

How Safe (and Legal) is Your Concrete Form Release Agent?

Become familiar with the safety standards and regulations to help protect your workers, plant and environment.

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My grandfather used to show me a trick: He would strike a match and throw it into a pail of gasoline. (I do not suggest that anyone attempt this “trick.”) Because the oxygen supply was so quickly diminished, nothing happened except for the match going out.

Does that mean gasoline is “safe”? Not by a long shot.

We can also make some comparisons with concrete form release agents. Safety rules, both from an employee and environmental perspective, must be observed carefully to ensure we are not dealing with materials that are harmful, or potentially harmful, to our employees and environment.

Employee safety

It is very important that all employees are familiar with Material Safety Data Sheets (MSDSs) and in particular the Hazardous Material Identification System (HMIS) ratings shown on the MSDSs. The HMIS ratings shown on the MSDSs are also a quick reference for employees. Four categories are shown:

- Red (fire)
- Blue (health)
- Yellow (reactivity)
- White (personal protection)

The ratings for fire, health and reactivity are set by the National Fire Protection Association (NFPA) using the numbers “0” to “4” with “0” being the lowest potential hazard/problem and “4” being the highest potential. Personal protection is rated as “A” through “K” and “X.” All employees should be aware of how to read the HMIS labels on containers and also be aware of the differences in the ratings. Safe handling of the material and proper safety equipment are extremely important. Your employees should be educated with this information to enhance personal, plant and environmental safety.

While all the ratings are important, the one often overlooked in concrete form release agents is the “Red (fire)” classification. This classification falls under the DOT regulations shown below.

Required labeling of containers

The question of labeling concrete release agent containers during transport and placards required during transportation often arises among precasters and concrete pipe producers.

Container labeling for safety purposes in the plant is extremely important, but first we have to get the material to

the plant. This can be done by a commercial carrier or often via a customer-owned truck. If the material is “combustible” or “flammable,” a “Hazardous Materials 126 Certified” driver is necessary no matter how much material is being transported. In the same vein, a Commercial Drivers License (CDL) is needed only if the Gross Vehicle Weight (GVW) of the truck exceeds 26,000 lbs (11.8 tonnes).

Definitions

- Hazardous materials: Products that pose a risk to health, safety and property during transportation. The term is often shortened to HAZMAT, or to HM. Hazardous materials include explosives, various types of gas, solids, flammable and combustible liquids and other materials.
- Flammable (Red Label “3”): Any material that has a flash point of 140 F or less (closed cup)
- Combustible (Red Label “2”): Any material that has a flash point of between 141 F and 200 F (closed cup)

Materials having a flash point in excess of 200 F (no Red Label Required as being NFPA rated as “1” or “0”) are DOT-exempt. These materials are not DOT regulated and do not require the truck to be identified with “hazardous materials” placards nor do they require the driver to be HazMat 126 Certified.

As required by law, all flammable and combustible material containers must have a “Red Label” on each container. The exception to this is if there are multiple “small” containers in a package, then the outside package must have the “Red Label.”

Shipping via commercial or company-owned trucks

Hazardous material placards are not required on the truck if the amount of flammable or combustible material being carried does not exceed 1,000 lbs (0.45 tonnes). If there are more than 1,000 lbs of a combustible or flammable material being carried, appropriate placards must be shown. However, any amount of hazardous materials being transported requires that the driver be HazMat 126 certified.

Labeling of containers

Further, any size container with a flammable or combustible material must have a “Red Label” with the number “2” for combustible and the number “3” for flammable. The exception

