



Uvex® - Ultra Violet Excluded

SCT Filters and Tints Brochure

Uvex: Ultra Violet Excluded

Uvex, Ultra Violet Excluded, developed Spectrum Control Technology (SCT). It incorporates unique dyes, designed to absorb select wavelengths of radiant energy (light), into polycarbonate safety lens. Our safety lenses employ specifically formulated resins that filter 99.9% of the UV radiation in accordance to the U6 scale of the Z87 standard.

SCT® filters and tints manipulate light to reduce a spectral hazard or to provide distinctive filtration for specific viewing tasks. Examples include filtering solar radiation to reduce glare and blocking radiation from welding to protect workers around these operations. Potential benefits and attributes of various SCT filters and tints are described described below.



Clear Lens

is recommended for indoor and outdoor environments where normal to low light conditions exist. This Clear lens has a Visible Light Transmittance of 92% and provides true color recognition. The clear lens will absorb 99.9% of UVA and UVB radiation.



Espresso Lens

is recommended for workers in outdoor environments where sunlight and glare cause eyestrain, such as gardeners, masons, construction workers, pilots. This Espresso lens has a Visible Light Transmittance of about 15% and will absorb 99.9% of UVA and UVB radiation. The espresso lens tint provides true color recognition. It serves as a 'blue blocker', filtering 97% of blue light to reduce hazy, out of focus appearance. Espresso is an excellent choice for enhanced contrast.



Gray Lens

is recommended for workers in outdoor environments where sunlight and glare causes eyestrain and fatigue, such as utility workers, construction workers, roofers. This gray lens has a Visible Light Transmittance of about 15% will absorb 99.9% of UVA and UVB radiation. This Gray lens tint also provides true color recognition and meets the traffic signal color requirements of ANSI. It is suggested as a general purpose sunglass lens for driving and most outdoor activities.



Light Gray Lens

is recommended for workers where glare cause eyestrain and fatigue, workers that transition between indoor and outdoor work environments such as truck drivers, utility workers, warehouse operators, and others requiring general purpose sunglass protection. This light gray lens has a Visible Light Transmittance of about 35% and will absorb 99.9% of UVA and UVB radiation. The Light Gray lens tint also provides true color recognition.



Dark Gray Lens

is recommended for outdoor environments where strong sunlight and glare cause eyestrain and fatigue, such as with driving and other outdoor activities. This dark gray lens has a Visible Light Transmittance of about 10% and will absorb 99.9% of UVA and UVB. The dark gray lens tint also meets the traffic signal color requirements of ANSI. It is suggested as general purpose sunglass lens for driving and other outdoor activities.

**50% Gray Lens**

is recommended for environments where glare cause eyestrain and fatigue and workers that transition between indoor and outdoor work environments such as truck drivers, utility workers, warehouse operators, and others requiring general purpose sunglass protection. This 50% Gray lens has a Visible Light Transmittance of about 50% and will absorb 99.9% of UVA and UVB radiation. The 50% Gray lens tint also provides true color recognition, and meets the traffic signal color recognition requirements of ANSI.

**Silver Mirror Lens**

is recommended for workers in outdoor environments, such as gardeners, pilots, highway construction, utility workers. It reflects sunlight and glare that causes eyestrain and fatigue. This silver mirror lens has a Visible Light Transmittance of about 15% and will absorb 99.9% of UVA and UVB radiation. The silver mirror lens tint also provides true color recognition, and meets the traffic signal color recognition requirements of ANSI.

**Gold Mirror Lens**

is recommended for workers in outdoor environments, such as gardeners, pilots, highway construction, utility workers. It reflects sunlight and glare that causes eyestrain and fatigue. This gold mirror lens has a Visible Light Transmittance of about 15% and will absorb 99.9% of UVA and UVB radiation. The gold mirror lens tint also provides true color recognition, and meets the traffic signal color recognition requirements of ANSI.

**Red Mirror Lens**

is recommended for workers in outdoor environments, such as gardeners, pilots, highway construction, utility workers. It reflects sunlight and glare that causes eyestrain and fatigue. This red mirror lens has a Visible Light Transmittance of about 15% and will absorb 99.9% of UVA and UVB radiation. The red mirror lens tint also provides true color recognition, and meets the traffic signal color recognition requirements of ANSI.

