OSHA says workers must know of chemical hazards at worksite

Do your workers know which roofing materials are hazardous to their health? Do they know how to handle these materials safely under normal conditions or in an emergency?

By next summer you should be able to answer "yes" to both of these questions. Otherwise, you could be cited for not complying with the Occupational Safety and Health Administration's (OSHA) hazard communication standard. The standard, which has the force of law, goes into effect on May 25, 1986 for firms that use hazardous materials.

By developing and enforcing the standard, OSHA is hoping to reduce the number of chemically related injuries and illnesses in the workplace. The standard requires chemical manufacturers, importers and end users to make safety information available in a "usable and readily accessible form" to employees who must work with hazardous substances.

The standard wasn't originally intended to regulate roofing contractors. When it was published in November 1983, its requirements applied only to manufacturers in Division D of the Standard Industrial Classification (SIC) index. Specialty contractors, who are in SIC Division C, were exempt. This summer, however, a Third Circuit Court of Appeals ruling broadened the scope of the standard to include specialty contractors along with other SIC code divisions.

Three components work together

According to the standard, employees are to learn to recognize and handle workplace hazards through proper container labeling, material safety data sheets (MSDS) and training. These three components should complement each other, OSHA says, with the labels alerting workers to the hazards, the MSDSs offering workers more detailed safety information and the training giving workers skills to use the other two components.

New standard has force of law

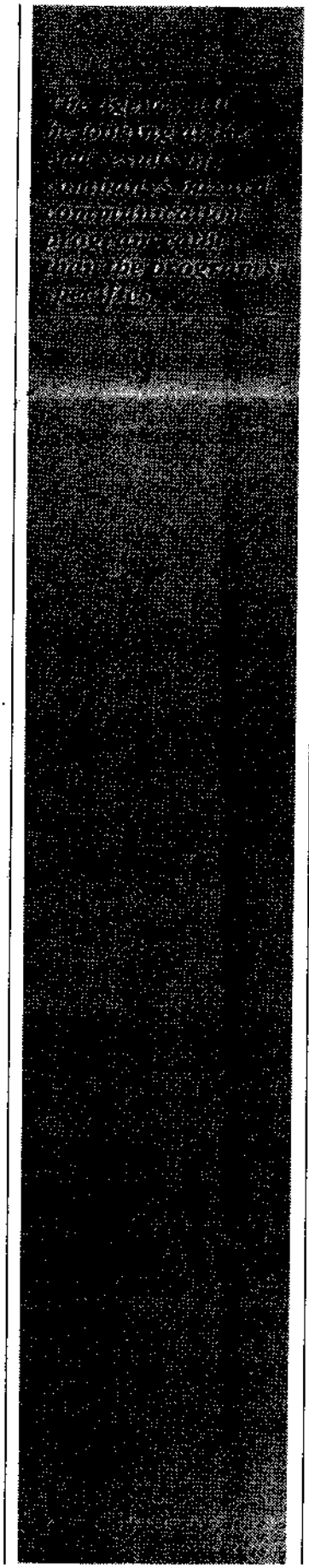
by Martin Eastman, editor

It is the chemical manufacturers' and importers' responsibility to provide their customers with properly labeled product containers and MSDSs, according to the standard. These firms must begin labeling hazardous products and sending MSDSs with the products by Nov. 25, 1985. The standard requires manufacturers to send an MSDS only with the initial shipment of a product to a customer. Subsequent shipments do not need to be accompanied by MSDSs unless the product's formulation changes.

By the May 25 deadline end users such as roofing contractors must know which products present in their warehouses and worksites are hazardous. User firms are also responsible for training employees who may come in contact with the hazardous chemicals to use the labels, MSDSs and other safety materials sent by the manufacturers and importers.

Many manufacturers and contractors may already be in substantial compliance with the OSHA standard. Companies that fell into an SIC category covered by the original standard have had almost two years to develop labels, MSDSs and training programs. Other companies, including many roofing contractors, have already instituted some sort of hazard communication program in order to comply with their state's right-to-know legislation, which may have a broader scope than the original federal standard. More than 20 states have right-to-know laws on their books that apply to roofing firms.

The OSHA standard preempts state law, however, so there may be some differences in the way the regulations will be administered and enforced. One major change from the states' laws is the OSHA standard's performance orientation. OSHA's standard leaves hazard communication program specifics up to the discretion of the employer, while state laws tend to spell out these details.



