



Safety Alert September 2023

Subject/Topic: Selection of gloves for handling cryogenic liquids

Background: The UNSW Safety team are issuing this safety alert to remind users to select the correct glove type for use with liquid nitrogen and other cryogenic liquids.

Incident with context. An incident occurred where a person received a small liquid nitrogen burn while they were in the process of lifting a liquid nitrogen Dewar. They were wearing a pair of Prosafe Ultratech Freeze gloves (see photo) at the time. During this process, liquid nitrogen spilled onto their hand through cracks in the gloves.

- On further investigation it was found that the gloves being used were only rated to -50°C and are not suitable for handling liquid nitrogen.
- The surface of the glove may crack, and the back of the glove is porous, which allows liquid nitrogen to pass through to the skin.

Summary of injury/damage: Minor blisters on the hands were sustained. Room temperature water was run over the person's hand for 10 minutes then burn gel was applied.



Actions Required.

- Any areas where liquid nitrogen or other cryogenic liquids are in use should review their glove type as identified in the Risk Management Form to ensure that they are rated for use with cryogenic liquids.
- If you discover any of the gloves of the type shown in the photograph above being used to handle liquid nitrogen or cryogenic liquids, remove them from use immediately.
- Take 2 minutes **2 Be Safe** before every task or activity in the lab to make sure you have identified the risks and implemented appropriate controls, including personal protective equipment.
- Make sure that the personal protective equipment you identify as a control in your Risk Management Form is suitable for the task, chemical or material being handled and that these details are transferred to the Safe Work Procedure.

- An example of cryogenic gloves suitable for handling cryogenic liquids is shown below:



- You must also wear a long-sleeved coat or gown with the sleeve cuff coming over the cuff of the gloves to prevent the liquid cryogenic fluid from getting inside the glove in the event of a spill.

Further Information: safety@unsw.edu.au