

# SLAC PPE: Sharing and Sanitizing

This document provides hygienic guidelines for use with common PPE to slow the spread of Covid 19.

**Whenever feasible, PPE should not be shared and should be individually issued. COVID-19 may stay on surfaces for up to several days.** Guidelines are listed by PPE type, and include cleaning instructions where applicable.

## The Basics

OSHA recently released [Guidance on Preparing Workplaces for COVID-19](#), including the points below.

The virus is thought to spread mainly from **person to-person**, including:

- Between people who are in close contact with one another (within about 6 feet).
- Through respiratory droplets produced when an infected person coughs or sneezes. These droplets can land in the mouths or noses of people who are nearby or possibly be inhaled into the lungs.

It may be possible to get COVID-19 by touching a surface or object and then touching your own mouth, nose, or possibly eyes, but this is not thought to be the primary route of transmission.

For all PPE use,

- Regularly wash hands (20 seconds) or use alcohol-based hand rubs. Workers should always wash hands when they are visibly soiled and after removing any PPE.
- All types of PPE must be properly removed, cleaned, and stored or disposed of, as applicable, to avoid contamination of self, others, or the environment.

## Safety Glasses & Face Shields:

- DON'T share. Issue to individuals.
- Welder or grinder face shields should be individually issued & maintained like a welding helmet.
- Don't leave PPE out near a piece of equipment for general use.
- For visitors, stock fresh, in-the-box glasses or replacement shields and dispose after each use.

### Cleaning:

- If sharing is required, clean immediately after EACH use using one of the techniques below.
  1. Wash with soap and water after each use and dry.
  2. Saturate wipe with 70% ethanol or isopropanol in water. Clean items after each use. Air dry to allow sufficient contact time. (May damage plastics.)
  3. Batch cleaning: Mix a cleaning bath with 65-75% ethanol or isopropanol in water. Single batch, short term use ONLY. Alcohol evaporation will diminish efficacy over time.

## Laser Safety Goggles:

Where practical, laser workers should have their own laser eyewear that are not shared. If eyewear is shared, then should limit amount of sharing between individuals and have more rigorous cleaning procedures.

### For all laser eyewear use:

- Wash hands before cleaning or donning laser eyewear.
- Wash hands after cleaning or removing laser eyewear.
- Consider using disposable nylon gloves when handling laser eyewear.
- If eyewear is shared, clean after each use; cleaning should also be considered prior to use if there's a concern about the eyewear being clean.
- Cleaning: can use a mild alcohol-free soap solution, then dry with a disposable non-abrasive tissue or wipe. **See addendum on manufacturer recommended cleaning practices.**

### Most cautious cleaning method:

- Use a disinfectant for the frames but NOT LENSES.
- Contact goggle manufacturer for recommendation.
- Clean lenses with a mild soap solution, then dry with a disposable non-abrasive tissue or wipe. CAUTION: Soap must be mild and alcohol-free.
- **See addendum on manufacturer recommended cleaning practices.**

### Cleaning absorptive polycarbonate or glass filter lenses:

- Use a mild soap solution or disinfectant for the frames.
- A mild soap solution can be used for the lenses. For the lenses, can also consider a disinfectant if approved by the eyewear manufacturer or a test is done to demonstrate it doesn't damage the eyewear. If testing a disinfectant, spot test the eyewear with a candidate disinfectant and check visually for signs of any damage.
- Disinfectant is unlikely to damage the filter material in a way that affects the OD (optical density, which determines the attenuation) given that the filters are typically 2-3 mm thick. There is a higher potential for damage to a protective or anti-reflective coating on the lens surface, which could affect the lens VLT (visual light transmission).

### Cleaning Reflective dielectric-coated filters:

- CAUTION REQUIRED for cleaning.
- Follow eyewear manufacturer instructions for cleaning. If recommended, perform a spot test to check for any damage. In general, a mild alcohol-free soap solution can be used, then dry with a disposable non-abrasive tissue or wipe.

## Lab Coats:

- DON'T share. Issue to individuals based on chemical hazards of work.
- Use disposable options for visitors.
- Disposable lab coats or well-separated storage of personal lab coats is recommended during Covid 19 pandemic.
- Coats may be laundered ONLY through professional lab attire cleaning companies.

## Lab Aprons:

Cryo and Rubber Chemical types. Sharing typically required.

- Wash hands before and after each use when donning and doffing protective equipment.
- Rubber and rubber-like aprons can be cleaned with warm soapy water. Clean after each use.
- Cloth type clothing need to be handled with clean gloves to prevent contamination. It may be possible to gently wipe cryo aprons with a disinfectant wipe.

## Reusable gloves:

Cryo (fabric) and heavy duty chemical types (e.g. butyl, neoprene). Sharing typically required.

- Wash hands before and after each use of Cryogenic or shared gloves.
- Apply hand sanitizer liberally to all parts of the hand, wrist and forearm prior to donning gloves. Don gloves before hands and forearms have finished drying.
- Conduct necessary work then remove gloves and wash hands again.

