

3M**Be Safe  Be Seen!***The publication that highlights relevant safety issues and offers industry insight and solutions.*

Should high-visibility clothing be considered Personal Protective Equipment?

Hazards exist in every workplace so strategies to protect workers are essential. The priority should be the elimination and control of hazards at their source or along the path between the source and the worker.

Controlling a hazard at its source should be the first choice because this method will eliminate it from the workplace altogether or isolate it from the worker. When the hazard cannot be removed or controlled adequately, such as in the case of a typical roadside construction work zone, then Personal Protective Equipment (PPE) must be used if the work process is to continue.

Personal Protective Equipment is equipment worn by a worker to minimize exposure to specific occupational hazards. Typical examples of PPE are respirators, gloves, fall protection, as well as head, eye and foot protection. PPE does not reduce the hazard itself nor does it guarantee permanent or total protection. For example, wearing hearing protection

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reduces the likelihood of hearing damage when the ear plugs or muffs are appropriately used for noise exposure. However, hearing protection does not eliminate the noise.

For those workers whose jobs place them in the hazardous roadway environment, the dangers can be life-threatening. In fact, the threat of being struck by a car is a constant hazard to workers exposed to passing motorists and other moving vehi-



cles while performing routine job duties. A task as simple as moving a traffic cone or loading equipment can result in workers being critically or fatally injured if they are not seen by a motorist. The risk is compounded during dawn, dusk or inclement weather, when workers become even less visible to passing motorists.

High-visibility garments should definitely be considered part of any PPE program. To begin or expand a high-visibility PPE program, it is important to consider not only the protection of workers, but to also ensure you are in compliance with applicable laws/regulations and existing standards.

The new American National Standard for High Visibility Safety Apparel (ANSI/ISEA 107-1999) is the first North American standard that provides authoritative guidance for the design, performance specifications and use of high-visibility safety apparel. In addition, the standard outlines placement of the materials needed for enhanced visibility.

This standard helps ensure that workers routinely exposed to the hazards of low visibility on the job are more easily seen. These workers include road construction crews, railway and utility workers, law enforcement and emergency response personnel, survey and airport ground crews, and others.

ANSI/ISEA 107-1999 more fully addresses the hazards associated with low visibility for occupational workers and provides guidance for employers and manufacturers. The new standard provides manufacturers with a road map to follow for developing and improving high-visibility garments for occupational work wear. Manufacturers can now be guided to design vests, shirts, pants, outerwear, rainwear and other apparel to meet any of the three classes of garments specified by the standard. Employers can select the class of garment based on the

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workers' activities and the level of risk in the working environment.

High-visibility garments like those specified in the ANSI standard can make workers visible to drivers at a greater distance, providing more time to respond. Clearly, high-visibility garments should form part of a comprehensive Personal Protective Equipment program.

(For a copy of the ANSI/ISEA 107-1999 standard, call the ISEA at 705-525-1695 or visit their website at www.safetycentral.org)

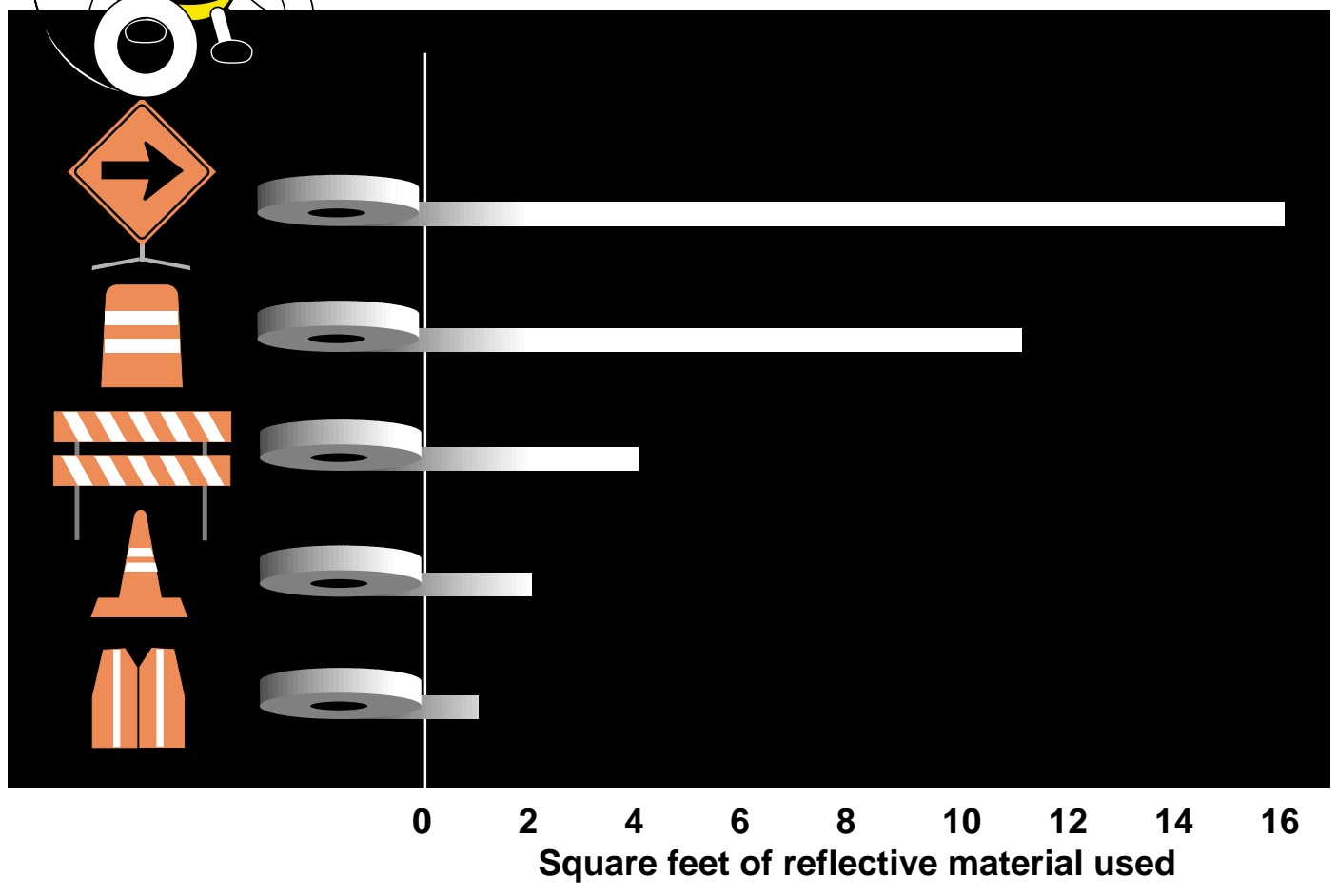
How Do Your Workers Measure Up?



