

All USC employees working in or adjacent to areas that have potential splash hazards are required to wear splash goggles. In certain cases, the use of a face shield in combination with splash goggles (or safety glasses) is necessary to fully protect against a hazardous chemical, radiological, or biohazardous splash.

HOW ARE SPLASH GOGGLES DIFFERENT FROM SAFETY GLASSES?

Splash goggles seal against the forehead, temples, and cheeks to prevent liquid that may strike the face from dripping down into the eyes. Additionally, splash goggles are not directly vented. Splash goggles with indirect vents are designed so that there is no direct path to the inside of the goggles, keeping splashes out of the eyes.

Indirect-vented goggles allow passage of air into the goggles, but not liquids. They provide protection against splashes as well as any projectiles. **NOTE:** For units with anti-fog coating, the coating will eventually lose its effectiveness.



Non-vented goggles provide a high level of protection, but may fog up more easily. **NOTE:** For units with anti-fog coating, the coating will eventually lose its effectiveness.



Direct-vented goggles allow surrounding air directly into the goggles. They are used primarily to protect against projectiles. **They do not provide adequate protection against splashes or vapors.**



WHEN ARE SPLASH GOGGLES NEEDED?

Splash goggles must be worn when there is a risk of splash from a hazardous material or biological agent, or when working with high risk chemicals or radiological processes.

Avoid using shop goggles since these are not designed for splash hazards, and may be direct-vented as well as manufactured with a cloth or foam seal. They are not approved for use in laboratories with hazardous chemicals. Questions? Contact labsafety@usc.edu.

WHAT I NEED TO KNOW...

- Always use splash goggles that are rated for impact protection. Look for the Z87.1 or Z87.1+ mark on the goggle.
- Adjust the splash goggles so that it fits snugly and comfortably.
- Wear splash goggles at all times in the lab where splash hazards and other high hazards are present.
- Clean splash goggles regularly and according to manufacturer's recommendations.
- If prescription glasses are worn, procure splash goggles that are designed to accommodate them. **DO NOT** wear contact lenses in the lab.

IS A FACE SHIELD ALSO NEEDED?

A face shield is needed when there is a high risk of splash from hazardous chemicals (e.g., corrosives, oxidizers) or biological agents (e.g., viruses, blood). A face shield is also needed for:

- Removal of hot liquids from an autoclave
- Liquid nitrogen dispensing
- Vacuum or pressurized glassware systems



Face shields are considered secondary protectors to be used in addition to splash goggles (or safety glasses) - [OSHA Eye and Face Protection eTool](#).

REFERENCES

- [Cal-OSHA Article 10. Personal Safety Devices & Safeguards](#)
- [OSHA Eye and Face Protection](#)
- [NIOSH Eye Safety](#)
- [Prudent Practices in the Laboratory - Chemical Splash Goggles](#)