## Hard Hats:

- DON'T share. Issue to individuals
- Visitor hard hats should be washed with soap and water after each use. Disinfectant wipe use may be reasonable.
- Cleaning and Storage instructions for 3M H-700 and H-800 series hardhat (ones with SLAC logo):

*Cleaning and Storage • Clean the hard hat and suspension with mild soap and water. Rinse and wipe dry. • Do not use paints, solvents, chemicals, adhesives, gasoline or like substances on this hard hat – doing so can lessen the protection from impact and penetration. • Never alter, puncture, modify or engrave the shell or the suspension. • Exposure to direct sunlight and heat over time can lessen the ability of the hard hat to withstand impact and penetration. When possible, store hard hat out of direct sunlight, including the dashboard or rear window shelf of a vehicle, and extreme heat over 120°F (49°C).*

## Climbing Harnesses:

- If shared, skin contact tends to be minimal. Transmission of germs should be of lower concern.
- Generally issued to individuals to assure that they are kept in proper adjustment.

## CalOSHA Regulatory Requirements:

8 CCR § 3387

### **§ 3387. Sanitation.**

Protectors shall be capable of being cleaned easily and disinfected. These protectors shall be kept clean and in good repair. Safety devices, including protective clothing worn by the employee, shall not be interchanged among the employees until properly cleaned. Where the division has determined that ordinary cleaning will not remove risk of infection, additional precautionary measures may be required.

Exception: Safety devices worn over shoes or outer clothing, no part of which contacts the skin of the wearer, such as metal footguards.

## Questions?

Contact your Directorate ES&H Coordinator for help.

## Addendum:

### Additional Info on Cleaning and Disinfecting Laser Safety Goggles

1. Information from laser eyewear manufacturers on cleaning
  - a. [Laservision FAQ](#) on cleaning laser eyewear
    - Clean eyewear with clear water and neutral cleaning agents (e.g. a mild, household glass cleaner)
    - Do not clean them dry- you could grind in small particles
    - Never immerse them into water
    - Do not use chemicals or acidic cleaning fluids for cleaning
    - Do not insert them into sterilization or disinfectant fluids
    - Never clean them with ultrasonic waves
  - b. Honeywell has [this info](#), though they no longer manufacture laser eyewear
    - Laser Eyewear CLEANING INSTRUCTIONS: Use UVEX CLEAR or wash in mild soap and water. Rinse in clean water. Air dry or pat dry with clean, soft tissue. Do not use ammonia, alkaline cleaners, abrasive cleaning compounds or solvents. Certain solvents may lower the impact resistance of these lenses.
  - c. Kentek sells Pyramex [lens cleaning towelettes](#) (box of 100 for \$15.25 or case of 10 boxes for \$102). Pyramex offers a variety of [lens cleaning products](#).
2. Information from some experts on disinfecting laser eyewear.

This is an issue that comes up at health care facilities. SLAC's LSO looked into this a little a year ago in response to a query from a Medical LSO on how to address a concern from their local public health authority. The query commented, "They are concerned about cross-contamination/infection from shared safety glasses and want laser operators to use high level medical disinfectants such as CS20 to decontaminate the glasses."

In response, 3 officers of [Z136 SSC-3](#) were consulted. This Z136 sub-committee is responsible for producing the ANSI Z136.3 standard *for Safe Use of Lasers in Health Care*:

- Chair, Dr. Ray Lanzafame, MD.
- Vice-Chair, Penny Smalley, Nurse and Healthcare Safety Consultant
- Secretary, Patti Owens, Cosmetic and Safety Consultant, RN

Their input for disinfecting/cleaning laser eyewear was:

- Patti Owens  
I contacted Andy Barrows with Innovative Optics, laser eyewear manufacturer, to determine if he had any additional strategies for disinfecting laser eyewear. Theoretically, one could use a disinfectant on the rigid frames, however, care would need to be taken to avoid any product contact with the lenses. Contacting the manufacturer of her own laser eyewear may also prove to be beneficial. However, I personally agree with Andy's comments below.

"Disinfecting eyewear is a tough question. We suggest warm soapy water. If they would like to use a disinfectant, I understand, but we don't have any studies showing how certain disinfectant can effect the lenses. It also depends on the type of lens (poly, glass, or coated)."

- Dr. Lanzafame  
Patti's information is good and would be my suggestion. However, I think the best advice would be to contact the specific manufacturer of the eyewear for their recommendations, particularly since the materials used and coatings vary a good deal. Generally, though, soap and water work and of course, using a soft material for drying thereafter so as to avoid scratching the coatings.
- Penny Smalley  
I agree with Dr. Lanzafame, but I would add that the soap used must be alcohol free. Generally one of the anti-bacterial alcohol free brands of soap made for sensitive skin work best. Also, some companies provide cleaning solutions, or recommend a particular one that is best for your LPE - but please read their directions carefully, and verify that they apply to the product you have, and are not generic.

The certified medical LSO at UCSF Health was also consulted. They commented,

"Our departments follow manufacturer's IFU (instructions for use). We also follow Cal OSHA 8 CCR 3380."

This CAL OSHA PPE regulation does not have specific guidance though on cleaning/disinfecting PPE.