

Loss Control

# INSIGHTS



After nearly 15 years of work, nations all over the world will finally have unified standards for the safe identification, use, transport and disposal of globally traded chemicals. The Globally Harmonized System of Classification and Labeling of Chemicals (GHS), a new system adopted by the UN Economic and Social Council, is now ready for worldwide implementation.

When fully adopted, GHS will impact businesses of every size and type. Kent Candee, environmental health services manager in EMC's Home Office Risk Improvement department and a director for the American Board of Industrial Hygiene, introduces you to the future of global chemical safety in this issue of *Loss Control Insights*.

*Continued inside*

#### » BE SAFE ONLINE

The Federal Trade Commission and a partnership of security experts, marketers and consumer advocates have launched an education campaign to help consumers stay safe online. Visit [www.onguardonline.gov](http://www.onguardonline.gov) to find out more about this initiative.

# CHEMICAL SAFETY GOES GLOBAL

Many countries have regulatory systems in place for the classification and labeling of chemicals. Although these systems may be similar in content and approach, their differences are significant enough to require multiple classifications, labels and safety data sheets for the same product when marketed in different countries. This may lead to inconsistent protection for those potentially exposed to the chemicals, and also creates extensive regulatory burdens on companies producing chemicals. The Globally Harmonized System of Classification and Labeling of Chemicals (GHS) will change all of that. In this article, EMC's Environmental Health Services Manager Kent Candee answers many questions about this new worldwide initiative.

## What are some of the benefits of GHS?

The diverse and sometimes conflicting national and international labeling requirements can create confusion among employers who seek to use hazard information to effectively protect their workers and communities. The application of GHS has the potential to:

- Enhance the protection of human health and the environment by providing an internationally comprehensible system
- Provide a recognized framework to develop regulations for those countries without existing systems
- Facilitate international trade in chemicals whose hazards have been identified on an international basis
- Reduce the need for testing and evaluation against multiple classification systems

When implemented, GHS will have a dramatic impact on improving safety for workers and others through consistent and simplified communication on chemical hazards and practices to follow for safe handling and use. As a result, companies may see a reduction in accidents and illnesses, and governments will benefit through improved protection of the public from chemical hazards.

**"The impact of The Globally Harmonized System of Classification and Labeling of Chemicals will include improved worker safety, public health and environmental protection, and increasing opportunities for trade and benevolence among nations."**

**Jennifer Silk,  
OSHA Deputy Director of  
the Directorate of Standards  
and Guidance**

## GHS PICTOGRAMS: The International Language Of Safety



Corrosives



Gases Under Pressure



Irritant

Dermal Sensitizer

Acute Toxicity (harmful)

Narcotic Effects

Respiratory Tract

Irritation

## What chemicals are covered under GHS?

GHS covers all chemical substances, solutions and mixtures. Pharmaceuticals, food additives, cosmetics and pesticide residues in food will not be covered at the point of consumption, but will be covered where workers may be exposed and when in transport.

## What changes will I see in chemical labels?

One of the many benefits of adopting GHS is that it provides a consistent format for labels, making the information easier to access and understand when making hazard assessments. The standardized label elements in the GHS are:

- Symbols (hazard pictograms) that convey health, physical and environmental hazard information
- Signal words (e.g. Danger or Warning) to emphasize hazards and indicate the relative level of severity of the hazard
- Hazard statements (e.g. fatal if swallowed, toxic if swallowed, may be harmful if swallowed) to describe the nature of the hazard

» **OSHA ADDRESSES  
COMBUSTIBLE DUST FIRES**

Learn how to reduce and mitigate the effect of fire and explosions caused by combustible dust in a new OSHA bulletin. Download a copy of this valuable bulletin at [www.osha.gov/dts/shib/shib073105.pdf](http://www.osha.gov/dts/shib/shib073105.pdf).

» **EPA REVISES WASTEWATER  
TREATMENT EXEMPTIONS**

EPA has finalized revisions to the wastewater treatment exemptions for hazardous waste mixtures. For more information on the action known as the "Headworks Rule Exemption," visit [www.epa.gov](http://www.epa.gov).

Regardless of what language they speak, workers worldwide will quickly understand the meaning of the pictograms used to identify hazard classes.



