parts, or at any time where the liquid is present outside of the dispensing container:



### **Skin and body protection**

Chemically compatible laboratory coats that fully extend to the wrist must be worn and be appropriately sized for the individual and buttoned to their full length. Personnel must also wear full-length pants, or equivalent, and close-toe shoes. The area of skin between the shoe and ankle must not be exposed.

Tyvek disposable lab coats are required during the use of WD-40. Lab coats may be reused so long as no WD-40 or other chemical spots are present and they are not torn or otherwise worn out. Store these lab coats only on the provided hooks near the entrance of the room and ensure that your name is written on the left breast pocket.

### **Hand protection**

Hand protection is required for the activities described in this SOP.

Disposable nitrile gloves are required during the use of WD-40. If the gloves do not fit properly, contact the lab manager to purchase the appropriate size for you.

Gloves must be inspected prior to use, including a check for pinholes.

Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands immediately after glove removal.

### **Eye protection**

ANSI Z87.1-compliant eye protection is required for all work with Objet resins. Ordinary prescription glasses will NOT provide adequate protection unless they also meet the Z87.1 standard and have compliant side shields. Chemical splash goggles are required during the use of WD-40.

### **Respiratory protection**

Respiratory protection is not required for the activities described in this SOP.

## **Section 4 – Special handling and storage requirements**

Most tools may be used with WD-40, unless otherwise restricted by their SOPs. No special requirements needed for handling. Wipe down all contaminated surfaces with a dry paper towel.

Avoid prolonged contact with skin. Avoid breathing vapors or mist. Keep away from heat or ignition sources.

Safe to dispose of contaminated rags, gloves, etc. in regular waste stream.

When work is completed, remove gloves and wash hands with soap and water.

## **Section 5 – Spill and accident procedures**

Chemical spills must be cleaned up as soon as possible by properly protected and trained personnel. Ensure that you have nitrile gloves, Tyvek disposable lab coat, and splash goggles on.

If the spill is relatively small you may wipe up the excess chemical with paper towels and dispose of them in the regular waste stream. Ventilate area; If in CSE2 G15A, open lab windows for thirty minutes while any remnants evaporate.



You may use the multi-absorbent pads from the chemical spill kit if the spill is large. Contact the lab manager immediately to inform them of the spill and for additional guidance. Follow the steps below:

1. Retrieve the lab spill kit from under the sink area.
2. Open the bucket and empty it onto an unused, uncontaminated surface. Utilize the splash goggles and nitrile gloves inside, as well as grabbing a disposable lab coat to wear.
3. Once fully suited with PPE (nitrile gloves, splash goggles, lab coat), use the multi-absorbent pads from the kit to absorb the large spill. As they become saturated, place them into the bucket of the spill kit.
4. Ensure the area is dry. Place any pads and paper towels used into the bucket.
5. Remove gloves and disposable lab coat and place into the waste container and seal the container with the lid.
6. Label the container with a properly filled out waste disposal label (see lab manager) and place the bucket into the non-flammable waste cabinet.
7. Promptly wash your hands with soap and warm water. Done.

For questions on spill cleanup, contact EH&S spill consultants at 206-543-0467 during normal business hours (Monday-Friday, 8 a.m. to 5 p.m.).

Any spill, exposure or near miss incident requires the involved person or supervisor to complete and submit the [UW Online Accident Reporting System](#) (OARS) form on the EH&S website within 24 hours (certain [types of incidents require immediate notification](#)).

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**Exposures:** If a person is injured, exposed, or suspected of being exposed to Objet resins, follow procedures listed here:

#### Perform first aid.

- **Inhalation exposure:** If irritation is experienced, move to fresh air. Get medical attention if irritation or other symptoms develop and persist.
- **Ingestion:** Aspiration hazard. DO NOT induce vomiting. Call physician, poison control center, or the WD-40 Safety Hotline at 1-888-324-7596 immediately.
- **Sharps injury** (needle stick or subcutaneous exposure): Scrub exposed area thoroughly for 15 minutes using warm water and sudsing soap.
- **Skin exposure:** Wash with soap and water. If irritation develops and persists, get medical attention.
- **Eye exposure:** Flush thoroughly with water. Remove contact lenses if present after the first five minutes and continue flushing for several more minutes. Get medical attention if irritation persists.
- **Signs and Symptoms of Exposure:** Harmful or fatal if swallowed. Aspiration of liquid into the lungs during swallowing or vomiting may cause lung damage. May cause eye and respiratory irritation. Inhalation of mists or vapor may cause drowsiness, dizziness, and other nervous system effects. Skin contact may cause drying of the skin.



