TDCJ Risk Management's

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Haz-Com and Chemical Safety

It's the time of year when facilities begin to compile their workplace chemical lists in efforts to submit their Tier II report.

What better time is there than now to bring up the subject of hazardous communication and chemical safety.

TDCJ defines many terms related to chemicals in its policy AD-03.16 Control of Chemicals as follows:

"Caustic (Corrosive) Material" is a substance capable of destroying or eating away by chemical reaction.

"Chemical" is any element, chemical compound, or mixture of elements and/or compounds.

"Combustible Liquid" is a substance with a flash point at or above 100 degrees Fahrenheit (°F)/ 37.8 degrees Centigrade (°C) and is identified as a Class II or Class III liquid.

"Common Name" is the designation or identification (e.g., code name, code number, trade name, brand name, generic name) used to identify a chemical other than by its chemical name.

"Container" is any bag, barrel, bottle, box, can, cylinder, drum, reaction vessel, storage tank, or like item containing a chemical. For the purpose of this directive, pipes or piping systems, engines, fuel tanks, or other operating systems in a vehicle, are not considered to be containers.

"Flammable Liquid" is a substance with a flash point below 100°F/37.8° and is identified as a Class I liquid.

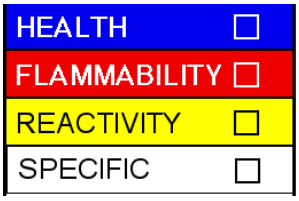
Flammable chemicals shall be stored inside an approved flammable storage cabinet that can be securely locked or in an approved flammable storage room or building.

No more than three flammable storage cabinets shall be maintained in one storage area. Each set of three cabinets shall be separated by no less than 100 feet.

"Flash Point" is the minimum temperature at which a liquid will give off sufficient vapors to form an ignitable mixture within the air.

"Hazard Communication (Haz-Com) Placard/NFPA 704 Hazard Communication (Haz-Com) Placard" is a four colored diamond placard identifying the specific haz-

ards of a chemical/material by using a zero through four number rating system aiding in the identification of hazardous chemicals.



The Haz-Com Placard/NFPA 704 Haz-Com Placard shall be used conjunctively with material safety data sheets (MSDS) identifying the hazards of chemicals used in the facility along with any noted warnings as listed on the chemical/ material container.

The hazard warnings listed in the MSDS shall be used to determine the hazard of the chemical and the NFPA 704 Haz-Com Placard shall be used to label the secondary container when manufacturer containers and labels are non-existent.

The placard
is divided into
four hazard ratings:

Red - flammability hazard,
Blue - health hazard,
Yellow - reactivity hazard, and
White - specific hazard.

Flammability Hazard (Red): This degree of hazard is measured by using the flash point assigned to the product as specified on the MSDS. (zero - will not burn; one - above 200°F; two - above 100°F and below 200°F; three - below 100°F; and four - below 73°F)

Health Hazard (Blue): The likelihood of a material to cause, directly or indirectly, either temporary or permanent injury or incapacitation due to an acute exposure by contact, inhalation, or ingestion. (zero - normal material; one - slightly hazardous; two - moderately hazardous; three - extreme danger; and four - deadly)

Reactivity Hazard (Yellow): The violent chemical reaction associated with the introduction of water, chemicals could also polymerize, decompose or condense, become self-reactive, or otherwise undergo a violent chemical change under conditions of shock, pressure, or temperature. (zero - stable; one - unstable if heated; two - violent chemical change; three - shock and heat detonate; and four - may detonate)

Specific Hazard (White): Other properties of the material causing special problems or require special fire-fighting techniques. (ACID = acid; ALK = alkali; COR = corrosive; OXY = oxidizer; P = polymerization; or Y = radioactive)

"Hazardous Chemical" is any chemical that is identified by the manufacturer as having the capability of producing adverse effects on the health and safety of humans or has a NFPA hazard rating of two through four.

