Safety Data Sheets (SDS) Guidelines

This safety guideline provides information on the minimum safety measures Cal Maritime expects all of its Employees and Contractors to follow while handling chemicals. The intent of this guideline is to prevent injuries and damage to property that could occur due to improper storage.

INTRODUCTION

Safety Data Sheets (formerly called Material Safety Data Sheets) communicate hazard information about chemical products.

Cal Maritime online Safety Data Sheets can be found on the Safety & Risk Management webpage.

CHEMICAL COMPATIBILITY GROUPS

The federal Hazard Communication Standard, revised in 2012, now requires chemical manufacturers, distributors, and importers to provide new Safety Data Sheets in a uniform format that includes the section numbers, headings, and associated information below.

Section 1 – Identification identifies the chemical on the SDS as well as the recommended uses. It also provides the essential contact information of the supplier.

Section 2 – Hazard(s) identification includes the hazards of the chemical and the appropriate warning information associated with those hazards.

Section 3 – Composition/information on ingredients identifies the ingredient(s) contained in the product indicated on the SDS, including impurities and stabilizing additives. This section includes information on substances, mixtures, and all chemicals where a trade secret is claimed.

Section 4 – First-aid measures describes the initial care that should be given by untrained responders to an individual who has been exposed to the chemical.

Section 5 – Fire-fighting measures lists recommendations for fighting a fire caused by the chemical, including suitable extinguishing techniques, equipment, and chemical hazards from fire.

Section 6 – Accidental release measures provides recommendations on the appropriate response to spills, leaks, or releases, including containment and cleanup practices to prevent or minimize exposure to people, properties, or the environment. It may also include recommendations distinguishing between responses for large and small spills where the spill volume has a significant impact on the hazard.

Section 7 – Handling and storage provides guidance on the safe handling practices and conditions for safe storage of chemicals, including incompatibilities.

Section 8 – Exposure controls/personal protection indicates the exposure limits, engineering controls, and personal protective equipment (PPE) measures that can be used to minimize worker exposure.

Section 9 – Physical and chemical properties identifies physical and chemical properties associated with the substance or mixture.

Section 10 – Stability and reactivity describes the reactivity hazards of the chemical and the chemical stability information. This section is broken into 3 parts: reactivity, chemical stability, and other.

Section 11 – Toxicological information identifies toxicological and health effects information or indicates that such data are not available. This includes routes of exposure, related symptoms, acute and chronic effects, and numerical measures of toxicity.

Section 12 – Ecological information provides information to evaluate the environmental impact of the chemical(s) if it were released to the environment.

Section 13 – Disposal considerations provides guidance on proper disposal practices, recycling or reclamation of the chemical(s) or its container, and safe handling practices. To minimize exposure, this section should also refer the reader to Section 8 (Exposure Controls/Personal Protection) of the SDS.

Section 14 – Transport information includes guidance on classification information for shipping and transporting of hazardous chemical(s) by road, air, rail, or sea.

Section 15 – Regulatory information identifies the safety, health, and environmental regulations specific for the product that is not indicated anywhere else on the SDS.

Section 16 – Other information indicates when the SDS was prepared or when the last known revision was made. The SDS may also state where the changes have been made to the previous version. You may wish to contact the supplier for an explanation of the changes. Other useful information also may be included here.
GHS PICTOGRAMS

- Health Hazard
  - Carcinogen
  - Mutagenicity
  - Reproductive Toxicity
  - Respiratory Sensitizer
  - Target Organ Toxicity
  - Aspiration Toxicity
- Flame
  - Flammables
  - Pyrophorics
  - Emits Flammable Gas
  - Self-Reacting
  - Organic Peroxides
- Exclamation Point
  - Irritant (skin & eye)
  - Skin Sensitizer
  - Acute Toxicity
  - Narcotic Effects
  - Respiratory Tract Irritant
- Gas Cylinder
  - Gases Under Pressure
- Corrosion
  - Skin Corrosion / Burns
  - Eye Damage
  - Corrosive to Metals
- Exploding Bomb
  - Explosives
  - Self-Reactives
  - Organic Peroxides
- Flame Over Circle
  - Oxidizers
- Environmental
  - Non-Mandatory
  - Aquatic Toxicity
- Skull & Crossbones
  - Acute Toxicity (fatal or toxic)

COMMON LABELING SYSTEMS

U.S. Department of Transportation (DOT) system categorizes hazardous materials into nine classes:
- Class 1: Explosives
- Class 2: Gases
- Class 3: Flammable Liquids
- Class 4: Flammable Solids
- Class 5: Oxidizers, Organic Peroxides
- Class 6: Toxic (Poison)
- Class 7: Radioactive
- Class 8: Corrosive
- Class 9: Miscellaneous
See U.S. DOT Chart 14 for details.

The National Fire Protection Association (NFPA) system consists of a diamond-shaped label with four sections that are color coded:
- Blue: Health Hazard
- Red: Fire hazard
- White: Specific Hazards
- Yellow: Reactivity

The numbering system ranges from zero (0) to four (4). The larger the number, the greater the hazard. Zero (0) is least hazardous and four (4) is the most hazardous. The NFPA codes describe how a material might behave in a fire situation.
See the NFPA OSHA Quick Card for details.

The Hazardous Materials Identification System (HMIS) uses a similar numbering system as NFPA. The current version of the HMIS manual (HMIS III) updated the formerly yellow coded “Reactivity” section to an orange “Physical Hazard” section to align with OSHA HazCom standard. The white colored “Personal Protection” section uses the HMIS personal protection index to describe the required personal protective equipment.

Refer to Hazardous Communication Program for the complete details located on the Department of Safety & Risk Management webpage.