

Principles of Chemical Management in the Textile and Garments Industry in Bangladesh

Promotion of Sustainability in the Textile and Garment Industry in Asia - FABRIC

Module 2:

Using reliable information sources on chemical substances and mixtures

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2.1 General Principles

2.2 Chemical labelling and marking

2.3 Using safety data sheets

2. Using reliable information sources on chemical substances and mixtures

2.1 General Principles

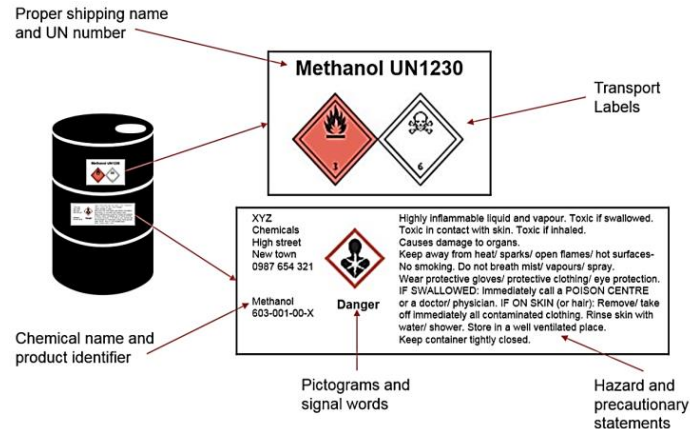
2.1.1 Factory shall use **reliable chemical information sources** on the chemical substances and mixtures, including at least safety data sheets and container labelling.

2.1.2 Factory shall ensure that chemical suppliers provide chemicals and chemical containers with **proper labelling** and that they provide updated labels whenever new relevant safety and health information is available.

2.1.3 Factory shall collect **up-to-date safety data sheet (SDS)** for chemicals from the chemical suppliers, which are ideally in line with requirements of the Globally Harmonized System of Labelling and Classification of chemicals (GHS). Alternatively, in the Schedule 8 of Hazardous waste and ship-breaking waste management Rules 2011, a shorter template of the SDS can be seen.

2. Using reliable information sources on chemical substances and mixtures

2.2 Chemical labelling and marking



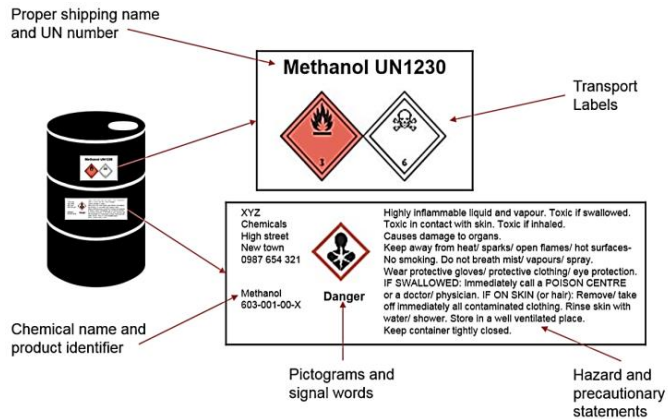
2.2.1 Every single chemical container in the factory shall be **clearly identified with printed labels on the containers, in English and Bengali.**

2.2.2 **Chemical containers that have not been labelled shall not be used** until the relevant information is obtained from the supplier or other reliable sources.

2.2.3 **Labels on the containers shall follow the standard** of the Globally Harmonized System of Chemical Classification and Labelling (GHS) or a similar uniform and recognized system.

2. Using reliable information sources on chemical substances and mixtures

2.2 Chemical labelling and marking



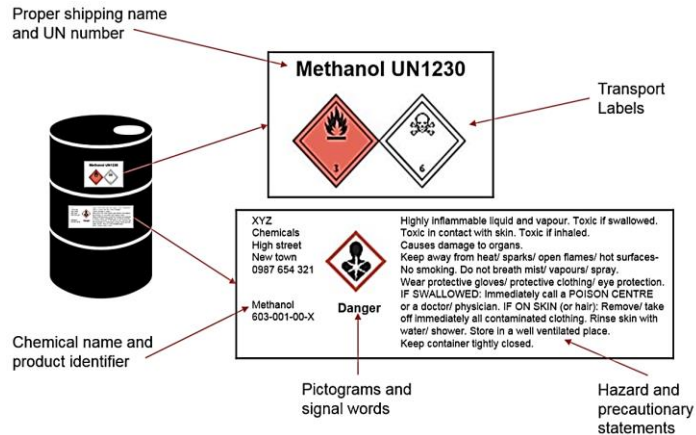
2.2.4 Besides the GHS label requirements, the following information should also be present on the container label: (i) The lot number or batch number (ii) Date of manufacture and expiry date.