Oxidizers



Flammables  
Self Reactives  
Pyrophorics

Self-Heating  
Emits Flammable Gas  
Organic Peroxides



Environmental Toxicity



Carcinogen  
Respiratory Sensitizer  
Reproductive Toxicity  
Target Organ Toxicity  
Mutagenicity  
Aspiration Toxicity



Acute Toxicity (severe)



Explosives  
Self Reactives  
Organic Peroxides

## What changes will I see in Material Safety Data Sheets (SDS)?

GHS material safety data sheet headings, sequence and content are similar to the International Organization for Standardization (ISO), European Union (EU) and American National Standards Institute (ANSI) sheet requirements. The 16 headings on GHS sheets will appear in the following order:

1. Identification of the substance or mixture and of the supplier
2. Hazard identification
3. Composition/Information on ingredients
4. First aid measures
5. Firefighting measures
6. Accidental release measures
7. Handling and storage
8. Exposure controls/Personal protection
9. Physical and chemical properties
10. Stability and reactivity
11. Toxicological information
12. Ecological information
13. Disposal considerations
14. Transport information
15. Regulatory information
16. Other information, including information on preparation and revision of the SDS

## What will my employees need to know?

Employees will need to be familiar with the new look and language of GHS labels and material safety data sheets. EMC can assist you in developing appropriate training programs for your employees.

## When will GHS be implemented?

GHS has been adopted by the United Nations with a goal of broad international adoption by 2008. However, GHS is a voluntary system that does not have the force of treaty obligations between nations. It is likely that different national systems/sectors will require different timeframes for GHS implementation.

## Any final comments about GHS?

Everyone involved in the development and adoption of GHS is hopeful that the system will be widely applied and confident that significant benefits to human health and the environment will be the result of that application.

# What Color Is Workplace Safety?



Count  
on EMC

## Environmental Health

How do you communicate the importance of safety to a multicultural workforce? Talk in colors! Color guidelines established by both the American National Standards Institute and numerous manufacturers and suppliers have developed the following industry-accepted standards for color usage within the workplace. When properly used, this type of approach can not only minimize the impact of language differences, but may also reduce the likelihood of on-the-job injuries.

### THE COLORS OF SAFETY



**Green** — Designates “safety” and the location of first aid and emergency response equipment, including drench showers and eyewashes.



**Red** — Identifies fire protection equipment and apparatus. This color category also includes alarm boxes, blanket boxes, fire buckets/pails and fire extinguishers. Additionally, red is used for emergency stop bars and buttons on hazardous machinery.



**Blue** — Used for general informational signs and bulletin boards. Blue is also used for specific warning signs associated with railroad operations and warning signs to not use or move equipment under repair.



**Black and White or Black and Yellow** — Safety black with safety white or safety yellow are the colors designating traffic controls and housekeeping markings. The preferred use of safety black with safety yellow is for traffic markings, while safety black with white is reserved for information purposes.



**Fluorescent Orange or Orange-Red** — Used for labels and containers for blood and infectious waste.



**Magenta** — Used as a radiation caution, including X-ray, alpha, beta, gamma, neutron and proton radiation.



**Yellow** — Designates caution and marks physical hazards. Yellow may also be used on storage cabinets and safety cans containing flammable or corrosive materials. Solid yellow or yellow with black stripes or checkers may be used interchangeably to provide a more commanding appearance.



**Orange** — Designates dangerous parts of machines and other energized equipment that may cause injuries, including cuts, crushing, shocking or other contact-related injuries.

What are the potential stressors that can negatively impact the health of your employees? EMC uses the latest technology to evaluate the environmental conditions that may result in costly losses.

EMC's industrial hygienists perform on-site environmental health surveys to identify risks such as excessive noise levels, chemical exposures and air contaminants. Based on the results, EMC provides specific recommendations to control each identified hazard. These practical solutions may include modifications in current operating procedures, adjustments in engineering controls and/or changes in personal protective equipment.

When should you call in EMC's industrial hygienists to assess exposures to environmental health problems? “Monitoring recurring employee health complaints is a good way to determine the need for our involvement,” notes EMC Environmental Health Services Manager Kent Candee. Candee also suggests calling immediately after any adverse environmental condition is reported by OSHA.

*Count on EMC* to help you recognize, evaluate and control the environmental stressors that could impact the health and performance of your employees.

# Preventing Off-The-Job Injuries Is Part Of Your Job, Too



By implementing various loss control initiatives, employers have made tremendous strides in lowering the rate of workplace deaths, which are down 17% since 1992. Today, employers must also focus on the impact of off-the-job fatalities, which have increased 14% during that same period.

**The business costs of off-the-job accidents are staggering when you take into account lost wages and productivity, medical and disability payments, and training for new employees.**

A 2004 National Safety Council (NSC) study estimated that twice as many workers (6.8 million) were seriously injured while off the job than were injured while working. Of the 49,000 injury-related deaths involving workers, roughly 90% occurred while

employees were off the job. But it's more than the numbers that have companies concerned. It's the financial impact of those numbers.

