



## All Sorts of Chemical Labels (and a note on AWAIR)

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First, a clarification about AWAIR. Our last article was intended to alert body and mechanical shops that you will again be required to have AWAIR programs (basic safety and health programs). You need to have a program in place by June 10, 2013, a detail we omitted. Because of that omission, some folks may have been told the standard doesn't apply. We assure you – it does. And we'll be working with AASP to help you develop your own AWAIR program. Look for more information on that in the next few months.

Chemical labels. We mentioned several months ago that they're changing. Manufacturers have until 2015 to change their labels. But you need to ensure employees are trained to understand these new labels well before that, by December 1, 2013. We'll discuss these new labels in our next column. This time, let's look at existing labeling systems.

OSHA's requirements for labels are simple: include the name of the product, manufacturer, and some type of hazard warning. The hazard warning is meant to convey the physical and health hazards of the chemical. But because this is a performance standard, OSHA provides little guidance on what form that warning must take, other than that it should include the effect on specific target organs.

Many manufacturers use two other warning systems to convey chemical hazards: the NFPA 704 system and the HMIS system. Both are very limited in scope.



The NFPA 704 system was developed to warn firefighters of the hazards they face in chemical fires. It ranks chemicals in three categories: health, fire and reactivity. Health is always the left-most diamond, in blue if the diamond is in color. Fire (or more accurately, flammability) is the top and in red. Instability (reactivity), in yellow, is always on the right. Numbers from zero to four are assigned to indicate the relative risk: zero is nonhazardous; four is the highest hazard.

The bottom white diamond is used to indicate other hazards, such as whether the chemical reacts with water (W), is corrosive (CORR), or is a strong oxidizer (OXY).

The advantages of the NFPA diamond: it's quick and easy to read. The major disadvantages: it only addresses the immediate harm from a chemical, ignoring any long term hazard. And it provides no detail about the type of harm or needed precautions. A strong corrosive could get the same rating as something that's very toxic to eat or breathe.

You'll often see the NFPA diamond on the propane cages at gas stations. Some municipalities require them on the doors of businesses with hazardous materials, so firefighters know what hazards the buildings contain.



The HMIS system (hazard management information system) is similar to the NFPA diamond, but is meant for everyday situations, not just fires. It was developed by the paint and coatings manufacturers as a quick way to communicate the hazards for everyday use of chemicals. Like the NFPA diamond, it uses a 0 to 4 scale, with zero meaning nonhazardous, and 4 being the highest hazard. Instead of a yellow section for reactivity, it will have an orange section for physical hazards, used for oxidizers, compressed gases, unstable chemicals, water reactive substances, and explosives. (Older versions of the HMIS rectangle may still have a yellow Reactivity box.)

Newer versions of the HMIS rectangle warn about chronic (long term) hazards, such as liver damage or cancer, with an asterisk in a box next to the health warning.



DOT placards are sometimes confused with the NFPA diamonds. DOT placards are diamond-shaped, but don't use a 0-4 scale and don't have four diamonds within the diamond. They aren't meant to warn employees about the hazards of working with a chemical. Instead, they're meant to warn emergency response personnel, responding to a transportation accident, of potential hazards. You'll see them on packages of hazardous materials, such as on the drums of lacquer thinner or methanol for washer fluid. They'll also show up on the trucks used to transport those materials.



There are nine different DOT placards: explosives (Class 1), compressed gases (Class 2), flammable liquids (Class 3), other fire hazards (such as flammable solids – Class 4), oxidizers (Class 5), poisons and infectious agents (Class 6), radioactive substances (Class 7), corrosives (Class 8), and otherwise hazardous materials (Class 9). If they have a number on them, it will refer to either the class, such as 3 for flammable liquids, or be a four-digit identification number, such as UN 1263 (used for paints). The numbers are not a rating system. The placards don't rate the hazards, but only identify them.

The DOT labels won't be supplanted by OSHA's new labeling requirements. Instead, they'll work well with them. But we'll leave details on that for next time.

If you have questions about AWAIR programs, chemical labeling, or other safety or environmental issues, contact CHESS at 651-481-9787; toll free at 877-482-4377, or [carkey@chess-safety.com](mailto:carkey@chess-safety.com).

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This article is intended to provide general information (not advice) about current safety topics. To discuss your specific concerns and how CHESS may help, please contact CHESS at 651-481-9787 or [chess@chess-safety.com](mailto:chess@chess-safety.com)