2.2.5 If the chemical packaging is too small or oddly shaped to contain all relevant information, the factory shall include only a distinctive product identifier and reference to the source of required additional information.

2.2.6 Proper labelling shall also be applied to the chemical waste containers, both in English and Bengali.

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2.2 Chemical labelling and marking



2.2.7 If full labelling is not practicable, the labelling on the waste container shall include the contact number of relevant personnel who can provide information about the composition and potential risks of the waste.

2.2.8 Factory shall provide adequate training to all the workers handling chemical products on chemical labelling, GHS pictograms and hazard and precautionary statements.

Basic Parts of GHS Compliant Label

The Basic Parts of A GHS-Compliant Label

1 → **n-Propyl Alcohol**
UN No. 1274
CAS No. 71-23-8

2 → **DANGER**

3 → Highly flammable liquid and vapor. Causes serious eye damage.
May cause drowsiness and dizziness.

4 → Keep away from heat/sparks/open flames/hot surfaces. No smoking. Avoid breathing fumes/mist/vapours/spray. Wear protective gloves/protective clothing/eye protection/face protection. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present. Continue rinsing.

Fill Weight: 18.65 lbs. Lot Number: B56754434
Gross Weight: 20 lbs. Fill Date: 6/21/2013
Expiration Date: 6/21/2020

5 → Acme Chemical Company • 711 Roadrunner St. • Chicago, IL 60601 USA • www.acmechem.com • 123-444-5567

See SDS for further information.

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1. **Product Identifier** - Should match the product identifier on the Safety Data Sheet.
2. **Signal Word** - Either use "Danger" (severe) or "Warning" (less severe)
3. **Hazard Statements** - A phrase assigned to a hazard class that describes the nature of the product's hazards
4. **Precautionary Statements** - Describes recommended measures to minimize or prevent adverse effects resulting from exposure.
5. **Supplier Identification** - The name, address and telephone number of the manufacturer or supplier.
6. **Pictograms** - Graphical symbols intended to convey specific hazard information visually.

Sample label courtesy of Weber Packaging Solutions • www.weberpackaging.com

GHS Pictogram



GHS01 Explosive



GHS04 Compressed Gas



GHS07 Harmful



GHS02 Flammable



GHS05 Corrosive



GHS08 Health Hazard



GHS03 Oxidizing



GHS06 Toxic



GHS09 Environmental Hazard

Chemical Labelling and Marking Checklist

Quick check for your container labels:		
<input type="checkbox"/>	Product is clearly identified	This is the name of the chemical product that is the same as mentioned in the SDS. This is also the name used by the supplier in their purchase orders/contracts with the chemical supplier/formulator.
<input type="checkbox"/>	Standard hazard pictogram indicating hazards associated with chemical substance	For example, GHS refers to nine distinctive hazard pictograms. The pictogram is related to the hazard class and category of classification as per the GHS, which is conveyed through the Hazard or H-Statement(s). Use the pictograms from https://unece.org/transportdangerous-goods/ghs-pictograms
<input type="checkbox"/>	Signal word used	A signal word is used to "signal" the relative level of severity of hazard to the reader of the label. The signal words used in the GHS are "Danger" and "Warning". Danger is mostly used for the more severe hazard categories Warning is mostly used for the less severe hazard categories
<input type="checkbox"/>	Hazard Statement(s) available either as description of abbreviated code (e.g. H-xxx)	In GHS standard hazard statements and three-digit hazard codes are available for all physical, health and environmental hazards. To find the meaning for the hazard codes, refer to https://unece.org/DAM/trans/danger/publi/ghs/ghs_rev04/English/07e_annex3.pdf .
<input type="checkbox"/>	Supplier or manufacturer names and contact details	The name of the chemical supplier and/or manufacturer with an emergency contact number should be available on the label. Information on the container or packaging label and in the safety data sheet should match.
<input type="checkbox"/>	Precautionary Statement(s) available either as description of abbreviated code (e.g. P-xxx)	In GHS standard statements and three-digit codes are available for different types of recommended precautionary statements. To find the meaning for these statements and codes, refer to https://unece.org/DAM/trans/danger/publi/ghs/ghs_rev04/English/07e_annex3.pdf

2. Using reliable information sources on chemical substances and mixtures

2.3 Using safety data sheets

2.3.1 Safety Data Sheet (SDS) is a widely recognized fundamental source of information on chemicals, used for identifying and controlling the possible environmental, health and safety impacts from chemicals being stored, transported, used and discarded. It is a document that provides information on:

