OCCUPATIONAL SAFETY AND HEALTH (CLASSIFICATION, PACKAGING AND LABELLING OF HAZARDOUS CHEMICALS)

CPL REGULATIONS 1997
ARRANGEMENT OF REGULATIONS

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• Schedules
In exercise of the powers conferred by section 66 of the Occupational Safety and Health Act 1994, the Minister makes the following regulations:

Citation and commencement.

These regulations may be cited as the Occupational Safety and Health (Classification, Packaging and Labelling of Hazardous Chemicals) Regulations 1997 and shall come into force on 15 April 1997.
Interpretation.

• In these Regulations, unless the context otherwise requires-
• “chemicals” mean chemical elements, compounds or mixtures thereof, whether natural or synthetic, but do not include micro-organisms;
• “degree of hazard”, in relation to classification or labeling of hazardous chemicals, refers to the specific nature of the risk involved in the following order:
a) for the hazardous chemicals in Part A of schedule I-
- explosive, which is more hazardous than oxidizing;
- oxidizing, which is more hazardous than extremely flammable;
- extremely flammable, which is more hazardous than high flammable; and
- highly flammable, which is more hazardous than flammable; and

b) for the hazardous chemicals in Part B of Schedule I-
- very toxic, which is more hazardous than toxic;
• toxic, which is more hazardous than corrosive;
• corrosive, which is more hazardous than harmful; and
• harmful, which is more hazardous than irritant;

“foodstuff” means food or drink intended for consumption;

“hazardous chemical” means any chemical which possesses any of the properties categorised in Schedule I, or for which relevant information exists to indicate that the chemical is hazardous;
“internationally recognised nomenclature” means the standard chemical nomenclature of the International Union of Pure and Applied Chemistry (IUPAC):

“medical practitioner” means a medical practitioner who is registered with the Director General to conduct medical surveillance programmes of employees;

“specific nature of the risk”, in relation to classification of chemicals, means the explosive, oxidizing, extremely flammable, highly flammable, flammable, very toxic, toxic, harmful, corrosive, irritant, carcinogenic, teratogenic or mutagenic nature of a particular chemical;
“supplier” means a person who supplies chemicals and includes a formulator, a manufacturer, an importer or a distributor.

Application

i) These Regulation shall apply to a supplier of hazardous chemicals for use at work except hazardous chemicals which are-

✓ defined as a radioactive material under the Atomic Energy Licensing Act 1984;
defined as a pesticide under the Pesticides Act 1974;
listed as poisons in the Poisons List Order 1993, except for chemicals which are classified therein as industrial and laboratory poisons;
defined as a drug under the Sales of Drugs Act 1952
listed as scheduled wastes in the First Schedule of the Environmental Quality (Schedule Wastes) Regulation 1989; and
foodstuff.
ii. These Regulations shall not apply to-

- the transportation of hazardous chemicals by rail, inland waterway, sea or air; and
- hazardous chemicals in transit which are stored at a bonded warehouse.
Duty of supplier to classify

i. It shall be the duty of a supplier to classify hazardous chemicals according to the specified nature of the risk involved based on the categories of hazards in Schedule I.

ii. Chemicals which fall within more than one category of hazard in Parts A and B of schedule I shall be classified under the category which poses the greatest degree of hazard in each Part.
Packaging requirements.

• A supplier shall ensure that the hazardous chemicals are supplied in packaging which satisfies the following requirements:

  ✓ if the packaging is a container shall be so designed and constructed that its contents cannot escape unless there is a requirement for safety devices to be fitted into the container;
the materials constituting the packaging and the fastening are not susceptible to adverse attack by the contents therein or liable to form harmful or dangerous compounds with the contents;

the packaging and fastening are strong and solid throughout to ensure that they will not come loose and will safely meet the normal stress and strain of handling; and

containers fitted with replaceable fastening device are so designed that the packaging can be repeatedly fastened without the contents escaping.
Seal the package.

- A supplier shall ensure that packages are initially closed with a seal in such a way that once the packages are opened, the seal are broken and could not be repaired.

