

Health and Safety Office - Guidance Note

Information on chemical hazards from, or as, suppliers

Topic:	Legislative changes in chemical hazard warning information.
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Scope:	<ul style="list-style-type: none"> • A brief overview of the requirements for suppliers/producers • Relevance to users in the University of Bristol
Relevant Legislation:	Globally Harmonised System of Classification and Labelling of Chemicals (GHS) The Classification, Labelling and Packaging of substances and mixtures (CLP) Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH). The Control of Substances Hazardous to Health Regulations 2002 (COSHH) The Carriage of Dangerous Goods and Use of Transportable Pressure Receptacles Regulations 2009 (CDG)
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1. Introduction:

Since the COSHH Regulations were introduced in 1988 there has been an increasing demand for standardised hazard information; this is needed to assist users downstream of the chemicals' manufacturer or supplier to be able to clearly recognise their hazardous properties. In turn, that helps the user to estimate the potential risks that those substances present.

The lack of quality in Safety Data Sheets and the international non-uniformity of labelling have led to many revisions. This briefing note clarifies the current situation and describes some expected developments in the near future.

2. Legislation:

2.1 The Regulation (EC) No 1272/2008 on Classification, Labelling and Packaging of substances and mixtures (**CLP**) has been introduced to standardise the information about hazards across the world to promote international trade without loss of safety. These regulations implement a United Nations agreement described as the Globally Harmonised System (**GHS**) which is often misquoted as being the legal requirement.

2.2 In the UK, visual signage was first established in the Classification, Packaging and Labelling Regulations (**CPL**), which latterly became the Chemicals (Hazard Information and Packaging for Supply) Regulations 2009 (**CHIP**).

These latter regulations also incorporated the requirements for the content and format of Material Safety Data Sheets; this has now been superseded by **REACH** which is an **EU** Regulation.










2.3 The requirements for the classification and labelling of dangerous goods needed for transportation are also being harmonized accordingly (see ref. 5.2.1). The current legislation has been updated as The Carriage of Dangerous Goods and Use of Transportable Pressure Receptacles Regulations 2009 (**CDG**); whereas it was originally separate, this restructure now directly refers to **ADR** (the European agreement concerning the International Carriage of Dangerous Goods by Road) for most significant duties.

3. The significant changes:

The major changes brought about by the new developments are placed upon the manufacturers of hazardous materials. They now have a responsibility to pass on much more, and better quality, information than before on toxicology etc. to all “downstream users” i.e. their product suppliers and ultimately the final users of substances. The impacts of the changes to the University as a downstream user are listed below, but do note that these are as “users” of materials, and not as suppliers (see 3.3 if acting as a producer or supplier). All changes will be gradual as current systems are affected by this development.

3.1 Labelling:

The labels of hazardous substances under **CHIP** are still recognised as being the Orange, Red, or Yellow squares overlaid with a pictogram, some supported by words where necessary. These are being replaced gradually by the **GHS** required labels as red diamonds with no shading.

GHS Pictograms and Hazard Classes		
<p>pic 1803</p>  <p>Oxidizers</p>	<p>pic 1802</p>  <p>Flammables Self Reactives Pyrophorics Self-Heating Emits Flammable Gas Organic Peroxides</p>	<p>pic 1801</p>  <p>Explosives Self Reactives Organic Peroxides</p>
<p>pic 1809</p>  <p>Acute Toxicity (severe)</p>	<p>pic 1808</p>  <p>Corrosives</p>	<p>pic 1804</p>  <p>Gases Under Pressure</p>
<p>pic 1807</p>  <p>Carcinogen Respiratory Sensitizer Reproductive Toxicity Target Organ Toxicity Mutagenicity Aspiration Toxicity</p>	<p>pic 1806</p>  <p>Environmental Toxicity</p>	<p>pic 1805</p>  <p>Irritant Dermal Sensitizer Acute Toxicity (harmful) Narcotic Effects Respiratory Tract Irritation</p>

The black pictograms under the new system are somewhat different from **CHIP** (as shown in ref. 5.1 and Appendix 1), as are some meanings to the specification for classification.

- The **CLP** Regulation introduces two new signal words: 'Danger' and 'Warning'. If the chemical has a more severe hazard, the label includes the signal word 'Danger'; in case of less severe hazards, the signal word is 'Warning'.