- a) Hazards of a chemical substance or preparation
- b) Potential health effects on exposure to a chemical
- c) Safe handling and storage of chemicals

The image shows a Safety Data Sheet (SDS) for 'Active 20% for synthesis'. The document is divided into sections, with red boxes highlighting specific areas:

- Section 1: Identification of the substance/mixture and of the company** (highlighted in red): This section includes the product name, identification number, and registration details.
- Section 2: Hazards identification** (highlighted in red): This section provides information on the classification of the substance or mixture according to Regulation (EC) No 1272/2008 (CLP).
- Section 3: Composition information** (highlighted in red): This section contains a table with columns for 'CAS No.', 'Substance name', 'Hazard class (incl. cat.)', and 'Signal word'. The table lists three substances: '1,3-Dioxane', '1,4-Dioxane', and '1,4-Dioxane', each with its respective hazard class and signal word.
- Section 4: Emergency telephone number** (highlighted in red): This section provides the contact information for the company's emergency response center.
- Section 5: Environmental information** (highlighted in red): This section provides information on the environmental impact of the substance or mixture.
- Section 6: Ecotoxicological information** (highlighted in red): This section provides information on the ecotoxicological properties of the substance or mixture.
- Section 7: Ecotoxicological information** (highlighted in red): This section provides information on the ecotoxicological properties of the substance or mixture.
- Section 8: Ecotoxicological information** (highlighted in red): This section provides information on the ecotoxicological properties of the substance or mixture.
- Section 9: Ecotoxicological information** (highlighted in red): This section provides information on the ecotoxicological properties of the substance or mixture.
- Section 10: Ecotoxicological information** (highlighted in red): This section provides information on the ecotoxicological properties of the substance or mixture.
- Section 11: Ecotoxicological information** (highlighted in red): This section provides information on the ecotoxicological properties of the substance or mixture.
- Section 12: Ecotoxicological information** (highlighted in red): This section provides information on the ecotoxicological properties of the substance or mixture.

Safety Data Sheets

There are 16 standard sections:

- **SECTION 1:** Identification of the substance/mixture and of the company
- **SECTION 2:** Hazards identification
- **SECTION 3:** Composition/information on ingredients
- **SECTION 4:** First aid measures
- **SECTION 5:** Firefighting measures
- **SECTION 6:** Accidental release measure
- **SECTION 7:** Handling and storage
- **SECTION 8:** Exposure controls/personal protection
- **SECTION 9:** Physical and chemical properties
- **SECTION 10:** Stability and reactivity
- **SECTION 11:** Toxicological information
- **SECTION 12:** Ecological information
- **SECTION 13:** Disposal considerations
- **SECTION 14:** Transport information
- **SECTION 15:** Regulatory information
- **SECTION 16:** Other information

2. Using reliable information sources on chemical substances and mixtures

2.3 Using safety data sheets

2.3.2 Factory shall obtain an SDS for every chemical product used in its territory from the chemical suppliers, both in English and Bengali.

2.3.3 SDS shall be kept at a central location as well as at the main store and sub-store (at least as hard copy) to be readily available for reference to the workers.

2.3.4 SDS shall be made available in the official national or local language understood by the workers and contain all relevant hazard and safety information.

2.3.5 The outline and content of the SDS should ideally follow the recommendations under GHS standards (e.g. containing the 16 standard sections).

2. Using reliable information sources on chemical substances and mixtures

2.3 Using safety data sheets

2.3.6 SDS soft copies can be uploaded on a factory server and access given to the relevant personnel (e.g., chemical management team, EHS compliance personnel, production teams).

2.3.7 The date of issue of the SDS and its version number shall be carefully checked and monitored. An SDS must be updated by a chemical manufacturer when:

- a)** Any ingredient used in the formulation is changed due to which there is an impact on the hazard classification of the formulation
- b)** New toxicological/legislative information applies to any ingredient used in the formulation that may impact the overall hazard classification of the formulation
- c)** Any type of restriction or authorization has been imposed on a substance or mixture under the national legislation or any international reference/standard relevant to the factory.

2. Using reliable information sources on chemical substances and mixtures

2.3 Using safety data sheets

2.3.8 **At least one qualified person shall be responsible for monitoring the validity of the SDSs** for each chemical product by checking with the chemical supplier for any potential updates at least once a year. The responsible person shall delete outdated information and upload any updated SDS as applicable.

2.3.9 **Relevant workers shall be trained** to obtain information from SDS, particularly about personal safety, hygiene, and proper handling and disposal of chemicals they are assigned to handle or to which they are exposed.

2.3.10 **The relevant contents of SDS shall be translated into shorter work instructions** for the workers to be easily understandable.

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