

What is an SDS, and why are they important?

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What is an SDS?

Safety Data Sheets (SDS) are essential 16-part documents that convey detailed information about hazardous chemicals. They assist with identifying and managing the risks associated with using and handling hazardous substances by providing recommendations for proper handling, storage, transport, disposal, and emergency procedure information. Think of an SDS as a cheat sheet that will guide you through the chemical handling process.





BACKGROUND: FROM MATERIAL SAFETY DATA SHEET (MSDS)

TO SAFETY DATA SHEET (SDS)

Safety Data Sheets (SDS) were initially known as Material Safety Data Sheets (MSDS) until 2012, when the Occupational Safety and Health Administration's (OSHA) Hazard Communication Standard (HCS) branch aligned with the Globally Harmonized System of Classification and Labelling of Chemicals (GHS) to rename—and standardise—the MSDS process.

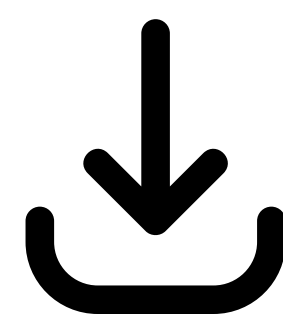
Before 2012, regulations regarding the order and contents of an MSDS differed from place to place. The GHS system is used across the European Union, so this change was enacted for consistency across regions.

As well as dropping the M—changing the name to Safety Data Sheets—the format of the reports was also regulated. Layout regulations for the new SDS included a standardised, user-friendly 16-section format. Companies were given approximately three years to change from MSDS to SDS.

For more information on how Chemwatch extracts data from SDS, read [SDS are useless!](#)

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When do you need an SDS?

