

NCDOT Division One Monthly Safety Trainer

Hazard Communication—General

(Reference SPP 1910.106) (SOP 10-10)

Overview of Topic

NCDOT purchases, stores, and uses a variety of chemicals in its everyday operations. Employees who handle chemicals must be aware of the hazards associated with those chemicals.

OSHA's Hazard Communication Standard (HCS) is based on a simple concept—your employees have both a need and a right to know the identities and hazards of the chemicals they are exposed to at work. They also need to know what protective measures are available to prevent adverse effects from occurring. OSHA designed the HCS to help you provide your employees with this information.

When you have proper information about the chemicals that your employees use, you can take steps to reduce exposures, substitute less hazardous materials, and establish proper work practices. These efforts will help prevent the occurrence of work-related illnesses and injuries caused by chemicals.

Chemical hazard evaluation

Employees should not handle hazardous chemicals until they have been trained in NCDOT's hazard communication program. When chemical hazards exist that cannot be eliminated, engineering practices, administrative practices, safe work practices, Personal Protective Equipment (PPE), and proper training regarding Hazard communication will be implemented. These measures will be implemented to minimize those hazards to ensure the safety of employees and the public.

A hazardous chemical is any chemical that is a physical or health hazard. Physical hazards produce a dangerous situation outside the body. Health hazards can cause health damage either immediately from short term (acute) exposure or slowly through long-term exposure (chronic).

The common types of hazardous chemicals found in NCDOT include but are not limited to:

- Acids
- Caustics
- Degreasing agents
- Flammables
- Greases
- Adhesives
- Cleaning agents
- Dusts
- Glues
- Petroleum products

Employer responsibility

As an employer, you must implement a hazard communication program designed to get information provided by manufacturers and importers to your employees. You must:

- Obtain MSDSs and labels for each hazardous chemical your employees use.
- Identify and list the hazardous chemicals in your workplace.
- Design and put into place employee protection programs.
- Develop and implement an effective written hazard communication program. The program must include provisions for container labeling, and collecting and ensuring MSDSs are available to your employees.
- Establish a training and information program.
- Ensure your employees have access to MSDSs and your complete program.

Written program

You must implement and maintain at each workplace, a written hazard communication program which has the following elements: (1) container labeling and other forms of warning requirements, (2) MSDS preparation, (3) employee information and training methods, (4) chemical lists and (5) multi-employer workplace procedures.

Material safety data sheets

You must have a MSDS in the workplace for each hazardous chemical that your employees use. MSDSs must be in English and include: (1) specific chemical identity and common names, (2) the chemical's physical and chemical characteristics, (3) potential acute and chronic health effects and related health information, (4) whether the chemical is considered to be a carcinogen, (5) exposure limits, (6) recommendations for appropriate protective measures, and (7) emergency and first aid procedures.

Labels and other forms of warning

You must ensure that each container of hazardous chemicals in your workplace is labeled, tagged, or marked with: (1) the identity of the chemical, (2) appropriate physical and health warnings for the chemical, and (3) the name and address of the chemical manufacturer, importer, or other responsible party.

The chemical name on the label must match: (1) the name on the chemical's MSDS sheet, and (2) the name on your list of hazardous chemicals.

The labels must be readable and in English.

Employee training

Employees must be provided with information and training on hazardous chemicals in their work area: (1) at the time of their initial assignment, and (2) whenever a new physical or health hazard is introduced into their work area.

Information and training must include: (1) understanding the requirements of the OSHA hazard communication standard, (2) understanding the various components of your company's hazard communication program, (3) knowing where the information is located in the company, (4) knowing what operations at the worksite are using hazardous chemicals, (5) being able to read and understand the information on the MSDSs and labels, (6) determining how the chemical can impact your job, i.e., do you need a respirator or other PPE, do you understand the best work practices for a specific chemical?

Training tips

Have samples of labels used at your company. Point out the elements required on labels. Bring in a sample MSDS and the corresponding chemical container with label. Point out that the chemical name must match. Also point out that the label contains very little information as compared to the MSDS.

.

Flammable & Combustible Liquids

Recently, to dramatize the danger of hauling gasoline in the trunk of a car, a test was conducted igniting ONE gallon of gasoline inside a car trunk — the resulting explosion blasted the trunk lid along with a huge fireball, some 80 feet into the air, with a force that would have killed anyone in that car.

Since you can't move fast enough to get away from an explosion, you had better do what's necessary to avoid one.

Handling flammable and combustible liquids is a common occurrence on construction projects. When you're the one that's handling them, do you follow proper guidelines, or do you tend to ignore and underestimate the dangers? To fully understand the real dangers of these liquids, you must know the difference between them.

A FLAMMABLE LIQUID like gasoline, lacquer thinner, alcohol, some paint thinners, etc. are much more volatile — their vapors can ignite below 100° F, even down to freezing and below.

A COMBUSTIBLE LIQUID such as fuel oil, kerosene, linseed oil, etc, must exceed 100° F in order to release enough vapors to ignite.

Whenever handling liquids in containers marked flammable or combustible, READ THE WARNING LABEL and remember, in addition to the danger of fire and explosion, there may be other serious health threats from these liquids—inhaling vapors, contact with skin, eyes, etc.

Listed safety containers are required for storing, handling and transporting of flammable or combustible liquids of any quantity.