

SAFETY DATA SHEETS

Safety data sheets are documentation supplied with substances in the workplace which should provide all the necessary information to use those substances safely, and form the basis of a COSHH (Control Of Substances Hazardous to Health) assessment. A data sheet should come with every product brought into the workplace.

Data sheets vary a lot in quality. Some companies take a lot of care in their preparation but many do not. The information is often incomplete, out of date or just plain wrong. There is a systematic tendency to underplay the hazards.

This factsheet provides a checklist for safety representatives to assess whether safety data sheets are adequate and to demand extra information when required. Clearly, an element of judgement is required in deciding how much information is sufficient; less data is needed for commonly available chemicals known to be safe than for materials whose properties are not so well documented. But if there is an element of doubt, demand that full information is supplied. Never accept data sheets as the only source of information — be ready to check out the information they contain with your union or with the organisations in the Hazards Movement.

The law

Section 6 of the Health and Safety at Work Act (HSW Act), and COSHH, require manufacturers and suppliers of substances to provide this information to users, in most cases employers. Employers have a duty to acquire such information for the purpose of risk assessment under COSHH and Regulation 2 of the new Management of Health and Safety at Work (MHSW) Regulations; to make it available to both to individual workers [MHSW Regulation 8]; and to union safety representatives [MHSW Regulation 17 and Schedule]. Under the Schedule, employers will be obliged to consult with safety representatives on the information to be provided to employees. Representatives will therefore be able to propose improvements in information if they do not think it is adequate.

The law is much less helpful on what information should actually go into a safety data sheet. The

Health and Safety Executive (HSE) provides general guidance [*Substances for use at work: the provision of information HS(G)27(revised)*] but this falls short of specifying the information manufacturers and suppliers must provide.

In response to European legislation, the HSE has recently issued the draft Chemicals (Hazards Information and Packaging) (CHIP) Regulations which are expected to become law in the middle of 1993. Suppliers will be obliged to provide enough information about chemicals classified as dangerous to enable users to take the right precautions. The headings under which information must be provided will be prescribed but the detail of the information will not be specified.

The information

General information:

- The safety data sheet should specify the manufacturer's or supplier's address; the telephone number and the emergency telephone number for contact at night or weekends, and the name of the technical person to be contacted.

The product:

- Every component of the product and its proportion must be mentioned. The component present in the smallest proportion may be the most toxic. Where components or proportions cannot be separately identified, this must be stated. There is no right of commercial confidentiality which permits this information to be withheld.

- The proper chemical name, any synonyms and the chemical formula of each component must be specified. If this information is missing, the user will not be able to identify the chemicals involved. Every chemical is assigned a unique number, the CAS Registry No., which enables it to be identified, and this must be provided. The Hazchem Code, which relates to the movement of chemicals by road in the UK, and the United Nations Number, for transport of chemicals internationally by road, rail and air, should be given.

- Where they exist, the Maximum Exposure Limits (MELs) or the Occupational Exposure Standards (OESs) for each component must be stated. A list of OELs is published annually by the HSE in a document called EH40. OELs are the maximum

allowable concentrations to which workers can be exposed under the COSHH Regs. Any other regulations which apply should be mentioned.

- The formulation (e.g. crystalline, oily, etc.), colour and odour of the product should be given with data on the physical properties (boiling point, melting point, density, etc.).
- Permitted uses should be stated plus information on any incompatible substances for mixing or storage. Permitted and forbidden methods of application should also be specified. Data on flammable properties should include the flash point, the upper and lower explosive limits and the auto-ignition temperature.

The hazards:

- The general nature of the risk (e.g. corrosive, radioactive) should be stated.
- Both short- and long-term effects of a) ingestion, b) inhalation, c) skin contact, d) eye contact should be presented. The first detectable signs of over-exposure should be specified. Reference should be made to any known carcinogenic or mutagenic properties and to reproductive hazards. The nature and extent of the tests performed should be mentioned. Where they are known, measures of toxicity such as the LD₅₀ value (amount of substance needed to kill half of a test group of animals) should be presented.
- A description of inherent fire and explosion hazards should be given, with information on any toxic by-products which can be formed.

Handling and use:

- Precise advice should be given on the necessary conditions for the safe use of the substance without risk to health.
- Appropriate control measures (enclosure, remote handling, local exhaust ventilation, etc.) should be specified. The effectiveness of the control measures should be outlined.

Personal protection:

- Personal protective equipment for all areas of the body should be specified for all the recommended uses of a substance. This should specify the material from which gloves should be manufactured to ensure they are impermeable and state the types of boots, overalls, goggles and respirators, which will conform to British Standards. Guidance should be given on the use of barrier creams. Advice

should be provided on procedures for cleaning protective clothing and equipment.

Storage:

- Information on storage should include the maximum safe lifetime of the product and container; special materials or design features for storage rooms and containers; maximum quantities to be stored; maximum stacking heights; possible chemical changes; incompatible chemicals; fire separation distances; temperature and ventilation requirements; protection against the weather; sensitivity to shock; and security measures.

Disposal:

- It should be specified whether the substance is a special waste under the Environmental Protection Act. Information should be provided on the preferred method of final disposal (removal to landfill, incineration, etc.) with any special precautions required. Possible environmental effects should be specified along with data on persistence and biodegradability.
- Procedures for emptying and cleaning containers together with appropriate safety measures should be provided.

Emergencies:

- Emergency procedures need to be specified for spillage and fire. In the event of spillage, the consequences should be spelled out, precautionary action, including evacuation, should be defined, and procedures for containment and clean-up laid down with advice on the protective equipment required.
- For fires, special hazards from combustion and decomposition should be defined, the correct type of extinguisher should be specified with warnings against the use of unsuitable or incompatible extinguishing agents, and particular information and advice for the Fire Brigade should be provided.

First aid:

- General instructions on first aid should be given for the effects of inhalation, ingestion, eye contact and skin contact. These instructions should be capable of being carried out at the site of exposure.
- If a specific antidote is provided with the product, instructions should be given for its use and any training required. Relevant information for doctors or ambulance personnel should be supplied.