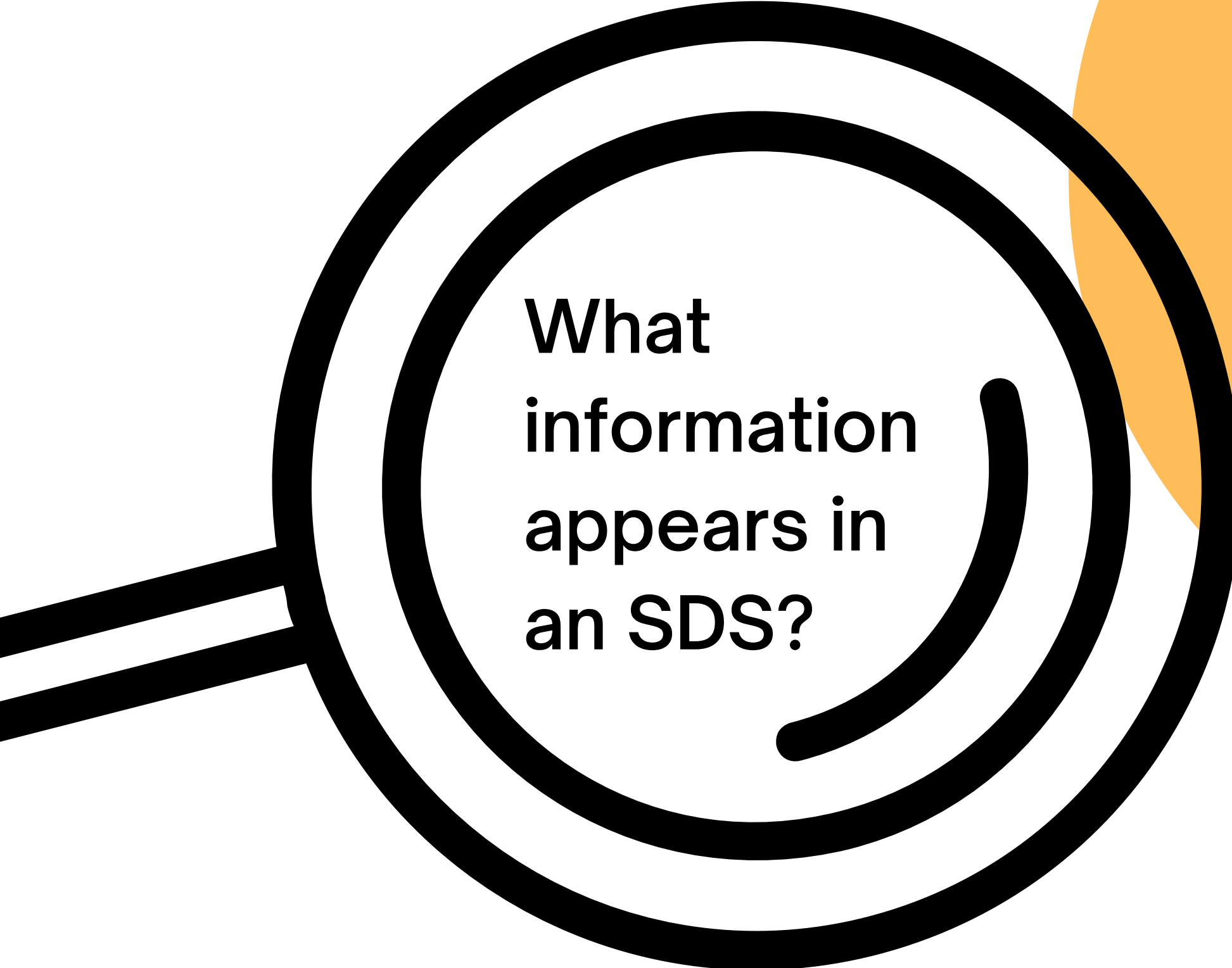


SDS Sample

Depending on the jurisdiction, your obligations to provide an SDS can differ slightly. However, manufacturers, distributors, and importers of hazardous substances must keep current and compliant SDS for any hazardous chemicals or substances being used, stored, or transported in a workplace.

When no existing SDS is available, for example, when you have created a brand new substance, you'll need to author your own SDS. Chemwatch offers SDS authoring solutions, AuthorITe and GoSDS, that you can use to create custom GHS-compliant SDS in just a few simple steps.



A large magnifying glass icon with a thick black handle and frame. The lens is positioned over the title text. The background features a large orange circle on the right and another orange circle at the bottom center.

What information appears in an SDS?

SDS provide crucial information on hazardous chemicals, including potential risks associated with their use and storage and how to use them safely. The mandatory 16-section format aims to help chemical users mitigate potential issues that may arise. These sections cover the following:

1. Product identification

Section 1 of the SDS contains the most basic identification information about the substance, including common names for the chemical, relevant identified uses, supplier details, and emergency contact details.

2. Hazard identification

This section outlines the risks associated with the chemical substance using hazard classifications, hazard codes/statements, precautionary codes/statements, signal words, and hazard pictograms. The pictograms feature prominently for quick hazard identification at just a glance. The nine pictograms fall into three hazard categories: physical, environmental, and health.

3. Composition of/information on ingredients

The ingredients and their concentrations are contained in this section. The concentration of ingredients that make up a particular chemical is often proprietary information. A certain level of confidentiality is achieved by disclosing percentage ranges rather than exact percentages of their formulations. For example, a chemical might be composed of 10–<30% of chemical X and 30–40% of chemical Y.

4. First aid measures

This section details the medical care recommended in the event of exposure to the chemical. Exposure is typically possible through eye contact, skin contact, inhalation, and ingestion, with recommendations ranging from “flush skin and hair with running soap and water” to “seek medical attention if irritation occurs,” for example.

5. Fire-fighting measures

Depending on the particular substance, chemicals can often be at an increased risk of flammability due to their composition or storage conditions. This section advises how fires involving the chemical should be extinguished if the situation arises.

6. Accidental release measures

Accidents are an inevitable part of chemical handling, and this section contains essential information on what you should do if a chemical is spilled or released. Information includes the type of PPE required, precautions, emergency procedures to follow, and clean-up recommendations.



7. Handling and storage

Section 7 outlines the safe handling and storage practices recommended to minimise exposure. Examples of the types of recommendations in this section include “use in a well-ventilated area.”

8. Exposure controls/personal protection

Personal Protective Equipment (PPE) and other safety equipment are vital to preventing chemical exposure. This section provides recommendations such as the installation of; eyewash stations, safety showers, and air exhausts, as well as specific PPE users, should be wearing, such as safety glasses and respirators, to name a few.

9. Physical and chemical properties

This section details the physical and chemical properties of the chemical. It provides information about the chemical, such as its state, appearance, smell, melting/freezing points, and even how the chemical tastes, to name a few.

