

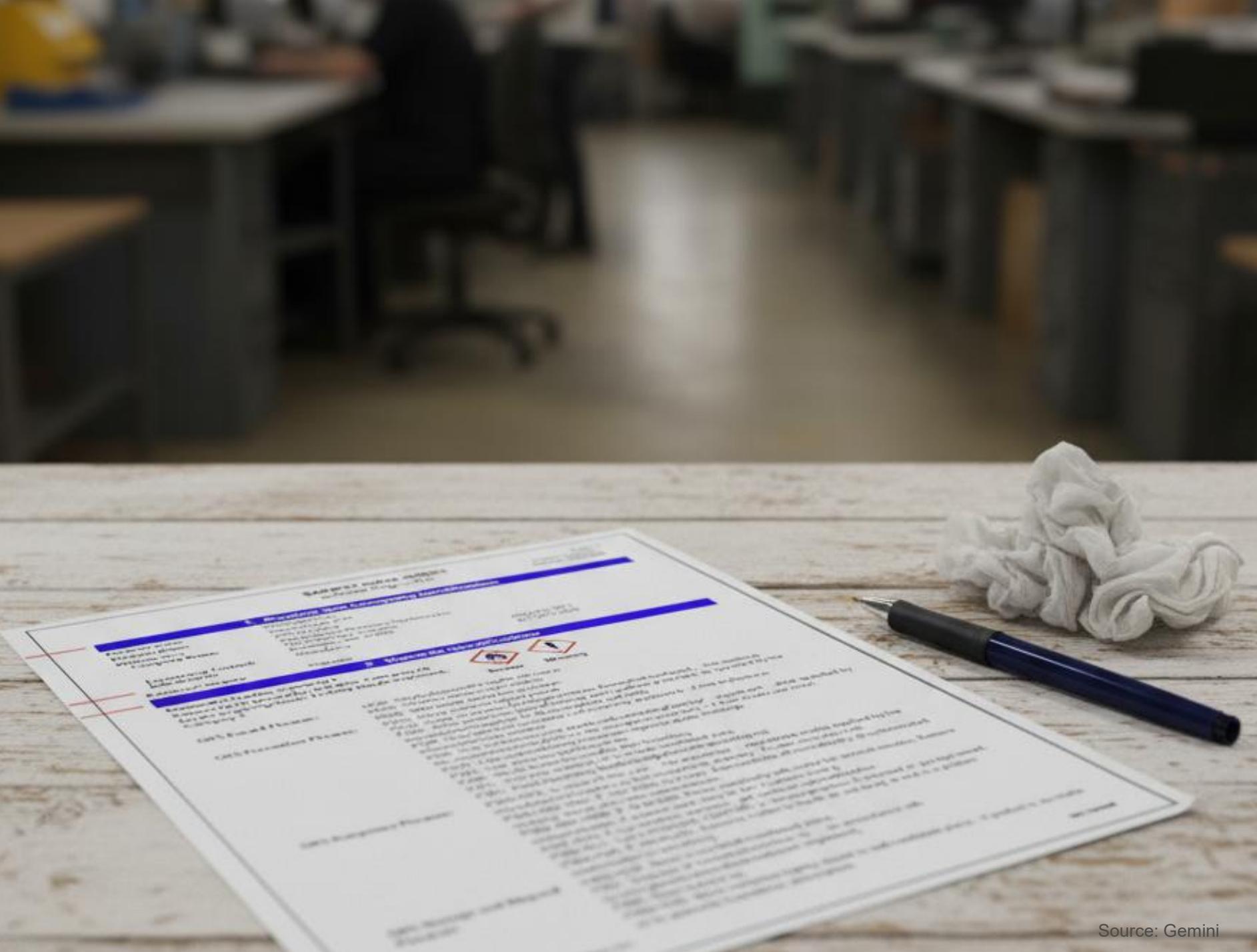


# (Brief) Introduction to the GHS

# Agenda

- **What is the GHS**
- **Access to information**





# What is the GHS

**CHEMICAL**

**SUBSTANCE**

**MIXTURE**

# CHEMICAL

**SUBSTANCE:** chemical elements and their compounds including any additive to preserve the stability and any impurities, but excluding any solvent which may be separated without affecting the stability of the substance.

