

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

1.1. Identification of the substance or preparation:

- identification as provided on the label,
- registration number for substances subject to this procedure.

1.2. Use of the substance/preparation:

- known uses (the most important or common where there are many possible uses),
- brief description of the exact effect of the substance/preparation.

1.3. Company/undertaking identification:

- person responsible for placing the substance or preparation on the market within the Community: full address, telephone number, e-mail address of the competent person responsible for the safety data sheet,
- person responsible in the Member State: full address and telephone number, if possible.

1.4. Emergency telephone.



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3. COMPOSITION/INFORMATION ON INGREDIENTS

— **For preparations classified as dangerous**, list of following substances, together with their concentration or concentration range in the preparation:

- substances presenting health or environmental hazards, if they are present in concentrations equal to or greater than certain concentrations. These concentrations are defined in the Directives 67/548/EEC and 1999/45/EC, in the Regulation (EC) No 1272/2008 and in the classification and labelling inventory;
- substances for which there are Community workplace exposure limits, which are not already included under the above point a;
- substances that are persistent, bioaccumulative and toxic (PBT) or very persistent and very bioaccumulative (vPvB), in accordance with the criteria set out in annexe XIII of REACH, in concentrations equal to or greater than 0.1 %.

— **For preparations not classified as dangerous**, list of following substances, together with their concentration or concentration range:

- substances presenting health or environmental hazards or for which there are Community workplace exposure limits, if they are present in an individual concentration equal to or greater than 1 % by weight for non-gaseous preparations and equal to or greater than 0.2 % by volume for gaseous preparations;
- persistent, bioaccumulative and toxic (PBT) or very persistent and very bioaccumulative (vPvB) substances, in accordance with the criteria set out in annexe XIII of REACH, if they are present in an individual concentration equal to or greater than 0.1 % by weight.

— Mention of the classification of dangerous substances; for substances not classified as dangerous, indication of possible PBT or vPvB nature.

— Name, registration number if available, CAS number, and IUPAC name (if available) of substances.

— Chemical nature of substances whose identity is to be kept confidential.

15. REGULATORY INFORMATION

— Indication of a Chemical Safety Assessment fulfilment for the substance or a substance in the preparation, if carried out.

— Copy of health, safety and environmental information shown on the label.

— Mention of specific provisions for the substance or preparation in relation to protection of man or the environment at Community level (e.g. authorisations, restrictions).

— Also mention, where possible, of national laws which implement these provisions.

16. OTHER INFORMATION

— Other information which the supplier assesses as being of importance for the health and safety of the user and for the protection of the environment (uses to be avoided, sources of key data, etc.).

— For a revised safety data sheet, indication of added, deleted or revised information.

2. HAZARDS IDENTIFICATION

- Classification of the substance/preparation or indication that the preparation is not classified as dangerous.
- Most important adverse physicochemical, human health and environmental effects of the substance/preparation.
- Symptoms relating to the uses and possible misuses of the substance/preparation that can reasonably be foreseen.
- Other hazards (which do not result in classification): dustiness, cross-sensitisation, suffocation, freezing, high sense potency (odour or taste) or environmental effects such as hazards to soil-dwelling organisms, photochemical ozone creation potential, etc.

9. PHYSICAL AND CHEMICAL PROPERTIES

- 9.1. General information: physical state (solid, liquid, gas), colour and odour.
- 9.2. Important health, safety and environmental information: pH, boiling point/boiling range, flash point, flammability (solid, gas), explosive properties, oxidising properties, vapour pressure, relative density, solubility, water solubility, partition coefficient n-octanol/water (K_{ow}), viscosity, vapour density, evaporation rate.
- 9.3. Other important safety parameters: miscibility, fat solubility (solvent, oil), conductivity, melting point/melting range, gas group, auto-ignition temperature, etc.

10. STABILITY AND REACTIVITY OF THE SUBSTANCE OR PREPARATION

- 10.1. Conditions to avoid: temperature, pressure, light, shock, etc.
 - 10.2. Materials to avoid: water, air, acids, bases, oxidising agents or any other specific substance.
 - 10.3. Hazardous decomposition products.
- Further information:
- need and presence of stabilisers,
 - safety significance, if any, of a change in physical appearance of the substance or preparation.