Labelling.

i) A supplier shall ensure that every packaging is labelled clearly and indelibly with the following information:
✓ the name of the hazardous chemicals in accordance with the internationally recognized nomenclature;
✓ the name, address and telephone number of the supplier;
✓ the danger symbol and indication of danger as specified in Schedule II;
✓ the nature of the special risk associated with the use of the chemical as specified in Schedule III; and
✓ the safety precautionary measures as specified in Schedule IV.
2. Where there is more than one symbol assigned to a chemical-

- the requirement to indicate the symbol for very toxic makes the symbols for harmful and corrosive optional;
- the requirement to indicate the symbol for explosive makes the symbol for harmful optional;
- the requirement to indicate the symbol for explosive makes the symbols for flammable and oxidising optional; and
- the requirement to indicate the symbol for oxidising makes the symbol for flammable optional.
3. In the case of irritant, highly flammable, flammable and oxidising chemicals, the information on special risk and safety precaution need not be given where the package contains 125 milliliters or less of the hazardous substance.

4. An indication such as “non-toxic”, :non-harmful” or any other similar indication shall not appear on the label or packaging of hazardous chemicals.

5. The information required under subregulation (1) shall be supplied in the national language and English.
Dimension of label.

a) The dimension of a label required in every packaging under regulation 7 shall be as specified in Schedule V.

b) The label shall be firmly affixed to one or more surfaces of the packaging so that the label can be read horizontally when the package is set down in its normal position.

c) When it is not practicable to label a hazardous chemical in view of the size of its container or the nature of its package, the container or package shall be tagged according to the dimension of label applicable as specified in Schedule V.
Duty of supplier to furnish Chemical Safety Data Sheet.

i. A supplier shall furnish an up-to-date Chemical Safety Data Sheet for each hazardous chemical supplied.

ii. The chemical Safety Data Sheet shall contain the following information:

a) the chemical product itself including the trade or common name of the chemical and the company identification with the details of the supplier;
the composition of the ingredients that clearly identifies the hazardous chemical for the purpose of conducting a hazard evaluation;

• the hazard identification;
• the first aid measures;
• the fire fighting measures;
• the accidental release measures;
• the handling storage;
• the exposure controls and personal protection (including the possible methods of monitoring workplace exposure);
• the physical and chemical properties;
• the stability and reactivity;
• the toxicological information (including the potential routes of entry into the body and the possibility of synergism with other chemicals or hazards encountered at work);
  ➢ the ecological information;
  ➢ the disposal information;
  ➢ the transport information; and
• the date of preparation of the Chemical Safety Data Sheet.
iii. The supplier shall review and revise the Chemical Safety Data Sheet from time to time when new information on a particular hazardous chemical becomes available.

iv. All information required on a Chemical Safety Data Sheet in pursuance of subregulation (2) shall be written in the national language and English.
Confidential information on Chemical.

i. Where the name of the chemical and the concentration of ingredients of the chemical referred to in paragraphs 9(2)(a) and (b) constitute confidential information, the information may be omitted from the Chemical Safety Data Sheet but the same shall be disclosed by the supplier to-

a) An occupational health doctor; or
b) Any person who uses or handles the chemical.
The information referred to in subregulation (1) shall be supplied only if the request for the information is made in writing and the information so obtained is used only for the protection of the safety and health of employees.
SCHEDULE I
(Regulation 2)
HAZARDOUS CHEMICALS AND PREPARATIONS

• For the purpose of this Schedule, unless the context otherwise requires –

• “acute health risk” means risk which may result in an effect that occurs immediately or shortly after a single exposure;
• “boiling point” means the temperature of a liquid at which the vapour pressure (i.e. the pressure characteristic at any given temperature in degree Celsius of a vapour in equilibrium with its liquids form) is equal to or slightly greater than ambient atmospheric pressure;
• “carcinogenic” means substances or preparations which if inhaled or ingested or penetrated into the skin, may induce cancer in humans or increase its incidence;
• “chronic health risk” means risk which may result in a harmful effect that occurs after repeated or prolonged exposure;
• “exothermic reaction” means a chemical reaction which results in the production of heat energy;

• “Flash point”, in relation to extremely flammable, highly flammable and flammable chemicals, means the lowest temperature in degree Celsius at which liquid will produce enough vapour to ignite;