**MIXTURE:** a mixture or a solution composed of two or more substances in which they do not react.

## GLOBALLY HARMONIZED SYSTEM OF CLASSIFICATION AND LABELLING OF CHEMICALS

- Is a **system that establishes harmonized definitions and criteria** for classifying and communicating the hazards of chemicals.
- Developed under the United Nations
- The GHS is **not a standard or regulation** but is a system that can be integrated into national processes and decision making.

## **GLOBALLY HARMONIZED** SYSTEM OF CLASSIFICATION AND LABELLING OF CHEMICALS

- It represents a proposal of **globally agreed classification criteria**
- with **standardized labelling elements**,
- built on already **existing systems**

## GLOBALLY HARMONIZED SYSTEM OF CLASSIFICATION AND LABELLING OF CHEMICALS

- It aims to determine if a chemical is hazardous and the degree of such hazard, based on its intrinsic properties.
- It defines which are the communication elements that reflect this determination.
- It presents a one-to-one assignment of labelling elements according to classification results.

**CHEMICALS**

**have inherent  
hazardous  
properties**

**GHS  
addresses  
chemicals'  
hazards**

# Hazard vs Risk

Disambiguation

**HAZARD X EXPOSURE = RISK**

$$\text{HAZARD} \times \text{EXPOSURE} = \text{RISK}$$

- The hazardous nature of a chemical relates to the **intrinsic properties that make it dangerous**.
  - Eg: the ability to ignite or explode can cause adverse health effects such as skin burns or acute toxicity, or harm the environment, such as disrupting the development of certain species.

**HAZARD X EXPOSURE = RISK**

- The hazardous nature of a chemical relates to the **intrinsic properties that make it dangerous**.
- Risk refers to the **likelihood of the hazard manifesting**.

### HAZARD X EXPOSURE = RISK

- The hazardous nature of a chemical relates to the **intrinsic properties that make it dangerous**.
- Risk refers to the **likelihood of the hazard manifesting**.
- **Exposure involves an interaction between the chemical and the potential target** (a human or another living organism).
  - As exposure decreases, so does the likelihood of harm, thereby minimizing the risk.
- The **conditions of use of a chemical determine the level of exposure**.

# The Purple Book

GHS source

- The **GHS document** is also referred to as the Purple Book.
- A Sub-Committee of Experts on the GHS **updates the GHS every two years**
- The electronic version of every new revised edition is freely accessible through the [UNECE website](#), and is published in the six UN official languages
- The [11th revised edition](#) was published on September 2025



Source: Gemini

# ACTIVITY



## TRUE OR FALSE?

- The GHS pertains to chemicals, which means only pure substances.



## TRUE OR FALSE?

- The GHS pertains to chemicals, which means only pure substances. - **FALSE**

The GHS pertains to chemicals, and chemicals are substances or mixtures of substances.



## TRUE OR FALSE?

- The GHS aims to determine if a chemical is hazardous, and the degree of such hazard.



## TRUE OR FALSE?

- The GHS aims to determine if a chemical is hazardous, and the degree of such hazard. - **TRUE**



## TRUE OR FALSE?

- The GHS is a mandatory standard worldwide.



## TRUE OR FALSE?

- The GHS is a mandatory standard worldwide. - **FALSE**

The GHS is not a standard or a regulation, but can be integrated into national processes and decision making.



## TRUE OR FALSE?

- The GHS establishes the criteria to assess chemical risks.



## TRUE OR FALSE?

- The GHS establishes the criteria to assess chemical risks. - **FALSE**

The GHS addresses the hazards of chemicals, which relate to the intrinsic properties that make them dangerous, and not risks, which represent the likelihood of the hazard manifesting.



## TRUE OR FALSE?

- The GHS refers to chemical hazards because an effective communication of hazards helps minimize risks in any context or exposition level.



## TRUE OR FALSE?

- The GHS refers to chemical hazards because an effective communication of hazards helps minimize risks in any context or exposition level. - **TRUE**



## TRUE OR FALSE?

- The GHS is updated every two years and is published in the six UN official languages, being the electronic version freely accessible.



