

Summary of PPE Requirements for Cryogen Use: per Pub3000 chapter 29.4

Operation	Potential Hazard	Face Shield and Safety Glasses (with Side Shields)	Safety Glasses (with Side Shields)	Cryogen Gloves	Closed-Toe Shoes	Long Pants (No Cuffs)	Lab Coat or Long-Sleeve Shirt	Remarks
Pouring small nonpressurized (<5 liters) volume of LN₂ between open containers	Eye or skin injury from splashing		YES	Recommended ¹	YES	YES	Recommended ¹	Avoid pouring cryogenics from above chest level
Work with experimental samples immersed in LN₂ in small (~1 L) dewar	Frostbite and burns from cold surface contact		YES	Recommended ¹	YES	YES	Recommended ¹	Thermally insulated hand tools may be an effective alternative to gloves
Handling chilled metal transfer lines	Frostbite and burns from cold surface contact		YES	YES	YES	YES	YES	
Dispensing LN₂ from a pressurized line to an open dewar²	Frostbite and burns from cold surface contact, eye and skin injury from splashing	YES	YES	YES	YES	YES	YES	
Closed pressurized line LN₂ or LHe transfer	Frostbite and burns from contact with the unexpected release of pressurized cryogen liquid or gas	YES	YES	YES	YES	YES	YES	

¹ Recommended. For a few limited operations, cryogen gloves or long-sleeve shirts/lab coats may not be needed.

² When using a phase separator between the pressurized LN₂ line and the open non-pressurized dewar, the risk of a cryogen splash is substantially reduced.