10. Stability and reactivity

Most of section 10 relates to section 7 of the SDS, Handling, and Storage. This section's main new information relates to the substance's stability/volatility. This is particularly important regarding how it is transported.

11. Toxicological information

Section 11 of the SDS is critical as it details the symptoms you are likely to experience following exposure to the chemical through all the possible routes (inhalation, ingestion, skin, and eye contact).

12. Ecological information

This section outlines the chemical's effects on the surrounding environment if released—information regarding; ecotoxicity, bioaccumulative potential, and other adverse effects.

13. Disposal considerations

Section 13 outlines the recommendations for eventually disposing of the chemicals. Proposals will outline; ideal disposal containers, the effects of sewage disposal, precautions for incineration/landfill, and chemical properties that may affect disposal options.

14. Transport information

The transport information section includes information that needs to be included on any shipping labels. These labels must consist of; UN numbers, proper shipping/technical names, the transport hazard class, the packing group, and any other special precautions that should be taken during transport.

15. Regulatory information

Globally, regulatory information relating to health, safety, and the environment is continually being updated as new research and discoveries lead to changes in regulation. These include hazard updates, additional information from recent studies, and information deemed no longer compliant. These updates will all appear in this section of the SDS.

16. Other information

The last section of the SDS includes information on the version history of the SDS and complete definitions of abbreviations used throughout the SDS.

Please watch our Mini Brief, Reading and Understanding an SDS for detailed information on these sections.



Why do you need an SDS management system in place?

An SDS management system makes your life easier and your workplace safer. With the range of products available at Chemwatch, you'll find the perfect solution to keep track of your SDS. It's easy! We oversee your work, organising your SDS and ensuring they're accurate and up-to-date. Once you receive an SDS, you must make them accessible to the appropriate staff.



What happens if you don't have an SDS management system in place?

If your company does not have an SDS management system in place, you run the risk of not having the appropriate SDS, or holding SDS that are out-of-date. In Australia, this is considered a breach of Workplace Health and Safety. You are legally required to have the correct and up-to-date SDSs on-hand for any hazardous materials your company uses. Similarly, in the United States, it is a requirement—set by OSHA—that workplaces must have SDS readily available and accessible for employees working with hazardous chemicals.

At Chemwatch, we have an advanced three-stage SDS management system.

How do we manage thousands of SDS and keep them updated?

Webster and Nettie —Our Artificial Intelligence Assistants

First up is Webster! He is our custom-built AI who spends his days zooming across the web with his trusty jetpack to find your SDSs. He is super-efficient: Webster scans more than 200,000 URLs daily—that's more than 80 million every year—tracking changes that need to be made by comparing the original SDS to any updates. He works with Nettie, another AI, to build line-by-line comparison reports between old and new SDSs with highlighted changes in red. Nettie also reports any regulatory changes for substances found on the SDS.

1

**Risk
asses-
ments**

This proprietary software scans your SDS up to four times a year. As many as 60 separate key data points can be extracted from the updated sheets and made available to you. This information is used to create numerous secondary reports, including:

2
**Seco-
ndary
labels**

3
**Standard
Operating
Procedures**

4
**Toxicity
reports**



Our SDS and Registration Team

The second part of our SDS team is made up of humans. They are responsible for the upkeep and maintenance of our ever-growing collection of SDS. They contact chemical manufacturers and suppliers to source the most accurate and up-to-date information. Once the team has collected the latest information, they add it to our ever-growing collection. This team will also send you monthly reports about your SDS. Furthermore, if a supplier fails to provide a response regarding a chemical or an SDS, the SDS and registration team will create a proforma request in your name.