• “hazardous preparation” means any preparation which possesses any of the properties categorized in Parts A and B of Schedule I, or for which relevant information exists to indicate that the preparation is hazardous;
• “LC-50” means a concentration of a chemical in air which is estimated to produce death in 50% of an experimental animal population on inhalation for a short period of time;

• “LD-50” means a dose of a chemical applied either through ingestion, injusction or application to the skin which produces death in 50% of an experimental animal population;

• “mutagenic” means substances or preparations which if inhaled or ingested or penetrated into the skin may induce genetic changes in spermatozoa or ovum cells or increase its incidence.
• “teratogenic” means substances or preparations which if inhaled or ingested or penetrated into the skin of a pregnant woman, may induce deformation in the foetus or increase its incidence.
The following chemicals and preparations are hazardous within the meaning of these Regulations:

Part A: Classification based on physicochemical properties

a. Explosive
   • chemicals and preparations which may explode under the effect of flame or which are more sensitive to shocks or friction than dinitrobenzene
b. Oxidising
   • chemical and preparations which give rise to highly exothermic reaction when in contact with other chemicals, particularly flammable chemicals

   c. Extremely flammable
   • liquid chemicals and preparations having a flash point lower than 0 degree Celsius and a boiling point lower than or equal to 35 degree Celsius
d. Highly flammable

- chemical and preparations which may become hot and finally catch fire when in contact with air at ambient temperature without any application of energy;
- solid substances and preparations which may readily catch fire after brief contact with a source of ignition and which continue to burn or be consumed after removal of the source of ignition;
- liquid substances and preparations having a flash point below 21 degree Celsius;
- gaseous substances and preparations which are flammable in air at normal pressure; or
- substances and preparations which, when in contact with water or damp air, evolve highly flammable gases in dangerous quantities.
e. Flammable

- liquid substances and preparations having a flash point equal to or greater than 21 degrees Celsius and less than or equal to 55 degrees Celsius.
Part B: Classification based on health effect

• **Very toxic**
  – substances and preparations which if inhaled or ingested or penetrated into the skin may involve extremely serious, acute or chronic health risks or even death; or
  – substances and preparations for which the LD-50 absorbed orally in rat is less than 25 mg/kg or the LD-50 percutaneous absorption in rat or rabbit is less than 50 mg/kg or the LC-50 absorbed by inhalation in rat is less than 0.5 mg/litre (administered for a minimum period of four hours)
• Toxic
  – substances and preparations which if inhaled or ingested or penetrated into the skin may involve serious, acute or chronic health risks or even death;
  – substances and preparations for which the LD-50 absorbed 25 to 200 mg/kg or the LD-50 percutaneous absorption in rat or rabbit is between 50 to 400 mg/kg or the LC-50 absorbed by inhalation in rat is between 0.5 to 2 mg/litre (administered for a minimum period of four hours);
  – substances and preparations which are defined as carcinogenic, teratogenic or mutagenic.
• Harmful

– substances and preparations which if inhaled or ingested or penetrated into the skin may involve limited health risks; or

– substances and preparations for which the LD-50 absorbed orally in rat is between 200 to 500 mg/kg or the LD-50 percutaneous absorption in rat or rabbit is between 400 to 2000 mg/kg or the LC-50 absorbed by inhalation in rat is between 2 to 20 mg/litre (administered for a minimum period of four hours)
• **Corrosive**
  ✓ Substances and preparations which may, on contact with living tissues, destroy them