"Health Hazard" is a chemical or other substance for which there is statistically significant evidence that acute or chronic health effects may occur in exposed individuals. The term "health hazard" includes chemicals, which are carcinogens, toxic or highly toxic agents, reproductive toxins, irritants, corrosives, sensitizers, and other agents, which damage the lungs, skin, eyes, or mucous membranes.

All chemicals shall be stored with regard to respective chemical characteristics and compatibility in accordance with the manufacturer's specifications, which are provided on the MSDS.

"Immediate Use" means the hazardous chemical is under the control of and used by the person who transferred it from

a labeled container and is used only within the work shift in which it is transferred.

"Label" is written, printed, or graphic material, displayed on or affixed to containers of hazardous chemicals.

"Material Safety Data Sheet" (MSDS) is the document required by government regulations for all hazardous chemical substances produced and/or sold in the United States.

The MSDS provides information on the identity of the chemical, chemical characteristics, physical and health hazards, to include primary routes of entry, exposure limits, precautions for safe handling, storage, and use, control measures, emergency and first aid procedures, and the chemical manufacturer's name, address, and telephone number.

"Non-Hazardous Chemicals" include over-the-counter items (e.g., furniture polish, dish soap, hand cleaner, shoe polish, disinfectants).

"Personal Protective Equipment" (PPE) is the protective clothing (e.g., gloves, safety glasses, safety harness, respirator) or like items intended to be worn by an individual to create a barrier against workplace hazards.

"Qualified Individual" is an employee whose training, education, and/or experience specifically qualify the employee to perform a specified job activity.

"Secondary Container" is a portable container into which chemicals are transferred for use.

"Toxic Material" is a substance through which a chemical reaction or mixture can produce possible injury or harm to the body by entry through the skin, digestive tract, or respiratory tract. The toxicity is dependant on the quantity absorbed and the rate, method, site of absorption, and the concentration of the chemical.

"Unit Chemical Control Procedure" is a written, unit specific set of guidelines identifying unique areas of concern or unit practices not covered by this directive.

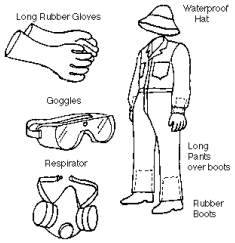
"Unit of Measure" is the specified accounting method used to verify quantity of a particular hazardous chemical (e.g., ounces, pounds, gallons) in its specified container.

Many people work with and around chemicals everyday that can be hazardous if not used properly. Cleaners, solvents and detergents are examples of potentially hazardous chemicals when misused.

By following safe practices when using chemicals, employees can protect themselves against chemical hazards.

- Always read the labels on the products before you use them.
- All chemical products have an MSDS (Material Safety Data Sheet) listing the product's specific hazards. Contact your supervisor to review the MSDS and learn the hazards of the chemical.
- Each department supervisor shall ensure adequate and appropriate PPE is provided to staff and offenders dispensing and using hazardous chemi-

cals in accordance with the manufacturer's specifications identified on the respective MSDS and as outlined in Table II Barriers to Prevent Contact with Chemicals Hazards found in EA-05.09 Hazard Communication Program.



- Follow label warnings and instructions.

- Do not mix chemicals! For example, never mix bleach with ammonia.
- Learn emergency procedures in case you or others are exposed to chemical splash or fumes. These procedures can be found on the MSDS.

- Keep containers closed when not in use. Store chemicals in original containers in a cool, dry place.
- Only use chemicals in well-ventilated areas.
- Make sure chemical containers are labeled properly. If you do not have an appropriate label, ask your supervisor.
- Make sure chemicals are diluted properly. Do not exceed the dilution ratio for concentrated chemicals. For instance, if the label calls for one ounce of chemical to be mixed with one gallon of water, don't add two ounces.

Chemical Dilution Chart

- Where hazardous chemicals are stored, dispensed, or used, the respective chemical MSDS shall be reviewed to determine the requirements for providing emergency eye wash stations and safety showers.

Your supervisor can provide more information on chemical hazard recognition, use, storage, and protective equipment.

Each department shall identify a minimum of one common use area for positing the most recent set of "Notice to Employees" in English and Spanish.

NOTICE TO EMPLOYEES

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