3.1.1 Impact on users:

Within the University there are many thousands of different chemicals held in stock and used only periodically and in relatively small amounts. With the advent of this change in the regulation of labelling requirements **there has been no implication** that existing stocks need re-labelling. The change will be gradually seen in new deliveries, and that will be dependent on the suppliers' current stocks being used up.

- Staff need to be made aware that there will be two labelling systems running in parallel for several years, so they should be trained to recognise and understand each system i.e. **CHIP** and **GHS**.
- Any bulk deliveries will carry labels which coincide with the hazard labelling of the products themselves, whereas currently the signage differs slightly.

3.2 Data Sheets:

Referred to in **REACH** as Safety Data Sheets (**SDS**), but known also as Health and Safety Data Sheets (**HSDS**), or Material Safety Data Sheets (**MSDS**), these are written by the manufacturer who within them must display the results of its studies of all the known potential hazards of a substance. These were demanded as part of **COSHH** to help employers to perform their own risk assessments. The content and format of this data ranged in quality and was often very sparse. The **CHIP** regulations made the format requirements more explicit, and this has now been further developed with tighter controls as specified in **REACH** (see 5.3).

- The **SDS** will contain an "Exposure Scenario" (**ES**) that tells a user how the substance may be used, and the potential exposure to hazard (i.e. the risk) under those conditions. As a generic example, this may be "a volatile substance if used outdoors should need no respiratory protection".
- Within **REACH** there is a list of specific materials called Substances of Very High Concern (**SVHC**). These are materials with particularly hazardous properties (e.g. carcinogens) for which manufacturers will need to extensively research their toxicology. The implication is that some of these materials may be withdrawn from the market due to this constraint. There are however provisions in Article 3(23) within the regulations and Article 67(1) for University exemption, allowing continuing use for all laboratory work but large-scale production (see ref. 5.3.4).

3.2.1 Impact on users:

On receiving a **SDS** a user should establish that it coincides exactly with the material that is to be used, and that the use is fully described in the **ES** (see ref. 5.3.2). If this is not the case, then the user should contact the manufacturer or supplier to request the relevant information for their projected scenario. If the information is not received, then users have a responsibility to establish their own **ES** before they can legally use the material.

- A downstream user has the responsibility to follow the guidance provided on the **SDS**. Suppliers will provide information as Risk Management Measures (**RMM**) in

Section 8 of the **SDS**. These should currently be recorded by users on the specific or generic **COSHH** Assessment.

- **COSHH** assessments will have to be reviewed to take account of any significant changes.
- The new **SDS** will contain references to a list of warning references that were previously called “**R**” (risk) and “**S**” (safety) **phrases** under **CHIP**, but now under **CLP** are called “**H**” (hazard) and “**P**” (precautionary) **statements**. These may appear very similar, but should be consulted carefully in case of subtle differences (see ref. 5.3.5).
- Article 36 of **REACH** requires all parties, including users, to keep copies of all **SDS** for at least 10 years from purchase/use. This can be effected electronically as a database.

3.3 Producers of substances:

If any department is responsible for producing substances that are to be sent anywhere outside of the University, then they will be liable to fixing the correct labelling and writing the **SDS** which must contain the results of their own toxicology testing, and an **ES**, in accordance with **REACH**. Although this is outside the scope of this briefing, some useful relevant references have been included below (see ref. 5.3.3).

Please notify Andy Macquiban, Chemical Safety Advisor at the Health and Safety Office if you are such a producer.

4. Summary

- Purchasers of hazardous substances will receive them for some time from suppliers carrying either sets of hazard labels **GHS** or **CHIP** until such time as the older **CHIP** labels are outlawed.
- As above, a variety of information may be received as **CHIP phrases** or **GHS statements**, supplemented by the signal words of Danger or Warning.
- There is no requirement to replace the **CHIP** labels on substances in the workplace for the foreseeable future.
- The information sent with purchases of hazardous substances should be read carefully and any changes used to review **COSHH** assessments.
- The **SDS** as referred to above should be kept on file by users and must be stored until 10 years after the substance has ceased to be held in the workplace.
- Users must be sure that they will use the substances within the scope of the quoted Exposure Scenario (**ES**) on the **SDS**, otherwise they must write their own.
- Everyone using hazardous substances must do so in accordance with the suppliers' advice laid out as Risk Management Measures (**RMM**) on the **SDS**. These must be incorporated as the control measures for **COSHH** assessment.
- Suppliers (and manufacturers) of hazardous substances are responsible for writing their own **SDS** including **ES** and for issuing copies to their clients. This may be relevant to small-scale producers within the University.