11. TOXICOLOGICAL INFORMATION

- Information on the different routes of exposure (inhalation, ingestion, skin and eye contact).
- Indication of dangerous-to-health effects and related symptoms from exposure to the substance, preparation or certain substances in the preparation: acute effects (acute toxicity, irritation and corrosivity), sensitisation, repeated dose toxicity, CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction).
- Other information: toxicokinetics, metabolism and distribution.
- For substances subject to registration, summaries of toxicological studies results.
- Statement specifying whether the substance or substances contained in the preparation meets/meet or not the criteria for CMR, categories 1 and 2.

12. ECOLOGICAL INFORMATION

Effects, behaviour and environmental fate of the substance or preparation and dangerous products arising from the degradation of substance/preparation.

- 12.1. Ecotoxicity: acute and chronic aquatic toxicity, toxicity data on soil micro- and macro-organisms and other environmentally relevant organisms (birds, bees and plants), inhibitory effects on the activity of micro-organisms.
- 12.2. Mobility: known or predicted distribution of the substance or constituents of the preparation to environmental compartments, surface tension, absorption/desorption.
- 12.3. Persistence and degradability of the substance or appropriate constituents of the preparation.
- 12.4. Bioaccumulative potential of the substance or appropriate constituents of the preparation with reference to the partition coefficient n-octanol/water (K_{ow}) and bioconcentration factor (BCF).
- 12.5. Results of persistent, bioaccumulative and toxic (PBT) assessment.
- 12.6. Other adverse effects: ozone depletion potential, photochemical ozone creation potential, endocrine disrupting potential and/or global warming potential.

7. HANDLING AND STORAGE

7.1. Technical measures for safe **handling**:

containment, local and general ventilation, measures to prevent aerosol and dust generation and fire, measures required to protect the environment (e.g. use of filters or scrubbers on exhaust ventilation, use in a bunded area, measures for collection and disposal of spillages, etc.) and any specific requirements or rules relating to the substance or preparation (e.g. procedures or equipment which are prohibited or recommended) with, if possible, a brief description.

7.2. Necessary conditions for safe **storage**:

- specific design for storage rooms or vessels (including retention walls and ventilation), incompatible materials, conditions of storage (temperature and humidity limits/range, light, inert gas, etc.), special electrical equipment and prevention of static electricity;
- indications of quantity limits under storage conditions and type of material used in the packaging/containers.

7.3. Recommendations for specific use(s).



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8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Exposure limit values:

- indication of occupational exposure limit values and/or biological limit values, applicable in the Member State where the substance or preparation is placed on the market;
- information on monitoring procedures;
- indication of DNELs¹ (derived no-effect levels) and PNECs² (predicted no-effect concentration).

8.2. Specific risk management measures:

- 8.2.1. Occupational exposure controls:
work processes, appropriate engineering controls, collective protection measures, personal protection equipment,
- 8.2.2. Environmental exposure controls.

13. DISPOSAL CONSIDERATIONS

- Description of generated dangerous residues and their safe handling.
- Appropriate methods of disposal of both the substance or preparation and any contaminated packaging.
- Indication of any relevant Community provisions relating to waste. In their absence, reminder of national or regional provisions applicable.

14. TRANSPORT INFORMATION

- Special precautions in connection with transport or conveyance either within or outside the user's premises.
- Where relevant, information on the transport classification for each of the modal regulations: UN number, class, proper shipping name, packing group, marine pollutant, other applicable information.

4. FIRST AID MEASURES

- Description of symptoms and effects.
- Instruction concerning first aid to give.
- Indication of possible delayed effects.
- Mention of possible need for assistance by a doctor.
- List of special means to be provided in the case of an accident with some specific substances or preparations.

5. FIRE-FIGHTING MEASURES

- Suitable extinguishing media.
- Extinguishing media which shall not be used for safety reasons.
- Special exposure hazards arising from the substance or preparation itself, combustion products, resulting gases.
- Special protective equipment for fire-fighters.

6. ACCIDENTAL RELEASE MEASURES

- Personal precautions.
- Environmental precautions.
- Methods for cleaning up.
- Handlings to avoid.

1. DNEL: the level of exposure to the substance above which a human group should not be exposed.
2. PNEC: the concentration of the substance below which adverse effects in the environmental sphere of concern are not expected to occur.