EHSS Hazardous Chemical Guide

Hazardous laboratory chemicals are required to be barcoded and tracked using the chemical inventory software, BioRAFT.

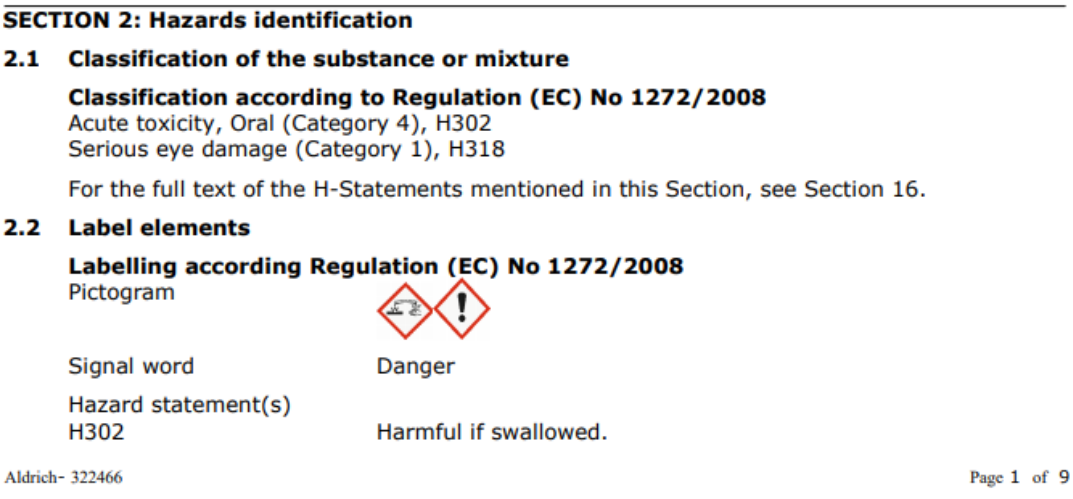
The most effective way to determine if a chemical is hazardous or non-hazardous is to review the chemical manufacturer's safety data sheet (SDS) and the chemical container label. A hazardous chemical will contain one or more GHS hazard pictogram(s) on the chemical container label and in the chemical manufacturer's SDS. **Please note**: If a product contains the environmental hazard pictogram **only**, it is considered a non-hazardous chemical.

The GHS hazard pictograms are referenced below (see Table 1) along with some examples. However, this is not an all-inclusive list.

For more information on non-hazardous chemicals and inventory exempt chemicals, please reference the EHSS Inventory Exempt Chemical Guide.

If assistance is needed, please contact EHSS 315.443.6883 or ehss@syr.edu.

When referring to the SDS, Section 2 (Hazards Identification) provides the hazard information associated with the chemical (see Figure 1). An example of a hazardous laboratory chemical will have hazards listed, GHS pictograms, as well as signal words such as "Warning" or "Danger".



SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008
Acute toxicity, Oral (Category 4), H302
Serious eye damage (Category 1), H318

For the full text of the H-Statements mentioned in this Section, see Section 16.

2.2 Label elements

Labelling according Regulation (EC) No 1272/2008
Pictogram

Signal word — Danger

Hazard statement(s)
H302 — Harmful if swallowed.

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Figure 1. Excerpt of Section 2 from an SDS.

Table 1. GHS Pictograms.

HEALTH HAZARD Carcinogens, respiratory sensitizers, reproductive toxicity, target organ toxicity, germ cell mutagens Examples: Benzene, Dichloromethane, Lead(II) chloride, 1,3-Butadiene, Copper(II) iodide, Methanol	
GAS CYLINDER Compressed gases, liquefied gases, dissolved gases Examples: Argon, Nitrogen, Ammonia, Propane, Carbon Dioxide	
FLAME OVER CIRCLE Oxidizers (gases, liquids, and solids) Examples: Perchloric acid, Ammonium persulfate, Hydrogen peroxide (30%), Potassium nitrate, Cobalt(II) perchlorate hexahydrate	
FLAME Flammable gases, liquids, and solids, self-reactives, pyrophorics Examples: Sodium dodecyl sulfate (SDS), Diethyl ether, Picric acid, Tetrahydrofuran (THF), Acetonitrile, Ethanol, Isopropyl alcohol	

CORROSION Skin corrosion, serious eye damage Examples: Sodium hydroxide, Potassium hydroxide, Hydrochloric acid, Sulfuric acid, Triton X-100, Iron(III) nitrate nonahydrate	
EXCLAMATION MARK Irritant, dermal sensitizer, acute toxicity (harmful) Examples: Ethylenediaminetetraacetic acid (EDTA), Sodium carbonate, Triphenylphosphine, Rhenium(III) chloride, Potassium phosphate tribasic, Tetrasodium pyrophosphate	
EXPLODING BOMB Explosives, self-reactives, organic peroxides Examples: Glyceryl trinitrate, Ammonium perchlorate	
SKULL & CROSSBONES Acute toxicity (severe) Examples: 2-Mercaptoethanol (BME), Cyclohexene, Phenol, Sodium azide, N,N,N',N'-Tetramethylethyldiamine (TEMED), Piperidine, Hydrofluoric acid	

For Reference only: Environmental Hazard Pictogram	
ENVIRONMENTAL HAZARD **Toxic to aquatic organisms** **Please note:** If a product contains the environmental hazard pictogram **only**, it is considered a non-hazardous chemical.