

# OSHA / GHS HAZCOM

# QUICK REFERENCE CHART

## Minimum Requirements for a Safety Data Sheet

**Section 1, Identification** includes product identifier; manufacturer or distributor name, address, phone number; emergency phone number; recommended use; restrictions on use.

**Section 2, Hazard(s) identification** includes all hazards regarding the chemical; required label elements.

**Section 3, Composition/information on ingredients** includes information on chemical ingredients; trade secret claims.

**Section 4, First-aid measures** includes important symptoms/effects, acute, delayed; required treatment.

**Section 5, Fire-fighting measures** lists suitable extinguishing techniques, equipment; chemical hazards from fire.

**Section 6, Accidental release measures** lists emergency procedures; protective equipment; proper methods of containment and cleanup.

**Section 7, Handling and storage** lists precautions for safe handling and storage, including incompatibilities.

**Section 8, Exposure controls/personal protection** lists OSHA's Permissible Exposure Limits (PELs); Threshold Limit Values (TLVs); appropriate engineering controls; personal protective equipment (PPE).

**Section 9, Physical and chemical properties** lists the chemical's characteristics.

**Section 10, Stability and reactivity** lists chemical stability and possibility of hazardous reactions.

**Section 11, Toxicological information** includes routes of exposure; related symptoms; acute and chronic effects; numerical measures of toxicity.

**Section 12, Ecological information** (Non-mandatory) includes ecotoxicity (aquatic and terrestrial, where available); persistence and degradability; mobility in soil and other ecological information.

**Section 13, Disposal considerations** (Non-mandatory) description of waste residues and information on their safe handling and methods of disposal, including the disposal of any contaminated packaging.

**Section 14, Transport information** (Non-mandatory) includes UN number; transport hazard class(es); environmental hazards (e.g., Marine pollutant (Yes/No)) and other transport information.

**Section 15, Regulatory information** (Non-mandatory) safety, health and environmental regulations specific for the product in question.

**Section 16, Other information**, includes the date of preparation or last revision.

Employers must ensure that SDSs are readily accessible to employees. See Appendix D of 29 CFR 1910.1200 for a detailed description of SDS contents.

## Precautionary Statements

There are four types of Precautionary Statements used on labels:

**Prevention** – Statements meant to keep you from harm.  
Example: "Wear protective gloves."

**Response** – Statements providing steps to take if you have been exposed to a chemical hazard.  
Example: "Immediately call a poison center or doctor/physician."

**Storage** – Explains the safe way to store the chemical.  
Example: "Keep container tightly closed."

**Disposal** – The last statement explains to the employer/employee how to dispose of the chemical safely.  
Example: "Dispose of contents/container in accordance with local regulations."

## Hazard Pictograms



**Flammable Liquid**  
• Liquids



**Flame**  
• Flammable Gas  
• Oxidizing Gas  
• Pyrophoric  
• Self-Heating  
• Self-Reacting  
• Organic Peroxides



**Explosive**  
• Explosives  
• Self-Reacting  
• Organic Peroxides



**Health Hazard**  
• Acute Toxicity  
• Skin Corrosion  
• Serious GHS (GHS 07)



**Corrosive**  
• Skin Corrosion  
• Serious GHS (GHS 05)  
• Respiratory Sensitizer  
• Acute Toxicity



**Gas Cylinder**  
• Gases Under Pressure



**Corrosive**  
• Skin Corrosion  
• Serious GHS (GHS 05)  
• Corrosive to Metals



**Exclamation Mark**  
• Irritant (skin and eye)  
• Skin Sensitizer  
• Acute Toxicity  
• Respiratory Irritant  
• Hazardous to Ozone (non-fluorinated)



**Environmental Hazard**  
• Aquatic Toxicity

## Minimum Requirements for a Chemical Label

- Product Identifier** – This is the unique name or number used to identify a hazardous chemical. The same (Product) Identifier must be used for the label, SDS and required company chemical list for each chemical.
- Signal Word** – A word used to alert employees of a potential hazard and its relative level of severity. The two signal words used are:  
**Danger** – Used for more severe hazards.  
**Warning** – Used for less severe hazards.
- Supplier Identification** – The name, address, and telephone number of the supplier.
- Hazard Statements** – Information describing the nature of the chemical hazard and the degree of the hazard. (Example: "Fatal if swallowed.")
- Precautionary Statements** – A phrase describing recommended measures to be taken to minimize or prevent adverse effects resulting from exposure to the hazardous chemical or improper storage or handling. See additional information to the left.
- Hazard Pictograms** – A symbol which is intended to convey specific information about the hazards of a chemical. See additional information above.
- Supplemental Information** – Manufacturers, importers or distributors may choose to add supplementary information to the label when it provides further details, and does not contradict or cast doubt on the validity of the standardized hazard information.

### 1 Product Identifier

### 2 Signal Word

### 3 Supplier Identification

### 4 Hazard Statements



### 5 Precautionary Statements

### 7 Supplemental Information

# Osha Quick Reference Guide

**Jin-Ying Zhang**



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web light resin transfer molding or light rtm is a process by which composite products are manufactured using a closed mold system the closed mold consists of an a side mold base mold and a semi rigid b side mold counter mold that is sealed to the a side mold using vacuum pressure resin is drawn into the resulting cavity

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