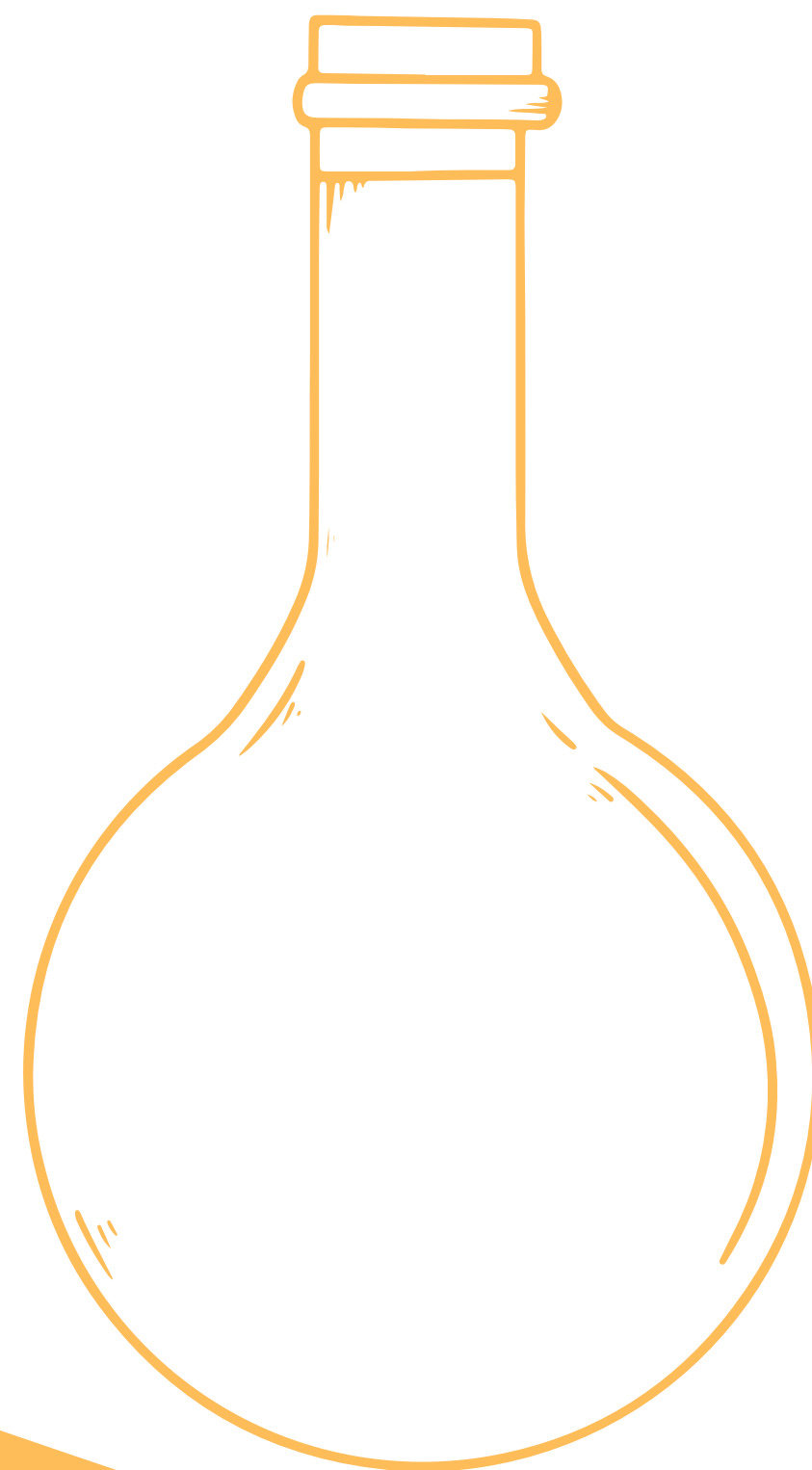
Our Chemists



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After extensive research and testing, our three-pronged approach has become the gold standard of our Chemwatch services range. We combine 'brute-force tactics' and 24/7 artificial intelligence to ensure that our SDS management system performs in accordance with the highest possible standards.

To find out how your company could benefit from one of our SDS management systems, get in touch today.