"The business costs of off-the-job accidents are staggering when you take into account lost wages and productivity, medical and disability payments, and training for new employees," said Alan C. McMillan, president and CEO of NSC. In 2004, the cost of employee injuries, both on and off the job, was more than \$330 billion. Nearly 60%, or \$200 billion, was for injuries to employees who were off the job. In addition, off-the-job injuries accounted for employers losing 165 million days of production time, compared with 80 million lost work days as a result of workplace injuries.

In light of these figures, businesses should recognize the value of keeping employees safe at all times. In a recent NSC survey of 1,300 companies of varying sizes, off-the-job safety training has shown significant financial impact at businesses that have implemented these programs. Research presented at the 17th World Congress of Safety and Health at Work revealed that for every dollar businesses spent on safety, they realized a \$3 to \$6 savings.

In addition to helping your organization reduce the likelihood of workplace injuries, EMC's loss control representatives can provide you with printed material, videos, online information and training to help your employees reduce the likelihood of off-the-job injuries.

[Courtesy of Stevens Publishing Corporation, Dallas, TX]

## What safety and health programs work best?

Here are the top five safety and health programs employers can implement based on their potential to improve worker safety and health off the job.

1. Fitness training
2. Stress management
3. Health education
4. Smoking cessation
5. Defensive driving courses

[Report in the National Safety Council's *Off-The-Job Injury Survey*]

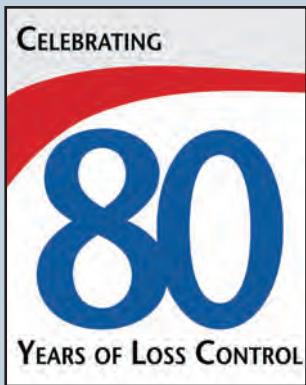
## MAKING YARD WORK SAFER

With spring around the corner, here are some tips to share with employees about safe lawn mowing procedures.

- Protect yourself and others from thrown objects by clearing the work area of rocks, sticks or any other materials that could become a projectile if struck by the mower blades.
- If the discharge chute clogs or the grass catcher is full, stop the engine before attempting to clear the clog or empty the grass catcher.
- Stop the engine before adjusting the wheels of the mower.
- Mow across the slope of hillsides. Do not mow up and down the slope.
- Never leave a mower running unattended.
- To ensure solid footing, wait until the grass is fully dry before mowing.
- Wear close-fitting clothes, long pants or slacks, and closed-toe shoes with traction soles.
- Do not operate any power equipment while barefoot or when wearing flip-flops or sandals.

Watch *Loss Control Insights* for more off-the-job safety tips to share with your employees.

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## What's Best For Sore Muscles — Heat Or Cold?

One of the first signs of spring is the aching muscles from yard work and spring cleaning. So what's the best strategy for soothing those sore muscles? Cold first, advises the *Mayo Clinic Health Letter*.

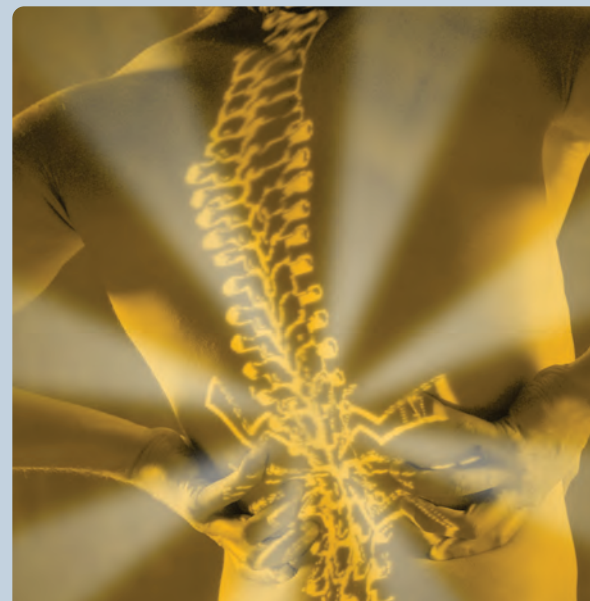
### Lead Off With Cold

To relieve pain associated with sprains and strains, it's usually best to apply a cold compress for about 20 minutes at a time every four to six hours over the first few days. Cold reduces swelling and inflammation and relieves pain. For a cold compress, use a cold pack, a plastic bag filled with ice or a bag of frozen vegetables. Remember to wrap any of these items in a dry cloth or towel to help prevent frostbite.

### Follow Up With Heat

Start using heat after the pain and swelling have decreased, usually two to three days after the injury. Heat relaxes tightened sore muscles and reduces pain. Heat is usually better than cold for chronic pain such as arthritis or for muscle

relaxation. Apply heat to the injured area for 20 minutes up to three times a day. Heat lamps, hot water bottles, warm compresses or taking a warm bath or hot shower are common ways to apply heat. A new option for heat therapy is a wearable heat patch, allowing you to apply heat and keep moving.



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