

NEBOSH International Construction Certificate Unit ICC1 - Managing and Controlling Hazards in International Construction Activities

Introduction

This Supplement contains updates to your study material for Unit ICC1 of the NEBOSH International Construction Certificate. Please read it carefully.

Element 8: Chemical and Biological Health – Hazards and Risk Control

Forms and Classification of, and the Health Risks from Hazardous Substances

Main Classification of Hazardous Substances

This subsection has been amended and now reads as follows:

“Chemicals can be broadly classified into three types; those having:

- **Physico-chemical effects** – explosive, oxidising, highly flammable.
- **Health (toxicological) effects** – toxic, harmful, irritant, carcinogenic.
- **Environmental effects** – harmful to aquatic organisms, dangerous for the ozone layer.

TOPIC FOCUS

Chemicals hazardous to health are classified as:

- **Toxic** (or very toxic) - small quantities cause death or serious ill health if inhaled, swallowed or absorbed via the skin.
- **Harmful** - may cause death or serious ill health when inhaled, swallowed or absorbed through the skin in large doses.
- **Corrosive** - destroy living tissue on contact, such as sulphuric acid and hydrochloric acid in chemical cleaners, e.g. for masonry, brickwork.
- **Irritant** - cause inflammation of the mucous membranes (eyes and lungs) or skin from immediate, prolonged or repeated contact.
- **Carcinogenic** - may cause cancer (abnormal growth of cells in the body) when inhaled, swallowed or absorbed via the skin.

TOPIC FOCUS

Hazard Symbols - GHS

Examples of hazard symbols under the Globally Harmonised System (GHS):



Carcinogen

Toxic

Corrosive

Flammable

Some chemicals cause **sensitisation**, which means they can produce an allergic reaction that will gradually worsen as exposure is repeated. There are two types:

- **Skin sensitisers** – can cause allergic dermatitis on contact with the skin (e.g. epoxy resin used in adhesives and paints).
- **Respiratory sensitisers** – can cause asthma and similar effects if inhaled (e.g. wood dusts and isocyanates).

Finally, there are two categories of substances that, although not often found in construction materials, can be of great concern when present:

- **Mutagens** – may cause genetic mutations that can be inherited.
- **Toxic to reproduction** – may cause sterility or affect an unborn child."

Assessment of Health Risks

Sources of Information

The last paragraph under this subheading has been amended to read:

"As we saw earlier with the GHS labels, the European (CLP) Regulation is based on a Globally Harmonised System."

Product Labels (H4)

The original two paragraphs under this subheading have been replaced by the following:

"Substances that are classified (by international or national regulations) as dangerous for supply are to carry a product label, which must give the following information:

- Name, address, and telephone number of the supplier.
- The nominal quantity of the substance/mixture (though this may be elsewhere on the package) – but only where it is made available to the general public.
- Product identifiers:
 - for substances this would be: name, identification number (EC number, CAS number or inventory number);
 - for mixtures this would be: trade name, and then the identity of all the substances (maximum of 4) in the mixture which contribute to its classification.
- Hazard pictograms.
- Signal word (as applicable).
- Hazard statements (as applicable).
- Precautionary statements (as applicable).
- Supplementary information."

(The label is unchanged.)

Suggested Answers to Revision Questions

Element 8: Chemical and Biological Health - Hazards and Risk Control

Question 7

The answer is now:

“A product label must give the following information:

- Name, address, and telephone number of the supplier.
- Nominal quantity of the substance/mixture (may be elsewhere on the package) – where made available to the general public.
- Product identifiers:
 - for substances: name and identification number (EC number, CAS number or inventory number);
 - for mixtures: trade name, and identity of all the substances (maximum of 4) in the mixture which contribute to its classification.
- Hazard pictograms.
- Signal word (as applicable).
- Hazard statements (as applicable).
- Precautionary statements (as applicable).
- Supplementary information.”