Chemwatch is here to help SDS Management



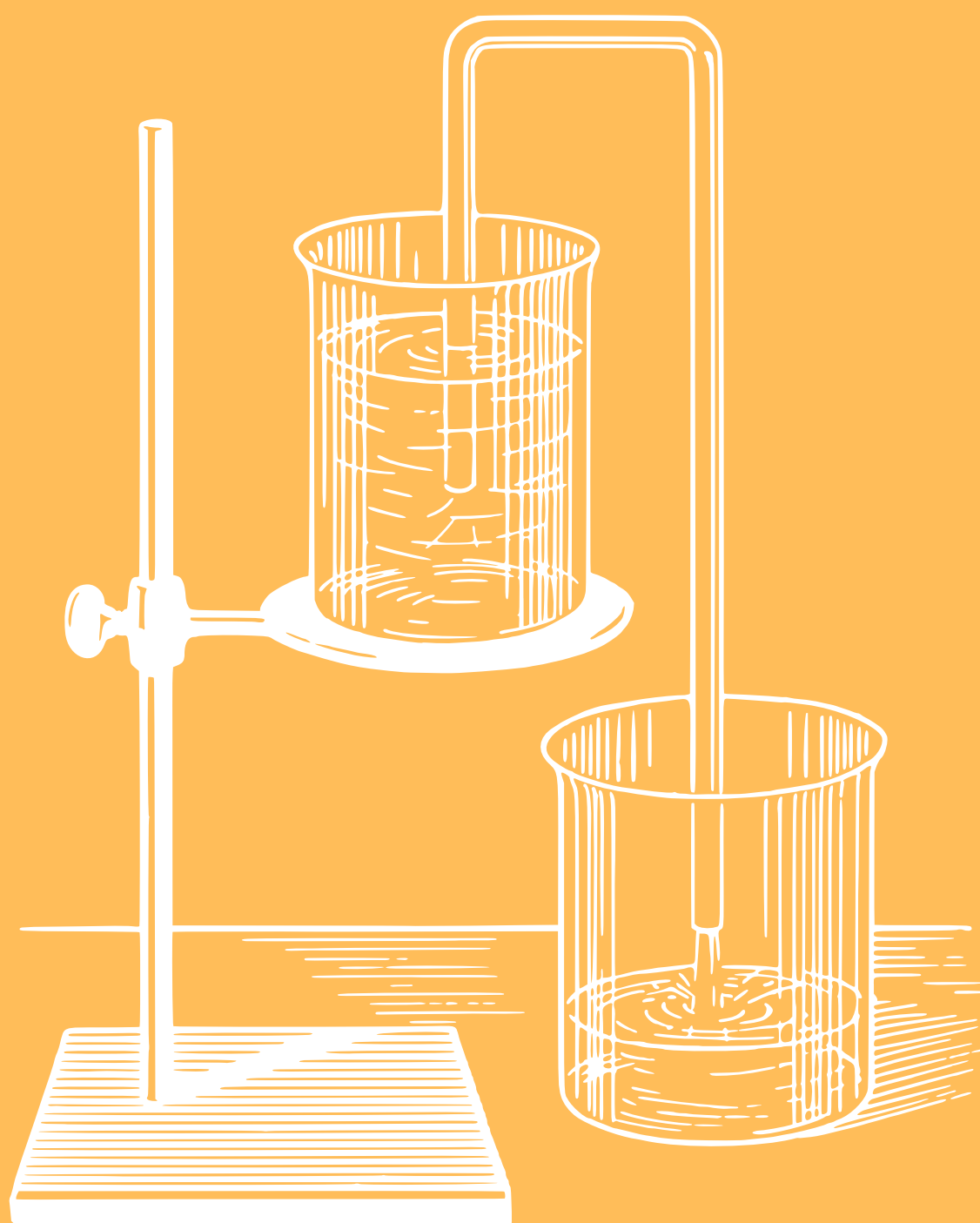
Chemwatch offers a complete range of SDS Management solutions to suit all requirements. Contact us at sales@chemwatch.net for more information about how our [Backpack](#), [GoldFFX](#) and [Chemeritus](#) packages can help you, Backpack allows you to set up SDS folders to suit your needs and search from our Collection of over 50 million for the SDS you require. For access to 50 free chemicals, click [here](#) for a free trial of Backpack (Backpack Ltd).

SDS Authoring

If authoring your own SDS is what you require, Chemwatch also offer [GoSDS](#) and [AuthorITe](#). GoSDS is a quick and easy way to author Safety Data Sheets (SDS). The pay-as-you-go authoring system allows you to create your own SDS in 7 simple steps. Created by professional SDS authors and GHS regulatory experts, the platform is GHS compliant and contains over 200,000 fully classified chemicals that are accessible during the authoring process as well as giving you access to the most up-to-date regulations. For a free trial of GoSDS, click [here](#).



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