5. References:

Listed below are references that have been used to compile this briefing note. References containing significant required detail are highlighted in the body of the document. Others provide background information if needed.

5.1. HSE guide on new labelling requirements: <http://www.hse.gov.uk/ghs/index.htm>

5.1.1. Implications of the changes due to **GHS (Globally Harmonised System) and CLP (Classification, Labelling, and Packaging)** <http://www.hse.gov.uk/ghs/implications.htm> ,

http://ec.europa.eu/enterprise/sectors/chemicals/files/ghs/clp_introduction_en.pdf

5.1.2. **CHIP** regulations (existing requirements) <http://www.hse.gov.uk/chip/index.htm>
and HSG 228 <http://www.hse.gov.uk/pubns/priced/hsg228.pdf>

5.2. Chemicals Hazard Legislation overview:

<http://www.chcs.org.uk/chemical-hazards-legislation.htm>

5.2.1 New (**GHS**) labels and the effects on the transport of dangerous substances labelling

http://www.unece.org/trans/danger/publi/ghs/ghs_rev01/English/05e_annex1.pdf

<http://www.hse.gov.uk/cdg/manual/regenvirment.htm>

5.2.2. European Chemicals Agency introductory guidance on **CLP**

http://guidance.echa.europa.eu/docs/guidance_document/clp_introduutory_en.pdf

5.2.3. Suppliers' guidance

<http://www.sigmaldrich.com/safety-center/globally-harmonized.html>

http://www.slaughter.co.uk/clientUploads/rslslaughter/uploads/radEditor/documents/w280128_ghs-safety_engl-0109_web.pdf

5.3 **REACH** (Registration, Evaluation, Authorisation & restriction of Chemicals) **Regulations**

<http://www.hse.gov.uk/reach/>

5.3.1 Safety Data Sheets (**SDS**) under REACH

<http://www.hse.gov.uk/reach/resources/reachsds.pdf>

5.3.2 REACH guidance for downstream users of chemicals (not producers)

http://guidance.echa.europa.eu/docs/guidance_document/du_en.pdf

5.3.3 Exemption from registration for the production of small quantities of new substances.

http://guidance.echa.europa.eu/docs/guidance_document/ppord_en.pdf

5.3.4 The Candidate List of chemicals that are under severe scrutiny by the Agency under REACH, and maybe threatened.

http://echa.europa.eu/chem_data/authorisation_process/candidate_list_table_en.asp

<http://www.hse.gov.uk/reach/resources/19authorisation.pdf>.

5.3.5. H and P statements.

http://www.unece.org/trans/danger/publi/ghs/ghs_rev02/English/07e_annex3.pdf

6 **Glossary of acronyms:**

ADR: European Agreement Concerning the International Carriage of Dangerous Goods by Road

CDG: The Carriage of Dangerous Goods and Use of Transportable Pressure Receptacles Regulations 2009

CHIP: Chemical (Hazard Information and Packaging for Supply) Regulations 2009

CLP: The Classification, Labelling and Packaging of substances and mixtures (**European Regulation (EC) No 1272/2008**)

COSHH: The Control of Substances Hazardous to Health Regulations 2002

CPL: The Classification Packaging and Labelling of Dangerous Substances Regulations 1984

ES: Exposure Scenario

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

H-statement: Hazard Statement

MSDS: Material Safety Data Sheet

P-statement: Precautionary Statement

R-phrase: Risk Phrase

REACH: The Registration, Evaluation, Authorisation and Restriction of Chemicals

RMM: Risk Management Measure

S-phrase: Safety Phrase

SDS: Safety Data Sheet

Appendix 1

New GHS Chemical Hazard Labels: 2009

The Globally Harmonised System (GHS) will be phased in by suppliers over 15 years. So both types of labels will be with us for the foreseeable future.

Old		New
	→	
	Corrosive	
	→	
	Flammable	
	→	
	Health Hazard	
	→	
	Acute Toxicity	
	→	
	Oxidising	
	→	
	Explosive	
	→	
	Hazardous to the Aquatic Environment	
	Compressed Gas	
	Respiratory Hazard	