• **Irritant**
  ✓ non-corrosive substances and preparations which, through immediate, prolonged or repeated contact with the skin or mucous membrane, can cause inflammation
SCHEDULE II
(PARAGRAPH 7(1)(c)
DANGER SYMBOLS AND INDICATION OF DANGERS
<table>
<thead>
<tr>
<th>(1) Indication of Danger</th>
<th>(2) Description of Symbol (background colour)</th>
<th>(3) Danger Symbol</th>
</tr>
</thead>
<tbody>
<tr>
<td>Explosive</td>
<td>An exploding bomb (light orange)</td>
<td></td>
</tr>
<tr>
<td>Oxidising</td>
<td>A flame over a circle (canary yellow)</td>
<td></td>
</tr>
<tr>
<td>Extremely flammable</td>
<td>A flame (signal red)</td>
<td></td>
</tr>
<tr>
<td>Highly flammable</td>
<td>A flame (signal red)</td>
<td></td>
</tr>
<tr>
<td>Flammable</td>
<td>A flame (signal red)</td>
<td></td>
</tr>
<tr>
<td>Very toxic</td>
<td>A skull and crossbones (white)</td>
<td></td>
</tr>
<tr>
<td>Toxic</td>
<td>A skull and crossbones (white)</td>
<td></td>
</tr>
<tr>
<td>Corrosive</td>
<td>The symbol showing the damaging effect of an acid (white background in upper half and black background in lower half)</td>
<td></td>
</tr>
<tr>
<td>Harmful</td>
<td>A St. Andrew’s Cross (white)</td>
<td></td>
</tr>
<tr>
<td>Irritant</td>
<td>A St. Andrew’s Cross (white)</td>
<td></td>
</tr>
</tbody>
</table>
SCHEDULE III
(PARAGRAPH 7(1)(d))
RISK PHRASES

Indication of Special Risks
R1. Explosive when dry
R2. Risk of explosion by shock, friction, fire or other sources of ignition
R3. extreme risk of explosion by shock, friction, fire or other sources of ignition
R4. Forms very sensitive explosive metallic compound
R5. Heating may cause explosion
R6. Explosive with or without contact with air
R7. May cause fire
R8. Contact with combustible material may cause fire
R9. Explosive when mixed with combustible material
R10. Flammable
R11. High flammable
R12. Extremely flammable
R13. Extremely flammable liquefied gas
R14. Reacts violently with water
R15. Contact with water liberates highly flammable gases
R16. Explosive when mixed with oxidizing substances
R17. Spontaneously flammable in air
R18. In use, may form flammable/explosive vapor-air mixture
R19. May form explosive peroxides
R20. Harmful by inhalation
R21. Harmful in contact with skin
R22. Harmful if swallowed
R23. Toxic by inhalation
R24. Toxic in contact with skin
R25. Toxic if swallowed
R26. Very toxic by inhalation
R27. Very toxic in contact with skin
R28. Very toxic if swallowed
R29. Contact with water liberates toxic gas
R30. Can become highly flammable in use
R31. Contact with acid liberates toxic gas
R32. Contact with acid liberated very toxic gas
R33. Danger of cumulative effects
R34. Causes burns
R35. Causes severe burns
R36. Irritating to eyes
R37. Irritating to respiratory system
R38. Irritating to skin
R39. Danger of very serious irreversible effects
R40. Possible risk of irreversible effects
R41. Risk of serious damage to eyes
R42. May cause sensitization by inhalation
R43. May cause sensitization by skin contact
R44. Risk of explosion if heated under confinement
R45. May cause cancer
R56. Toxic to soil organisms
R57. Toxic to bees
R58. May cause long term adverse effects in the environment
R59. Dangerous for ozone layer
R46. May cause heritable genetic damage
R47. May cause birth defects
R48. Danger of serious damage to health by prolonged exposure
R49. May cause cancer by inhalation
R50. Very toxic to aquatic organisms
R51. Toxic to aquatic organisms
R52. Harmful to aquatic organisms
R52. Harmful to aquatic organisms
R53. May cause long term adverse effects in the aquatic environment
R54. Toxic to flora
R55. Toxic to fauna
B. Combination of Special Risks

R14/15. Reacts violently with water, liberating highly flammable gases

R15/29. Contact with water liberates toxic, highly flammable gas

R20/21. Harmful by inhalation, in contact with skin

R20/21/22. Harmful by inhalation, in contact with skin and if swallowed

R20/22. Harmful by inhalation and if swallowed

R21/22. Harmful in contact with skin and if swallowed
R23/24. Toxic by inhalation and in contact with skin
R23/24/25. Toxic by inhalation, in contact with skin and if swallowed
R23/25. Toxic by inhalation and if swallowed
R24/25. Toxic in contact with skin and if swallowed
R26/27. Very toxic inhalation and in contact with skin
R26/27/28. Very toxic by inhalation, in contact with skin and if swallowed
R26/28. Very toxic by inhalation and if swallowed
R27/28. Very toxic in contact with skin and if swallowed
R26/37. Irritating to eyes and respiratory system
R36/37/38. Irritating to eyes, respiratory system and skin
R36/38. Irritating to eyes and skin
R37/38. Irritating to respiratory system and skin
R39/23. Toxic-danger of very serious irreversible effects through inhalation
R39/23/24. Toxic-danger of very serious irreversible effects through inhalation and in contact with skin
R39/23/24/25. Toxic-danger of very serious irreversible effects through inhalation, in contact with skin and if swallowed
R39/23/25. Toxic danger of very serious irreversible effects through inhalation and if swallowed