Commanding performance

To make sure users are complying with the standard, OSHA officials will require these firms to have:

- a written program that details how employees are to be trained;
- information readily available to the workers about the hazardous materials and products they are using; and
- properly labeled containers, indicating products' ingredients and the risks workers face if exposed to the substances.

OSHA's performance-oriented enforcement of this standard means that the agency will be looking at the end results of a company's hazard communication program rather than the program's specifics. The OSHA standard does not spell out how a label or MSDS should look or how workers should be trained, it simply defines what each component should do.

The standard's performance orientation is a two-edged sword, according to some safety experts. On the one side, it allows employers much greater freedom to develop programs that are relevant to the situations their workers generally face. On the other side, the standard offers little guidance to employers who want to know how to achieve the standard's expected results.

Although OSHA does not specify how employers are to comply with the standard, the agency will want to know how program objectives were accomplished. According to Charles O'Connor and Jay Young, two safety experts who have written a preface to the new standard, OSHA will want to know:

- how the employer assessed the hazards present in the company's operations;
- what hazardous chemicals are used in various operations and the physical and health dangers posed by these chemicals;
- how the employer determined that containers were properly labeled, MSDSs were available and sufficiently detailed, and training was adequate; and
- how employees were trained to recognize and handle emergencies involving hazardous chemicals.

Not too early to start program

Even though the deadline for compliance with the standard is seven months away, user firms should start developing a hazard communication program now. The first step is to determine which materials in the warehouse and at the worksites are hazardous. OSHA considers a product hazardous if it contains one of the 600 substances that the agency believes pose serious physical or health threats. Combustible, explosive, flammable or unstable products pose physical hazards, according to the standard, as do compressed gasses, organic peroxides, oxidizers and pyrophirics. The standard identifies products as health hazards if they cause measurable changes in the body. Chemicals that are carcinogens, irritants, toxins, corrosives or sensitizers fall into this class.

In a roofing operation hazardous chemicals are most likely to be associated with single-ply installations. Products that may contain hazardous chemicals include solvents, adhesives, primers, splice washes, sealants, caulks, tapes and two-pack urethanes. Further information about single-ply product hazards may be obtained from the Single-Ply Roofing Institute (SPRI). The Institute has devised a system that classifies the chemicals used in common single-ply products by the hazards they pose to the users.

Labels and MSDSs list hazards

The best source of product hazard information may be found in the labels and MSDSs the OSHA standard requires all manufacturers to send along with their hazardous products. Under the standard chemical manufacturers and importers must evaluate all of their products to determine which ones contain hazardous substances. If a manufacturer or importer finds that its product could be harmful, it must issue container labels and MSDSs that inform its customers of the hazard.

These labels and MSDSs may take many forms. In keeping with the performance orientation of the standard, OSHA has not developed specific formats for the documents. The agency's only concern is that the labels and MSDSs convey the necessary safety information.

A label, for instance, should warn field workers that they are using a hazardous product and tell them that more detailed safety information may be found in the MSDS that the employer should have on file. Labels may be in any suitable format as long as they are written in English and are displayed prominently and legibly on the product's original container. If a worker transfers a hazardous chemical from a labeled container into another container for immediate use, the second container does not have to be labeled.

OSHA Form-20. This OSHA MSDS form (front and back) has spaces for all of the information the OSHA standard requires.

U.S. DEPARTMENT OF LABOR
Occupational Safety and Health Administration

Form Approved OMB No. 44 R1387

MATERIAL SAFETY DATA SHEET

Required under USDL Safety and Health Regulations for Ship Repairing, Shipbuilding, and Shipbreaking (29 CFR 1915, 1916, 1917)

SECTION I

MANUFACTURER'S NAME | EMERGENCY TELEPHONE NO.