## TRUE OR FALSE?

- The GHS is updated every two years and is published in the six UN official languages, being the electronic version freely accessible. - **TRUE**





# Access to information

# Access to information

## Sources

<a href="#">eChemPortal – OECD</a>	<a href="#">NITE Chemical Risk Information Platform (NITE-CHRIP), Chemical Management Field. National Institute of Technology and Evaluation, Japan.</a>
<a href="#">PubChem. NIH, National Library of Medicine, National Center of Biotechnology Information.</a>	<a href="#">ECHA: C&amp;L Inventory. Catalogue of Classification and Labelling.</a>
<a href="#">Table of harmonised entries in Annex VI to CLP (for downloading excel sheets)</a>	<a href="#">Santé et Sécurité au Travail. INRS - Fiches toxicologiques.</a>
<a href="#">IARC Monographs on the identification of carcinogenic hazards to humans. List of classifications</a>	<a href="#">International Chemical Safety Cards (ICSCs)</a>
<a href="#">CompTox Chemicals Dashboard, EPA, U.S.</a>	<a href="#">COMMISSION DELEGATED REGULATION (EU) 2023/707 of 19 December 2022 amending Regulation (EC) No 1272/2008 as regards hazard classes and criteria for the classification, labelling and packaging of substances and mixtures</a>
<a href="#">Toxic Substances Portal – Agency for Toxic Substances &amp; Disease Registry U.S. (Toxicological Profiles)</a>	<a href="#">CLP Regulation (EC) No 1272/2008 of the European Parliament and of the Council on classification, labelling, and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.</a>
<a href="#">Portail Substances Chimiques. INERIS.</a>	

# Access to information

## Sources



# eChemPortal

The Global Portal to  
Information on  
Chemical Substances

Home

Substance Search

Property Search

Classification Search

Schedules of Assessments

Sources

About 

Help 

Contact



## Quick Search

50-00-0



**Tips for Number search**

CAS, EC, IUBMB, MITI, UN or NA Number, including number separators. Do not search on partial Numbers.

**Tips for name search**

Use \* as wildcard. To search for \* as character (non wildcard use), use \*\* instead.

 Search

● **FORMALDEHYDE 37%**  
(CAS N 50-00-0)

**Physical Chemical Properties**

**Ecotoxicity**

**Toxicity**

eChemPortal allows simultaneous searching of reports and datasets by chemical name and number, by chemical property, and by GHS classification. Direct links to collections of chemical hazard and risk information prepared for government chemical programmes at

eChemPortal provides free

### Chemical Substance Search

Substance (50-00-0) 

Filter sources by type of Information (all) 

#### Results

Your search criteria retrieved the substance(s) below or the same substance(s) identified by another identifier.

Hits: 1 - 50/64

 CSV

 EXCEL

  Name	Number	Remark	Match to substance	Result at source	GHS data 	Property data 
<input type="text" value="Filter"/>	<input type="text" value="Filter"/>	<input type="text" value="Filter"/>	 Filter	<input type="text" value="Filter"/>	<input type="text" value="Filter"/>	<input type="text" value="Filter"/>
Formaldehyde	50-00-0 (CAS Number)			<a href="#">AICIS assessments</a> 		
Formaldehyde	50-00-0 (CAS Number)			<a href="#">CCR</a> 		<input type="checkbox"/>
Formaldehyde	50-00-0 (CAS Number)	Priority Substance List Assessment Report		<a href="#">CESAR</a> 		
Formaldehyd	50-00-0 (CAS Number)			<a href="#">ChemInfo</a> 		
Formaldehyde	50-00-0 (CAS Number)	DTXSID7020637		<a href="#">CompTox Dashboard</a> 		

# ACTIVITY



## CHOOSE THE CORRECT STATEMENT

- There are many websites providing information on substances, whether it is data from tests on their hazardous properties or hazard classifications conducted in accordance with the GHS.
- It is highly likely to find specific data for a specific mixture in numerous websites.
- The eChemPortal, an information portal, offers paid access to a chemical search.



## FIND THE CORRECT STATEMENT

- There are many websites providing information on substances, whether it is data from tests on their hazardous properties or hazard classifications conducted in accordance with the GHS. - **CORRECT**
- It is highly likely to find specific data for a specific mixture in numerous websites.
- The eChemPortal, an information portal, offers paid access to a chemical search.



# Thank You!

We hope you enjoyed the presentation

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