R39/24. Toxic danger of very serious irreversible effects in contact with skin

R39/24/25. Toxic danger of very serious irreversible effects in contact with skin and if swallowed

R39/25. Toxic danger of very serious irreversible effects if swallowed

R39/26. Very toxic danger of very serious irreversible effects through inhalation

R39/26/27. Very toxic danger of very serious irreversible effects through inhalation and in contact with skin
R39/26/27/28. Very toxic-danger of very serious irreversible effects through inhalation, in contact with skin and if swallowed

R39/26/28. Very toxic-danger of very serious irreversible effects through inhalation and if swallowed

R39/27. Very toxic-danger of very serious irreversible effects in contact with skin

R39/27/28. Very toxic-danger of very serious irreversible effects in contact with skin and if swallowed

R39/28. Very toxic-danger of very serious irreversible effects if swallowed
R40/20. Harmful-possible risk of irreversible effects through inhalation
R40/20/21. Harmful-possible risk of irreversible effects through inhalation and in contact with skin
R40/20/21/22. Harmful-possible risk of irreversible effects through inhalation, in contact with skin and if swallowed
R40/20/22. Harmful-possible risk of irreversible effects through inhalation and if swallowed
R40/21. Harmful-possible risk of irreversible effects in contact with skin
R40/21/22. Harmful-possible risk of irreversible effects in contact with skin and if swallowed
R40/22. Harmful—possible risk of irreversible effects if swallowed

R42/43. May cause sensitization by inhalation and skin contact

R48/20. Harmful—danger of serious damage to health by prolonged exposure

R48/20/21. Harmful—danger of serious damage to health by prolonged exposure through inhalation and in contact with skin

R48/20/21/22. Harmful—danger of serious damage to health by prolonged exposure through inhalation, in contact with skin and if swallowed

R48/20/22. Harmful—danger of serious damage to health by prolonged exposure through inhalation and if swallowed
R48/21.  Harmful - danger of serious damage to health by prolonged exposure and in contact with skin

R48/21/22.  Harmful - danger of serious damage to health by prolonged exposure, in contact with skin and if swallowed

R48/22.  Harmful - danger of serious damage to health by prolonged exposure and if swallowed

R48/23.  Toxic - danger of serious damage to health by prolonged exposure through inhalation

R48/23/24.  Toxic - danger of serious damage to health by prolonged exposure through inhalation and in contact with skin
R48/23/24/25. Toxic-danger of serious damage to health by prolonged exposure through inhalation, in contact with skin and if swallowed

R48/23/25. Toxic-danger of serious damage to health by prolonged exposure through inhalation and if swallowed

R48/24/25. Toxic-danger of serious damage to health by prolonged exposure and in contact with skin

R48/24/25. Toxic-danger of serious damage to health by prolonged exposure, in contact with skin and if swallowed

R48/25. Toxic-danger of serious damage to health by prolonged exposure and if swallowed
SCHEDULE IV
(PARAGRAPH &(1)(e))
SAFETY PHRASES