**Blue Mirror Lens**

is recommended for workers in outdoor environments, such as gardeners, pilots, highway construction, utility workers. It reflects sunlight and glare that causes eyestrain and fatigue. This Blue mirror lens has a Visible Light Transmittance of about 15% and will absorb 99.9% of UVA and UVB radiation. The blue mirror lens tint also provides true color recognition, and meets the traffic signal color recognition requirements of ANSI.

**Orange Mirror Lens**

is recommended for workers in outdoor environments, such as gardeners, pilots, highway construction, utility workers. It reflects sunlight and glare that causes eyestrain and fatigue. This Orange mirror lens has a Visible Light Transmittance of about 15% and will absorb 99.9% of UVA and UVB radiation. The Orange mirror lens tint also provides true color recognition, and meets the traffic signal color recognition requirements of ANSI.

**Amber Lens**

is recommended for indoor and low light environments and situations where enhanced contrast is desired in normal to low daylight. The amber lens is not recommended for night time. This Amber lens has a Visible Light Transmittance of about 90% and will absorb 99.9% of UVA and UVB radiation. The yellow filters light at the blue end of the spectrum while allowing green and red light to pass to improve contrast and reduce hazy appearance in foggy, or dusk conditions. Not recommended for night time driving.

**SCT Reflect 50 Mirror Lens**

is recommended for workers that transition between indoor and outdoor work environments such as truck drivers, highway construction, utility workers. This SCT Reflect 50 mirror lens has a Visible Light Transmittance of about 50% and will absorb 99.9% of UVA and UVB radiation. It is designed specifically to suppress glare in bright indoor applications or to allow easy transition from inside to outside to suppress glare. The SCT Reflect 50 mirror lens tint also provides true color recognition, and meets the traffic signal color recognition requirements of ANSI.

**SCT-Vermillion Lens**

is recommended for indoor applications where enhanced contrast is desired in normal to intense light. SCT-Vermillion lens is not recommended for driving or general purpose use. This SCT-Vermillion lens has a Visible Light Transmittance of about 55% and will absorb 99.9% of UVA and UVB radiation. The red color filters light at the green and blue end of the spectrum and reduces glare from halogen and fluorescent sources with minimal impact on color perception. Useful for visual inspections of circuit boards, miniature components, and assembly work. Also for enhancing contrast in normal to intense light. Not recommended for night time driving.

**SCT-Blue Lens**

is designed for indoors where high levels of yellow light or sodium lamps are in use. This SCT-Blue lens has a Visible Light Transmittance of about 57% and will absorb 99.9% of UVA and UVB radiation. The blue color filters light at the yellow end of the spectrum and enhances contrast and reduces glare, eyestrain and fatigue from yellow light and sodium vapor lamp sources. Useful for semiconductor industry, food processing, and other workers in high yellow light environments. Not recommended for night time driving.

**SCT-Orange Lens**

is designed for use in the dental industry or in other industries where UV lamps are used for curing materials such as paints or inks. This SCT-Orange lens has a Visible Light Transmittance of about 45% and will absorb 99.9% of UVA and UVB. SCT-Orange filters violet, blue and certain green wavelengths which helps enhance protection against light emitted by UV lamps and can enhance contrast and reduce eye fatigue related to blue and violet light. Not recommended for night time driving.

**SCT Gray Lens**

is designed for workers exposed to short term electric arc hazards such as outdoor electrical, utility workers and communications installers. They are also good for use in welding areas by those without direct IR exposure and acceptable for outdoor use where sunglasses are used. This SCT Gray lens has a Visible Light Transmittance of about 15% will absorb 99.9% of UVA and UVB radiation, 93% of blue light, and 85% of infra-red radiation (similar to Shade 2.0 welding filter). The SCT Gray lens provides true color recognition allowing electrical workers to identify wire colors.

**The Shade 2.0**

are made for certain welding affiliated operations such as torch soldering, as well as a welder's helper lens. Shade 2.0 lens has a Visible Light Transmittance of about 35% will absorb UV, visible, IR, and blue light to levels that meet the ANSI Specifications for the shade. This lens filters > 85% of IR radiation. This is NOT to be used as general purpose sunglasses.

**Shade 3.0**

is designed for torch soldering, torch brazing and cutting by welders directly involved in welding. They should not be used as general purpose sunglasses or for use while driving. This Shade 3.0 lens has a Visible Light Transmittance of about 14% will absorb UV, visible, IR, and blue light to levels that meet the ANSI Specifications for the shade. This lens filters > 91% of IR radiation.