The Tale of the Tape

Many pieces of equipment and safety accessories such as cones, barricades and signs are bright orange, the same colour as most safety vests. So, during daylight hours, rather than standing out against their environment, workers wearing orange vests can actually blend into it.

To be seen at night, a six-foot tall worker often relies on a safety vest that contains less than one square foot of reflective material. **Is this enough?** Compare that to the equipment surrounding him or her such as a three-foot tall cone, which incorporates a two-square-foot reflective surface. **Clearly, roadside workers need visibility garments that efficiently and consistently aid in day and night time visibility.**



ANSI Answers The Call!

It is important that workers select garments that delineate the human form, so that they are distinguished from objects such as barrels, cones and signs in the work zone. Workers must stand out in order to be seen easily by motorists, Fluorescent materials during the day and reflective garments at night help to accomplish this task.

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GET NOTICED

Gone are the days of the bare-chested roadway worker with a deep tan. Today's clothing must protect workers from the environment, equipment, collisions with co-workers, their vehicles and outside traffic. Appropriate high-visibility garments can increase conspicuity.

But what's appropriate? And what constitutes high visibility?

When 3M™ Scotchlite™ Reflective Material is incorporated into safety vests and other protective garments, workers' visibility in low-light conditions and at night is enhanced. When Scotchlite Reflective Material is combined with a bright background colour – such as fluorescent lime-yellow or fluorescent red-orange – the workers are also more visible during the day against the sea of work-site orange. And the more reflective material that you specify on our workers' garments to help outline a human form, the better.

So, what is the difference between fluorescent and retroreflective materials?



It's the difference between night and day.

Retroreflection

Scotchlite™ Reflective Material products use a physical property known as retroreflection. It helps the eye perceive light in low-light conditions. In more scientific terms, retroreflection occurs when light rays are returned in the direction from which they came. A large amount reflected light is returned directly to the original light source, such as a car's headlights. Since very little light is scattered when the light is returned, retroreflective materials appear brightest to an observer located near the original light source such as behind the wheel of a car.

Fluorescence

Fluorescent colours have the properties needed to enhance daytime visibility. The high visibility of fluorescent materials is due to their unique ability to absorb energy in the near-ultraviolet and visible regions of the atmosphere, then reemit the energy as longer wavelength visible light. The property of returning more visible light than what was absorbed is what makes fluorescent coloured garments brighter and more colourful than ordinary traffic colours.

Make a move that will get noticed.

Now that you know why enhancing daytime and nighttime visibility is so important, it's time to make your move. Add the enhanced visibility and durability of Scotchlite reflective material products to your safety vests and other all-season apparel. Your workers will notice. But, more importantly, your workers will be noticed, too.



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Don't go to work without us

3M™ Scotchlite™ Reflective Material products offer a wealth of benefits including:

- High brightness in low-light and nighttime viewing situations.
- Excellent wash performance and durability.
- A wide range of visibility-enhancing products for use on safety vests and all-season apparel.
- Innovative products backed by the technical strength and services of 3M.
- Meets the current ANSI/ISEA 107-99 standard.

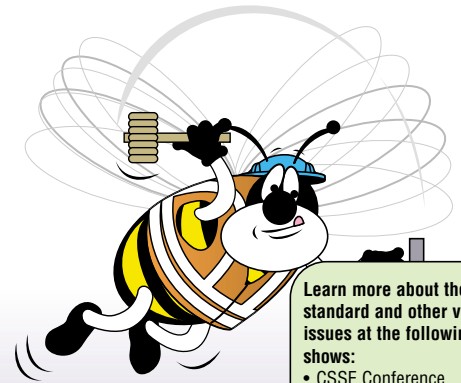
Our products meet, or exceed current specification requirements for visibility and durability. Not all reflective trims do.

Call 3M for more details on how to meet the current specification requirements.

3M

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Learn more about the ANSI standard and other visibility issues at the following safety shows:

- CSSE Conference
Calgary, AB
October 25-27
- Safety At Work Conference
Montreal, PQ
November 28-29