Indication of Safety Precautions
S1. Keep locked up
S2. Keep out of reach of children
S3. Keep in cool place
S4. Keep away from living quarters
S5. Keep under…..(*appropriate liquid to be specified by manufacturer*)
S6. Keep under….(*inner gas to be specified by manufacturer*)
S7. Keep container tightly closed
S8. Keep container dry
S9. Keep container in a well ventilated place
S12. Do not keep container sealed
S13. Keep away from food, drink and animal feeding stuff
S14. Keep away from…(*incompatible materials to be indicated by manufacturer*)
S15. Keep away from heat
S16. Keep away from sources of ignition—“No Smoking”
S17. Keep away from combustible material
S18. Handle and open container with care
S19. Do not keep sealed
S20. When using do not eat or drink
S21. When using do not smoke
S22. Do not breathe dust
S23. Do not breathe gas/fumes/vapour/spray
(appropriate wording to be specified by manufacturer)
S24. Avoid contact with skin
S25. Avoid contact with eyes
S26. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice
S27. Take off immediately all contaminated clothing
S28. After contact with skin, wash immediately with plenty of .... (to be specified by manufacturer)
S29. Do not empty into drains
S30. Never add water to this product
S33. Take precautionary measures against static discharges
S34. Avoid shock and friction
S35. This material and its container must be disposed of in a safe manner
S36. Wear suitable protective clothing
S37. Wear suitable gloves
S38. Incase of insufficient ventilation, wear suitable respiratory equipment
S39. Wear eye/face protection
S40. To clean the floor and all objects contaminated by this material use…(to be specified by manufacturer)
S41. In case of fire and/or explosion do not breathe fumes
S42. During fumigation/spraying wear suitable respiratory equipment (appropriate wording to be specified)
S43. In case of fire, use *(indicate in the space the precise type of fire fighting equipment. If water increases the risk, add-“Never use water”)*

S44. If you fell unwell, seek medical advice *(show the label where possible)*

S45. In case of accident or if you feel unwell, seek medical advice immediately *(show the container or label)*

S46. If swallowed seek medical advice immediately *(show the container or label)*

S47. Keep at temperature not exceeding… °C *(to be specified by manufacturer)*

S48. Keep wetted with… *(Appropriate material to be specified by manufacturer)*
S49. Keep only in the original container
S50. Do not mix with… (to be specified by manufacturer)
S51. Use only in well ventilated areas
S52. Not recommended for interior use on large surface area
S53. Avoid exposure-obtain special instruction before use
S56. Do not discharge into drains or the environment, dispose of to an authorized waste collection waste collection point
S57. Use appropriate containment to avoid environmental contamination

S59. Refer to manufacturer / supplier for information on recovery/recycling

S60. This material and/or its container must be disposed of as hazardous waste

S61. Avoid release to the environment. Refer to special instructions/safety data sheet
B. Combination of Safety Precautions

S1/2. Keep locked up and out of reach of children
S3/7/9. Keep container tightly closed, in a cool well ventilated place
S3/9. Keep in a cool, well ventilated place
S3/9/14. Keep in a cool, well ventilated place away from… *(incompatible material to be indicated by manufacturer)*
S3/9/14/49. Keep only in the original container in a cool, well-ventilated place away from… (Incompatible material to be indicated by manufacturer)

S3/9/49. Keep only in the original container in a cool, well-ventilated place

S3/14. Keep in a cool place away from… (incompatible material to be indicated by manufacturer)

S7/8. Keep container tightly closed and dry

S7/9. Keep container tightly closed and in well ventilated place

S20/21. When using do not eat, drink or smoke
S24/25. Avoid contact with skin and eyes
S36/37. Wear suitable protective clothing and gloves
S36/37/39. Wear suitable protective clothing, gloves and eye/face protective
S36/39. Wear suitable protective clothing, eye/face protection
S37/39. Wear suitable gloves and eye/face protection
S47/49. Keep only in original container at temperature not exceed…°C (to be specified by manufacturer)
SCHEDULE V
(PARAGRAPH 8(1))
DIMENSION OF LABEL
The dimension of label shall be as follows:

<table>
<thead>
<tr>
<th>Capacity of the package</th>
<th>Dimension in milimetres</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not exceeding three litres</td>
<td>At least 52x74</td>
</tr>
<tr>
<td>Greater than three litres but not exceeding 50 litres</td>
<td>At least 74x105</td>
</tr>
<tr>
<td>Greater than 50 litres but not exceeding 500 litres</td>
<td>At least 105x148</td>
</tr>
<tr>
<td>Greater than 500 litres</td>
<td>At least 148x210</td>
</tr>
</tbody>
</table>
• Each danger symbol shall cover at least one tenth of the surface area of the label but shall not be less than one square centimeter

Made 6 March 1997