### Get Help.

- **Immediate medical attention is required if ingestion has occurred. Show the safety data sheet to the doctor in attendance.**
- **Call 9-1-1 or go to nearest Emergency Department (ED); provide details of exposure:**
  - Agent
  - Dose
  - Route of exposure
  - Time since exposure
- **Bring the SDS and this SOP** to the Emergency Department
- **Notify your supervisor** as soon as possible for assistance
- **Secure the area** before leaving; lock doors and indicate spill if needed

### Report the incident to Environmental Health & Safety.

- **Notify EH&S immediately** after providing first aid and/or getting help.
  - During business hours (M-F/8-5), call 206-543-7262.
  - Outside of business hours, call 206-685-UWPD (8973) to be routed to EH&S Staff On Call.
- Any spill, exposure or near miss incident requires the involved person or supervisor to complete and submit the [UW Online Accident Reporting System](#) (OARS) form on the EH&S website within 24 hours (certain [types of incidents require immediate notification](#)).

## Section 6 – Waste accumulation and disposal procedures

The Fabrication Research Lab has two separate waste streams: flammable and non-flammable materials.

- Flammable waste materials must always be stored in the flammables cabinet.
- Non-flammable waste must always be stored in the non-flammable cabinet.
- Free-standing acids are not allowed in the space; Contact the lab manager if you run across these.

To dispose of empty cans, ensure that they contain no more than 3% of the total volume of the container. If so, dispose of them within the regular landfill waste stream. If disposing of a container with more than this, label it with a properly filled out waste collection tag and place into the flammable chemical storage cabinet. Contact the lab manager for labels.

When more than three containers are ready for disposal, or a spill has occurred, contact the lab manager and they will submit a chemical waste collection request.

**All chemical waste containers must be labeled** with a [UW Hazardous Waste Label](#). Refer to [How to Label Chemical Waste Containers](#).

To request a collection of chemical waste, submit a form on the [Chemical Waste Disposal](#) webpage on the EH&S website or directly in [MyChem](#) inventory. Contact EH&S at 206.616.5835 or [chmwaste@uw.edu](mailto:chmwaste@uw.edu) with questions.

Work area decontamination procedures as appropriate for the chemical in use should be followed.

## Section 7 – Protocol

WD-40 may be used for multiple purposes:



**Rust removal:** Spray the rusted part and allow the WD-40 to sit for several minutes. Wipe away the remaining WD-40 with a clean cloth or paper towel. If rust is more stubborn, you may try spraying the part with WD-40, waiting several minutes, then using a steel-wire brush to abrade the rusted area before wiping away the remaining liquid. Repeat as necessary.

**Lubricating parts:** Certain hinges and parts may be lubricated with WD-40 to reduce friction, wear, and noise of the part. Ensure that the part does not require other lubricants (e.g. grease, 3-in-1 oil, etc) before using WD-40.

**Removing prior protective coatings:** Occasionally, machines must be re-finished in their protective coating. This requires the removal of the previous layer. Spray the working surface liberally with WD-40 and allow it to sit for several minutes. Come back and wipe away the WD-40 and the dissolved protective coating (generally wax). Dispose in accordance to whatever protective layer was removed. Apply the new protective coating layer utilizing the instructions/chemical SOP for that material.

**NOTE:** Any deviation from this SOP requires approval from the lab manager.

**Section 8 – Special Precautions for animal use ( Yes  No)**

N/A

**Section 9 – Approvals required**

Users must complete training on this chemical SOP in order to work with WD-40 in the space.

**Section 10 – Decontamination**

Dry off parts completely with a cloth or paper towel. Allow to sit for at least 30 minutes to evaporate off any remaining WD-40 if worried about chemical incompatibilities.

**Section 11 – Designated area**

This chemical SOP only pertains to the Fabrication Research Lab. WD-40 must not be removed from the space without prior approval from the Fabrication Research Lab manager and utilized elsewhere, as the manager cannot factor in other hazards that may be present in other spaces of the building.

**Section 12 – Documentation of training**

- Prior to using substances included in this SOP, laboratory personnel must be trained on the hazards described in this SOP, how to protect themselves from the hazards, and emergency procedures.
- Ready access to this SOP and to a Safety Data Sheet for each hazardous material described in the SOP must be made available in the lab space(s) where these substances are used.
- The Principal Investigator (PI), or Responsible Party, if the activity does not involve a PI, must ensure that their laboratory personnel have attended appropriate laboratory safety training (and refresher training where applicable).
- Training must be repeated following **any** revision to the content of this SOP.



- Training must be documented. Trainings are documented via a Fabrication Research Lab Training Records spreadsheet. Please contact the lab manager for access: [Aalefort@cs.washington.edu](mailto:Aalefort@cs.washington.edu).