



# Standard Operating Procedure for SciGrip 4

SciGrip 4 Solvent cement for bonding acrylics

## Section 1 – Lab-Specific Information

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

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

Alexander Lefort  
Fabrication Research Lab Manager

## Section 2 – Hazards

Components:

Methylene Chloride (dichloridemethane)

Trichloroethylene

Methyl Methacrylate Monomer, Stabilized

Hazards:

Acute toxicity: category 2

Skin irritation: category 2B

Eye irritation: category 2A

Carcinogenicity: category 1B

Environmental acute toxicity: category 3

Environmental chronic toxicity: category 3

Hazard Statements:

H320: Causes eye irritation

H335: May cause respiratory irritation

H336: May cause drowsiness or dizziness

H351: Suspected of causing cancer



H412: Harmful to aquatic life with long lasting effects

H341: Suspected of causing genetic defects

H350: Suspected of causing cancer

Precautionary Statements:

P210: Keep away from heat/sparks/open flames/hot surfaces – No smoking

P261: Avoid breathing dust/fume/gas/mist/vapors/spray

P280: Wear protective gloves/protective clothing/eye protection/face protection

P337+P313: Get medical advice/attention

P403+P233: Store in a well ventilated place. Keep container tightly closed

P501: Dispose of contents/container in accordance with local regulation



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

#### Engineering controls

Only open and use SciGrip 4 in front of one of the laminar flow vents with the ventilation system turned on. Allow the system to reach full speed before opening or beginning work with this product.

#### 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 – nitrile gloves, lab coat, chemical splash goggles – before opening the product and during the entire extent of use and until the product has been properly sealed again.

#### 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 opening, use, and closing and storage of the product. Lab coats may be reused so long as no 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 opening, use, and closing and storage of the product. 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 SciGrip 4. 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 opening, use, and closing and storage of the product.

### Respiratory protection

Respiratory protection is not required for the activities described in this SOP. Remember to utilize the laminar flow exhaust vents.

## Section 4 – Special handling and storage requirements

When opening the SciGrip 4 container, utilize vice grips to remove the lid efficiently and without straining yourself to avoid accidental spillage or injury. The lid may be sealed tightly.

Application of the product must only be done utilizing the appropriate flat-tip syringe applicator bottle. Do NOT leave product in the applicator bottle once done. Return unused product to the metal can from which it came.

- Clean all contaminated surfaces with isopropanol and dry.
- Place all contaminated disposable items in appropriate laboratory waste for disposal.
- Non-disposable/re-usable utensils, glassware, and other surfaces contaminated with SciGrip 4 must be decontaminated at the end of the laboratory work session.
- When work is completed, remove gloves and wash hands with soap and water.

SciGrip 4 should not be transferred to secondary containers other than the dedicated applicator bottle unless the lab manager is made aware of this. If transferred, an appropriate label must be affixed to the secondary container, as per the EH&S guidance found here: [Chemical Container Labels | EHS \(washington.edu\)](#). Please contact the lab manager for appropriate labels.

Once finished with the material, tightly seal the lid and return to the chemical storage shelf in CSE2 G15C.



## Section 5 – Spill and accident procedures

Chemical spills must be cleaned up as soon as possible by properly protected and trained personnel. You must be trained on SciGrip 4 in order to clean up a spill of this chemical. All other persons should leave the area.

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 product from the spill. As they become saturated, place them into the bucket of the spill kit.
4. Once the area is dry, douse the area in water and dry with any remaining pads or paper towels. Place any paper towels used into the bucket as well.
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.

Do **not** attempt to clean up any spill if **not** trained or comfortable. Evacuate the area and call 9-1-1 on campus phone for help. If the spill is out of control, call 9-1-1. If a person is injured, exposed or suspected of being exposed, call 9-1-1 and follow the EXPOSURE PROCEDURES (below).