**Shade 5.0**

is designed for torch soldering, torch brazing and cutting by welders directly involved in welding. They should not be used as for general outdoor use or while driving. Shade 5.0 lens has a Visible Light Transmittance of about 2% will absorb UV, visible, IR, and blue light to levels that meet the ANSI Specifications for the shade. This lens filters > 97.5% of IR radiation.

**Espresso Polarized Lens**

is recommended for outdoor applications where the user needs to see fine details and deep colors without eye strain and for workers around water, ice or other reflective surfaces such as fisheries, naval and shipyards, road work and utilities. Uses high quality polarized lenses like those in high end sunglasses. This Polarized lens has a Visible Light Transmittance of about 13% and will absorb 99.9% of UVA and UVB radiation.

**SCT Cobalt Blue Lens**

is designed for high heat furnace, metal working and glass blowing applications. Replace heavy cobalt glass lenses. They do not meet welding shade requirements and are not for welding applications. This SCT Cobalt Blue lens has a Visible Light Transmittance from 0.3 to 1.0% depending upon the shade and will absorb 99.9% of UVA and UVB radiation and filter UV, IR, and Sodium flares associated with glass blowing. It also filters 75% of incidental IR heat radiation to keep the eye cool and comfortable in furnace and metal working environments.

**Photochromic Lens**

is recommended for most indoor and outdoor applications and for workers where sunlight and glare cause eyestrain and fatigue, specifically workers who transition between indoor and outdoor work environments such as truck drivers, Highway construction and utility. This Photochromic lens has a Visible Light Transmittance that varies from 21-85% depending upon the model and lighting conditions and will absorb 86% of UVA and UVB radiation.

**SCT Low IR**

is designed as a companion filter to Uvex SCT Gray, but for indoor or low light applications where low levels of IR radiation may be present. Such settings include utility work, in the vicinity of heat sources such as furnaces, or in welding operations as primary protection under helmets or for indirect tasks within the welding zone. The Visible Light Transmittance of this tint is 80% and will fully absorb UV radiation. SCT Low IR blocks 40% of the infra-red radiation and has a light green tint. Impact on color recognition is minimal, and this tint meets the traffic signal requirements of ANSI.

Rely on Uvex Lens Tints to Enhance Protection, Optimize and Preserve Worker Vision

Uvex is dedicated to supporting visual function in the workplace. Our scientifically formulated dyes selectively absorb bands of radiation to provide either increased hazard protection, or light filtration to enhance viewing tasks. Our approach to specialized lens tints – Spectrum Control Technology (SCT) – covers the entire range of wavelengths, meeting workers' needs in nearly every environment and operation.

Harmful light: The hazard you can't afford to overlook

Exposure to various types of visible and invisible radiation can cause eyestrain, headache, distraction, and short-term injuries such as photokeratitis – all of which impact worker comfort, safety and productivity. Furthermore, cumulative exposure or overexposure to certain wavelengths cause long-term effects such as cataracts and blindness. By selecting the right Uvex lens tint for the job, employers support productivity, reduce injuries and promote long-term eye health.

UV Protection

Ultraviolet radiation is the most prevalent form of light harmful to the eyes. Cumulative doses of UV on unprotected eyes can damage the cornea and lens, and are a leading cause of cataract formation. For outdoor and indoor jobs alike, tinted lenses that fully block UVA and UVB rays should always be worn. All Uvex lenses filter 99.9% of UV rays. It's in our name: UV EXcluded.

Visible Light and Glare Protection

The visible spectrum of light allows us to see objects and observe their colors. Excess visible light, or glare, however, disrupts vision and poses potentially significant safety risks. Glare is common outdoors,



where light bounces off reflective surfaces such as sand, water, glass or concrete. Outdoors, lenses that block 10% - 50% of visible light are usually ample. Indoors, SCT tints that filter select wavelengths should be considered. Brown tints reduce blue light transmittance from sunlight, while specialized SCT-Amber or SCT-Orange lenses protect from bulb sources of High Energy Visible (HEV) light.

Infrared Radiation Protection

IR radiation is invisible, sensed instead as heat from sources such as infrared diodes and lamps, high-intensity welding arcs, or furnace operations; IR is also released from accidental short circuit electric arcs. Protection is afforded with specialized Uvex lenses containing IR-absorbent pigments. Visors with IR-reflective coatings are also available to provide increased infrared protection and greater worker comfort.

Laser Protection

Lasers operate in very narrow wavelength bands – and can deliver high levels of harmful radiation. Without proper protection, the eye can be seriously injured or blinded from even brief exposure. Uvex offers a wide range of eyewear with laser protective filters to meet nearly every application.

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