



**Safety Data Sheets**

# **Module 2**

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Health & Safety  
**Essentials**

Registered charity number 207890

# Preparation, Provision and Use of Safety Data Sheets

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## Preparing Safety Data Sheets

Suppliers of chemicals have the legal duty to 'prepare and supply' or 'draw up' safety data sheets.

It is not common for laboratory chemists to have to write and supply safety data sheets but if they are preparing new substances/mixtures and sending them for external analysis, it is not unusual for chemists to be asked to prepare SDSs. In any event, there is a need to at least supply suitable information to allow the user to take the necessary measures relating to the protection of human health, safety at the workplace and protection of the environment. In general, a precautionary approach is adopted for newly synthesised compounds (where there is a paucity of toxicity data) are assumed to be toxic until proven otherwise.

**N.B. The law requires safety data sheets to be prepared by a 'competent person'.**

## Providing Safety Data Sheets

The SDS cannot be confidential, and must be provided to the recipient of the substance or mixture free-of-charge, in the language of the user (or the official language of the EU member state where the substance is placed on the market). It can be supplied on paper or electronically, no later than the date which the substance or mixture is first supplied.

The SDS is required to be updated without delay and reissued when there are significant changes, such as new information on the hazards. An updated SDS must be provided to customers who have received the material in the previous 12 months.

Your supplier does have certain rights to claim confidentiality over registration numbers, full chemical identity etc. but this shouldn't compromise your ability to handle the material safely.

A common problem in larger organisations is that the SDS is 'provided' to the recipients purchasing/procurement/department (as that is often the only contact information that the supplier has) and they will be unsure what to do with it. If you work in a laboratory, you need to find out where SDSs are being sent to and arrange for a copy or set-up a central storage or reference facility so this information is not lost.

You should always make sure that you are working with the most recent version of the SDS. If it is older than 3 years or so it may be worth checking this with the supplier.



## Using Safety Data Sheets in the Lab

The SDS is a fundamental source of information for carrying out a COSHH assessment (See *Health & Safety Essentials - COSHH*) or working on emergency preparedness and response plans. Due to the extensive requirements, modern SDSs can be long documents with terms and nomenclature you may not have seen before. For most COSHH assessment purposes, you will only actually need to examine some of the **16** sections to gather the information you require.

**Section 1** identifies the substance or mixture.

The hazard classified is found in **section 2**. This is where you will find relevant information about health hazards e.g. if the material is toxic, corrosive and the route of entry into the body. This information is vital in completing your COSHH assessment and developing adequate control measures.

**Section 3** will show the composition of the main constituents, and any impurities or stabilising additives so you will be able to determine which ingredient is responsible for which hazardous property and this may guide your selection of control measures.

Whilst first aid in **section 4**, fire fighting in **section 5** and accidental release measures in **section 6** are relevant (and they should be examined), their application to small scale intermittent lab use by chemists is often limited due to the generic nature of the advice provided.

**Section 7** gives information on handling and storage of the substance or mixture.

**Section 8** is worth examining in some detail as it provides information on exposure controls and recommendations for PPE (Personal Protective Equipment)/ RPE (Respiratory Protective Equipment).

It is likely that an experimental chemist will be fully familiar with the physico-chemical properties of the substance they have chosen but **section 9** will confirm many of these details.

Of particular importance when carrying out chemical reactions is knowing the stability, reactivity and incompatibility of the substances and **section 10** provides **some** of this information. **N. B. The information in this section is not comprehensive.**

**Section 11** provides toxicological information. It is actually designed for use by medical professionals and the basic hazards have already been described in section 2, but you can take a view from this information on the likely health effects from exposure during your actual activity.

The remaining 5 sections on ecological, disposal, transport, regulatory and 'other' issues rarely help in the assessment of small scale laboratory work. Some are highly detailed and very specific regulatory duties that don't apply, and these can also contain very lengthy information on the controls for the various uses of the substance which may not be relevant.

**The SDS is a vital source of information when planning chemical laboratory experiments but it should be remembered that it is just one source and is neither inclusive nor exclusive. Full details of the content of a SDS are given in Module 3.**