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 SciGrip 4, follow procedures listed here:

### Perform first aid immediately.

- **Contact with eyes:** Flush eyes immediately with plenty of water for 15 minutes and seek medical advice immediately.
- **Skin Contact:** Wash skin with soap and water. If irritation develops, get medical attention.
- **Inhalation:** Remove to fresh air. If breathing is stopped, give artificial respiration. If breathing is difficult, remove to fresh air. Seek medical advice.
- **Ingestion:** Do not induce vomiting. Seek medical advice immediately.



- **Likely routes of exposure:** Inhalation, eyes, and skin contact.
- **Acute symptoms and effects:**
  - **Inhalation:** Excessive overexposure may cause irritation to nose and throat. In confined areas, vapor can accumulate and can cause unconsciousness.
  - **Eye Contact:** May cause moderate eye irritation which may be slow to heal. May cause slight corneal injury. Vapor may cause mild discomfort and redness.
  - **Skin Contact:** Prolonged contact may cause skin burns. May cause more severe response on covered skin (under clothing and gloves).
  - **Ingestion:** Low toxicity if small amount swallowed, however larger amounts may cause injury. Aspiration into the lungs may occur during ingestion or vomiting.
- **Chronic (long-term) effects:** IARC Classification 2B (Methylene Chloride)

#### Get Help.

- **Immediate medical attention is required. 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

**Self-protection of the first aider:** Avoid contact with skin, eyes, or clothing. Wear personal protective equipment listed in this SOP.

**Note to physicians:** May cause sensitization in susceptible persons. Treat symptomatically.

#### 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, wear appropriate PPE. Ensure the lid is securely fastened on the container. Label it with a properly filled out waste collection tag and place into the non-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.

There should be no need to use glassware or other containers for SciGrip 4; If contact with SciGrip 4 occurs on another object, follow the spill cleaning guidelines.

### Section 7 – Protocol

1. Prepare the acrylic materials you wish to bond in front of one of the laminar flow vents. Collect any clamps and clamping surfaces you may also wish to use.
2. Turn on the ventilation system and wait for it to reach max speed. The sound from the system should reach a consistent hum.
3. Don proper PPE as previously stated.
4. Retrieve the chemical from the chemical storage shelf in CSE2 G15C along with the designated applicator bottle and a set of vice grips.
5. In front of the laminar flow vents, adjust the vice grips and clamp onto the lid. Spin them counter-clock-wise to remove the lid.
6. Using the applicator bottle, squeeze it a bit and then insert into the opening of the container. Release your grip on the applicator bottle slowly to suck up the amount of SciGrip 4 you wish to use.
7. Clamp or hold the acrylic pieces you wish to bond together and place the applicator tip against the seam. Squeeze very gently and watch for the mating seam to turn clear (a wet look) and pull the applicator along the seam in a steady manner, adjusting your squeeze to avoid overflowing the area. Use a towel to absorb any excess flow quickly to avoid disfiguring your surfaces – you may dispose of this via the “lightly contaminated materials disposal” SOP.
8. **Hold the pieces in place for a minute to allow the materials to bond to one another. You may now release your grip on the pieces, but be careful as the bond takes several hours to fully harden.**
9. **Once done, return any unused SciGrip 4 in the applicator bottle to the original container and re-secure the lid firmly. Place the applicator bottle and SciGrip 4 container back on the chemical shelf within CSE2 G15C.**
10. **Clean up the working area and remove PPE; Throw disposable gloves into the trash, clean and return the chemical splash goggles, and hang the lab coat on the designated hooks.**



**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**

All staff working with SciGrip 4 must be trained on this SOP prior to starting work. They must also review the SDS, and it must be readily available in the laboratory either physically or digitally. All training must be documented and maintained by the PI or their designee.

**Section 10 – Decontamination**

Decontamination should not be required during regular usage of these chemicals. The applicator bottle should not come in contact with or be used with other chemicals outside of SciGrip 4.

**Section 11 – Designated area**

SciGrip 4 should only be used in CSE2 G15 in front of an active laminar flow vent.

**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).