

Eye Protection

The purpose of the information below is to help you understand the terminology used in Science Olympiad event rules to identify types of protective eyewear. The determination of the minimum protection required for any individual event is the responsibility of the committee overseeing the rules for that event.

Contestants are responsible for providing their own protective eyewear. Eye protection specified in the rules is the minimum required. Science Olympiad is unable to determine the degree of hazard presented by equipment/materials/devices brought by the teams. Adult coaches/mentors of those teams must ensure the eye protection they bring is adequate for the hazard. Teams **MUST NOT** be allowed to compete without adequate eye protection. This is **NON-NEGOTIABLE**.

Protective eyewear used in Science Olympiad must be manufactured to meet the American National Standards Institute (ANSI) standard applicable at its time of manufacture. The current standard is ANSI/ISEA 107-2010. Approved protective eyewear can be identified bearing the manufacturer's mark of "Z87". This mark can be difficult to locate, especially on devices made of transparent material; look closely.

Please note that ALL protective eyewear must not only conform to ANSI Z87 (or Z87+ for Impact), but must provide a degree of protection equal to or higher than the type described in the event rules. The different types of protective eyewear are described below.

* *Note:* Face shields/visors are secondary protective devices and are not approved in lieu of the primary eye protection devices below regardless of the type of vents they have.

* *Note:* Prescription Glasses containing safety glass should not be confused with Safety Spectacles. "Safety glass" indicates the glass is made to minimize shattering when it breaks. Unless these glasses bear the "Z87" mark they are not approved for use when eye protection is indicated. If used, they must provide the same or higher degree of protection specified in the rules.

The terminology below will be used when specifying primary protective eyewear:

* *Note:* Water is not a hazardous liquid and its use does not require protective eyewear unless it is under pressure or substances which create a hazard are added.

* *Note:* Unvented goggles and Chemical Splash Goggles that seal tightly to the face completely around the eyes bearing the Z87 mark may be used in lieu of vented goggles. If you have goggles that bear the ANSI Z87+ mark, those goggles would meet the requirements for all goggles.

A. (ANSI Z87) Non-Impact Protection-Examples

Safety glasses

They provide particle protection only and may not be used in lieu of any other type of protective eyewear.

Safety Spectacles with Side Shields

Similar to Safety Spectacles above, they provide particle protection only. These will be specified when there is a probability of particles entering the eye from the side. This condition commonly occurs when multiple contestants/teams are engaged in an activity simultaneously.

Particle Protection Goggles

These must seal tightly to the face completely around the eyes and have direct vents around the sides. Direct vents consist of several small holes or a screen that can be seen through in a straight line. They may not be used when handling hazardous liquids because the vents provide a direct path for the liquid to enter the eye.

B. (ANSI Z87+) Impact Protection

Another attribute to be considered is Impact Protection. Protective eyewear bearing the mark "Z87" provides basic particle protection. Devices that meet the "High Impact" specifications of ANSI Z87.1-2003 are identified by the mark "Z87+".

Devices that meet the ANSI/ISEA 107-2010 are marked Manufacturing letter Z87+.

Impact protection is indicated when there may be a high inertia particle hazard (high mass or velocity).

C (ANSI Z87 D3) Chemical/Splash Protection Goggles

These must seal tightly to the face completely (**Except for VisorGogs**) around the eyes and *have indirect vents*. These vents are constructed so that liquids do not have a direct path into the eye. *If you are able to see through the vent holes from one side to the other, they are direct vents and the goggles may not be used when Chemical/Splash Protection is required.*