ADDRESS (Number, Street, City, State, and ZIP Code)

CHEMICAL NAME AND SYNONYMS | TRADE NAME AND SYNONYMS

CHEMICAL FAMILY | FORMULA

SECTION II - HAZARDOUS INGREDIENTS

PAINTS, PRESERVATIVES, & SOLVENTS	%	TLV (Units)	ALLOYS AND METALLIC COATINGS	%	TLV (Units)
PIGMENTS			BASE METAL		
CATALYST			ALLOYS		
VEHICLE			METALLIC COATINGS		
SOLVENTS			FILLER METAL PLUS COATING OR CORE FLUX		
ADDITIVES			OTHERS		
OTHERS					
HAZARDOUS MIXTURES OF OTHER LIQUIDS, SOLIDS, OR GASES				%	TLV (Units)

SECTION III - PHYSICAL DATA

BOILING POINT (°F.)		SPECIFIC GRAVITY (H_2O=1)	
VAPOR PRESSURE (mm Hg.)		PERCENT, VOLATILE BY VOLUME (%)	
VAPOR DENSITY (AIR=1)		EVAPORATION RATE (_____=1)	
SOLUBILITY IN WATER			
APPEARANCE AND ODOR			

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method used) | FLAMMABLE LIMITS | Lel | Uel

EXTINGUISHING MEDIA

SPECIAL FIRE FIGHTING PROCEDURES

UNUSUAL FIRE AND EXPLOSION HAZARDS

PAGE (1) (Continued on reverse side) Form OSHA-20 Rev. May 72

SECTION V - HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE

EFFECTS OF OVEREXPOSURE

EMERGENCY AND FIRST AID PROCEDURES

SECTION VI - REACTIVITY DATA

STABILITY | UNSTABLE | | CONDITIONS TO AVOID

STABLE

INCOMPATABILITY (Materials to avoid)

HAZARDOUS DECOMPOSITION PRODUCTS

HAZARDOUS POLYMERIZATION | MAY OCCUR | | CONDITIONS TO AVOID

WILL NOT OCCUR

SECTION VII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

WASTE DISPOSAL METHOD

SECTION VIII - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION (Specify type)

VENTILATION | LOCAL EXHAUST | SPECIAL

MECHANICAL (General) | OTHER

PROTECTIVE GLOVES | EYE PROTECTION

OTHER PROTECTIVE EQUIPMENT

SECTION IX - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING

OTHER PRECAUTIONS

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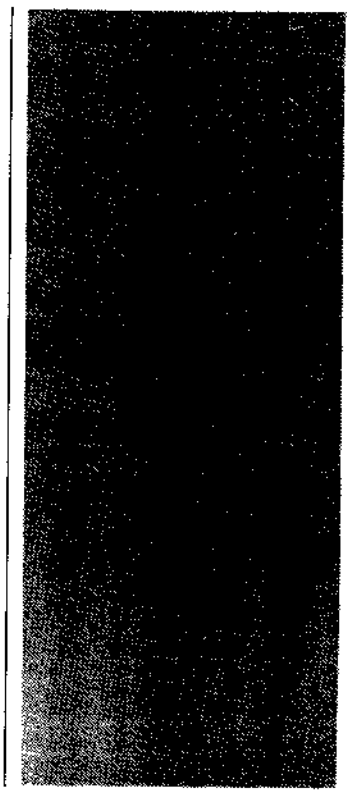
According to O'Connor's and Young's analysis of the OSHA standard, it is not necessary for a product label to give precautionary information. As long as the label identifies the material in the container, states any applicable hazard warnings and gives the name and address of the product's manufacturer or importer, it is in compliance with OSHA's regulations.

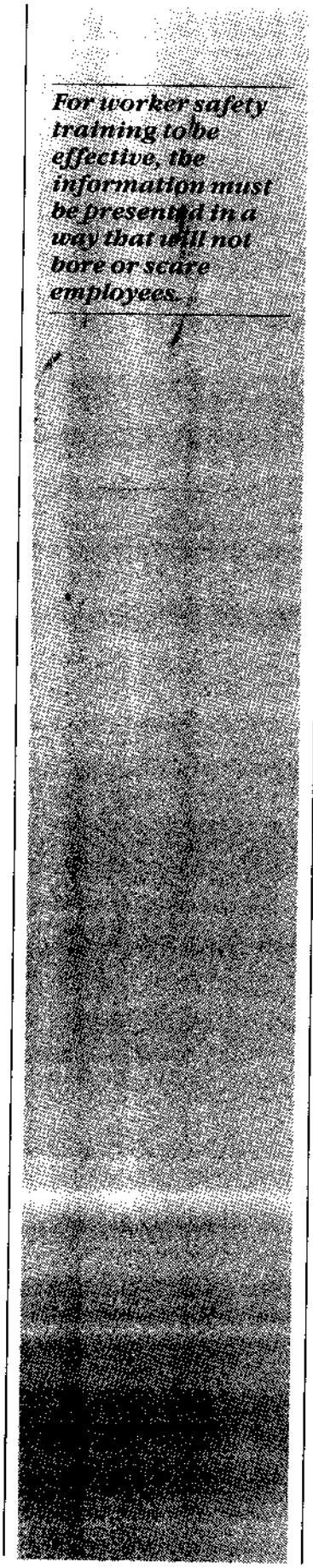
The place for more detailed safety and precautionary information, according to O'Connor and Young, is the MSDS. This document should:

- identify the product by its common name or trade name and list any of the product's individual chemical components that contribute to its harmful nature;
- state the physical and chemical characteristics of the product such as the melting point, vapor pressure and specific gravity;
- state the physical hazards such as flammability that are associated with the product's use;
- state the known health hazards associated with the product's use;
- describe the measures workers can take to avoid the product's harmful effects;
- describe the emergency and first aid measures that should be taken in the event of an accident;
- state the date that the MSDS was prepared or revised; and
- state the name and street address of the company that prepared the MSDS.

According to the OSHA standard, it is the product user's responsibility to make sure all of the hazardous materials in its warehouse and worksites are properly labeled and documented. This means that roofing contractors should have an MSDS on file for every hazardous chemical their workers use.



For worker safety training to be effective, the information must be presented in a way that will not bore or scare employees.



Since last summer, SPRI and NRCA have been working together to help contractors gather this information. SPRI has collected MSDSs from all of its manufacturer members and has made this information available to NRCA. The Institute has also urged its members to adopt consistent label and MSDS formats.

Users must train workers

It is also the user's responsibility to train field workers to use the information contained in the safety labels and MSDSs to avoid injuries or illnesses. The OSHA standard states that all employees who currently work with hazardous products must receive safety training by the May 25 deadline. Whenever new hazards are introduced into the worksite or new employees are added to the workforce that uses hazardous substances, the training must be repeated.

Like the labels and MSDSs, this training may take many forms. The OSHA standard spells out the results the agency expects employer training to achieve rather than the methods employers must use to achieve these results, according to John A. Pendergrass, manager of 3M's hazards awareness products division.

Pendergrass says that OSHA wants field workers to be able to describe the materials they are working with, the products' potential hazards, the symptoms of exposure and the protective measures that are to be used with the product. The agency also wants employees to know about the hazard communication standard itself, including its effective deadlines. The ability to recite this information is enough evidence, in OSHA's eyes, to show that a worker has received adequate training, according to Pendergrass.

Achieving these results may take some time and work on the employer's part, however. For worker safety training to be effective, the information must be presented in a way that will not bore or scare employees. A publication called *Industrial Safety & Hygiene News* has listed six guidelines it believes are essential for effective worker training. The guidelines include:

- **Know the audience.** Use terms that the workers understand. Trainers must also be aware of the connotations certain words or terms such as "cancer" or "chemical contamination" have for the employees. Recent events in the news, for instance, may make workers react emotionally to some topics.
- **Don't scare.** The information must be presented in a calm and professional manner. Some experts suggest that by using examples of the safe use of hazardous chemicals such as pesticides in the home, a trainer can reassure workers that, if the substances they apply at the worksite are handled correctly, there is little risk of harm.
- **Don't bore.** Workers would rather answer questions and interact with the teacher than be lectured at.
- **Be honest.** Make sure workers know of all the hazardous chemicals with which they will be working and the severity of the hazards associated with each of these substances.
- **Be prepared.** Make sure trainers have the knowledge to answer tough questions. It is also advisable to have technical support available to back up the trainers.
- **Be familiar with equipment and processes.** Trainers should be familiar with the safety equipment they are demonstrating and also familiar with the workers' day-to-day operations. This way the safety measures that are taught will be relevant to real worksite situations.

NRCA has more detailed information about the OSHA standard available, including a generic hazard communication program developed by Intereg Group, Inc., of Chicago. Intereg's program can be adapted to meet individual employers' needs. Components of the program include sample posters, signs, labels and MSDSs as well as in-depth explanations of OSHA and state regulations. For more information contact Carl Good at NRCA headquarters 312/693-0700.