

# Reducing eye injuries in the workplace:

A study of personal  
protective eyewear and  
antifog



# Independent studies show fogging is a deterrent to wearing safety glasses, goggles and faceshields.

A research study conducted at the 2009 National Safety Council Congress and Expo confirms the facts and suggests solutions.

## **2000 daily workplace eye injuries: the facts, the causes, the costs.**

According to The Centers of Disease Control and Prevention, more than 2000 workplace eye injuries occur every day, with 100 of them resulting in one or more days of lost work. A Bureau of Labor Statistics survey of workers who suffered eye injuries found that nearly three out of five were not wearing eye protection at the time of the accident.<sup>1</sup>

The cost of eye injuries to employers is over \$300 million in lost production time, medical expenses, and worker compensation.

The rate of eye injury and lost work time can each be reduced by 50% or more when personal protective eyewear is worn, according to a review of the effectiveness of various interventions for preventing work-related eye injuries in the *American Journal of Preventive Medicine*.<sup>2</sup>

## **Independent research study finds fogging is the #1 vision related barrier for not wearing PPE.**

In a study published in *Accident Analysis & Prevention Magazine*<sup>3</sup> in 2009, research with focus groups made up of construction, manufacturing, service

and retail workers showed that 100% of the groups named fogging as a factor for not wearing personal protective eyewear, number one among vision-related reasons.

Over 55% of research respondents suggested an antifogging solution to increase usage of

**Antifog was named more often than incentives, warning signs and a condition of employment, as a way of increasing usage of personal protective eyewear.**

personal protective eyewear. It was named by more focus groups than incentives, warning signs, eyewear cleaning stations and as a condition of employment.

## 2009 National Safety Council Congress and Expo research: 70% of workers have a fog problem, yet 66% don't specify or use antifog.

Nanofilm, maker of Defog It™ antifog, conducted a research study among attendees at the 2009 National Safety Council Congress and Expo, which hosted 10,000 safety, health and environmental professionals in Orlando, Florida, October 25-30, 2009.

The professionals who took part in the survey research reported fogged eyewear is a problem in their organizations.

Over 70% stated they either manage or specify products for people who have a fogged eyewear problem or have a personal fogging problem. Among these same respondents, 66% don't specify or use an anti-fog product. Reasons cited included not being able to find an antifog that performed effectively.

## Field studies demonstrate role of antifog in PPE usage

Nanofilm has conducted field tests with organizations with identified fogging issues. In each case, users reported the improved vision clarity that promotes PPE usage.

- Global pulp and paper producer
- Southwest U.S. utility company
- National Tactical Officers Association Members
- U.S. Coast Guard
- National Ski Patrol
- Major U.S. mining corporation

## Additional Resources

National Institute of Occupational Health and Safety:  
*Toolbox Talk*

<http://www.cdc.gov/niosh/topics/eye/toolbox-eye.html>

Liberty Mutual Research Institute for Safety:  
*Eyewear in the Workplace, Examining Barriers to Use*

[http://www.libertymutualgroup.com/omapps/ContentServer?c=cms\\_document&pagename=LMSGResearchInstitute%2Fcms\\_document%2FShowDoc&cid=1239990441146](http://www.libertymutualgroup.com/omapps/ContentServer?c=cms_document&pagename=LMSGResearchInstitute%2Fcms_document%2FShowDoc&cid=1239990441146)

Centers for Disease Control and Prevention:  
*Eye Safety for Emergency Response and Disaster Recovery*

<http://www.cdc.gov/niosh/topics/eye/eyesafe.html>

Centers for Disease Control and Prevention:  
*Eye Protection for Infection Control*

<http://www.cdc.gov/niosh/topics/eye/eye-infectious.html>

Centers for Disease Control and Prevention:  
*Eye Safety Checklist*

<http://www.cdc.gov/niosh/topics/eye/eyechecklist.html>

Centers for Disease Control and Prevention:  
*Eye Safety*

<http://www.cdc.gov/niosh/topics/eye/>

# About Clarity Defog It Antifog

Defog It antifog cloths and liquid can keep optics fog-free up to all day with a single application. The formula is used by militaries around the world to prevent fogged eyewear in vision-critical situations. It's tested safe and effective on safety glasses, safety goggles, faceshields and eyeglasses.

The product has been rigorously performance tested. In one test, a lens treated with Defog It was held over constant hot steam for 60 minutes without fog forming. Similar products failed in as little as 5 minutes. In another test, lenses coated with Clarity Defog It were moved between cold and hot environments 100 times without fog forming.

Nanofilm, founded in 1985, is a global optical leader in lens care and optical coatings. Millions of people around the world use Nanofilm products, including Clarity Defog It™, Clarity Clean It™ and other optical products, as well as nanotechnology-enabled coatings.

- 1 Centers for Disease Control and Prevention, Workplace Safety & Health Topics, <http://www.cdc.gov/niosh/topics/eye/>
- 2 Lipscomb, H.J., 2000. Effectiveness of interventions to prevent work-related eye injuries. *Am. J. Prev. Med.* 18 (4S), 27-33.
- 3 Lombardi, David A., Verma, Santosh K., Brennan, Melanye J., and Perry, Melissa J., 2009. Factors influencing worker use of personal protective eyewear. *Accident Analysis & Prevention* 41 (2009) 755-762.

