Safety Glasses and Photochromic Lenses

FACT SHEET 63-002-1013

Safety glasses with photochromic lenses may not be worn indoors. If a worker performs eye hazardous duties outdoors a significant percentage of the time, they could be provided a pair of clip-on/flip-up sun lenses to wear over their clear safety glasses or a second pair of safety glasses with a permanent sunglass tint. Glass and plastic photochromic lenses do not provide the worker with the maximum possible protection and could result in an adverse liability issue for the government in the event of an eye injury.

Photochromic lenses represent a safety hazard when moving from outdoors to indoors. American Standards Institute/International Safety Equipment Association (ANSI/ISEA) Z87.1-2010, Occupational and Educational Personal Eye and Face Protection Devices, J.9, states that “They should be used with care where the wearer passes from outdoors to indoors in the course of the job. And continues….Photochromic lenses shall be used only after a complete hazard assessment and at the discretion of the person responsible for the selection of protectors.”

Ensure that the hazard assessment validates the existence of a glare hazard before considering authorizing the use of photochromic lenses.

Safety glasses with photochromic lenses may not be worn indoors. DA PAM 40-506, The Army Vision Conservation and Readiness Program, 15 July 2009, Chapter 5, Section 5-4(e) states that, “Photochromic lenses in industrial safety eyewear may only be used in outdoor locations where movement into and out of buildings or facilities does not occur.”

The Tri-Service Vision Conservation and Readiness Program of the Army Institute of Public Health (AIPH) at the U.S. Army Public Health Command (USAPHC) recommends:

When tinted lenses are required for job performance, they should be in the form of a flip-up lens covering an ANSI/ISEA Z87.1-2010 device; or be in a lens and frame combination meeting ANSI/ISEA Z87.1-2010 standards. Tinted lenses may be approved by the local Vision Conservation and Readiness Team (VCRT) for specific worksites or hazards, but will not be worn indoors unless designed for a specific indoor radiation hazard.

Photochromic lenses in industrial safety eyewear may only be used in outdoor locations where movement into and out of buildings or other facilities does not occur. The relatively slow rate of change in photochromic lenses presents a hazard to workers moving indoors or into other areas with lower illumination levels than outdoor environments. The initial darkness created by slow tint change combined with lower interior lighting reduces the illumination on indoor tasks and presents an unacceptable risk to employees. Employees wearing photochromic lenses not made of polycarbonate material must be made aware that the materials are less than optimum for impact protection and present a potential hazard when moving from an area of full illumination to one of reduced illumination.

For these reasons, photochromic lenses should rarely be authorized. Local policy may be established to totally prohibit photochromic lenses. It is the responsibility of the supervisor to ensure safe use of photochromic lenses (that is, outdoor wear only). When employee is authorized to wear photochromic lenses, the employee should bear the additional cost over that of standard clear lenses. Photochromic lenses must be in plastic or polycarbonate material.

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