

BCAL Construction Hazard Control and Risk Assessment Version 1

BCAL Construction University of Regina, Lab Bldg. 113

- All workers have taken and passed the WHMIS training program.
- MSDS on all hazardous materials used in the lab are posted and readily available.
- Emergency contacts off and on campus are posted and readily available.
- A first aid kit is installed in the lab.
- Eyewash and safety shower stations are installed.
- A Fume Hood is installed.

All workers are issued and will wear PPE (personal protective equipment) such as lab coats, safety glasses and protected toe foot ware.

Controlled Products Needed:

1. **Epoxy Resin:** Likelihood of harm (**very unlikely**) - Measuring and mixing to be done in a fume hood. Empty containers of both resin and hardener will be rinsed three times with wash acetone in a fume hood and dumped in a waste disposal drum in Science Stores.
2. **Epoxy Hardener:** Likelihood of harm (**very unlikely**) - Measuring and mixing is to be done in a fume hood.
3. **Ethanol:** Likelihood of harm (**very unlikely**) - Small quantities used over long intervals with adequate ventilation.
4. **Dichloromethane:** Likelihood of harm (**unlikely**) - Very small quantities used for a final wipe of all plates will be done outdoors.
5. **Acetone (wash):** Likelihood of harm (**unlikely**) - For rinsing epoxy containers in a fume hood.

Risks:

- **Inhalation of lead oxide from old lead (very low risk):** No old oxide lead will be used; if oxide is present it will be vacuumed up using an asbestos-certified cleaner.
- **Lead Contamination (very low risk):** Protective gloves (vinyl or latex) will be worn when handling lead. No food will be allowed in the lab. All workers will be instructed to remove their gloves and wash their hands thoroughly before touching their eyes, nose or mouth. Contaminated gloves are to be disposed of and not re-worn.

- **Epoxy Contamination (risk very low):** All workers are to wear proper personal protection equipment and are rotated frequently so no one person is constantly in contact with the material and adequate ventilation is provided.
- **Back Injuries (low risk):** All workers are instructed in the proper methods and limits of lifting.
- **Toe Injuries (low risk):** All workers will wear PPE and are instructed on procedures to prevent injuries.
- **Other Injuries (low risk):** The swaging machine (swager) has a set of slowly rotating rollers with good shielding and speed control. Fingers cannot reach the rollers by a physical barrier. Lab is well organized with proper storage; workers' jobs are rotated often.
- **Fire (low risk)** Lab has passed inspection by Mr. Murray Fisher (University fire safety consultant) and Mr. Mark Briggs (University building inspector).
- **Injuries to the fingers and hands during the pressing stage (very low risk):** The rams of the press move very slowly and are controlled by remotely via electric switches. Workers need not be near the press once switches have been turned on.