Material Safety Data Sheet

Issued on September 15th 2023

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product name:	Alkaline zinc-manganese dioxide batteries 49517 NiMH AA Premium Rechargeable Batteries HR6 49514 NiMH AAA Premium Rechargeable Batteries HR03
Brand:	Verbatim
Company Name:	Verbatim GmbH
Address:	Düsseldorfer Straße 13 65760 Eschborn, Germany
Emergency Contact:	+49 6196 9001-0

2. HAZARDS IDENTIFICATION GHS Classification:

· 2.1 Classification of the substance or mixture
· Classification according to Regulation (EC) No 1272/2008

GHS08 health hazard

Resp. Sens. 1	H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Muta. 2	H341	Suspected of causing genetic defects.
Carc. 1A	H350	May cause cancer.
Repr.1B	H360FD	May damage *fertility. May damage the unborn child.*

GHS09 environment

Aquatic Acute 1	H400	Very toxic to aquatic life.
Aquatic Chronic 1	H410	Very toxic to aquatic life with long lasting effects.

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GHS07

Acute Tox. 4	H302	Harmfull if swollowed
Skin Irrit. 2	H315	Causes skin irritation.
Eye Irrit. 2	H319	Causes Eye irritation.
Skin Sens. 1	H317	May cause an allergic reaction.

· **Information concerning particular hazards for human and environment:**
The product has to be labelled due to the calculation procedure of Regulation (EC) No.1272/2008.
·
Classification system:
The classification is according to the latest edition of EU Regulation (EC) No. 1272/2008, and extended by company and literature data.

· **2.2 Label elements**
· **Labelling according to Regulation (EC) No. 1272/2008**

The product is classified and labelled according to the CLP regulation.
· **Hazard pictograms**

GHS07 GHS08 GHS09

Signal word *Danger*

Hazard-determining components of labelling:
Nickel dihydroxide
Nickel
Cobalt
potassium hydroxide
·
Hazard statements
H302 Harmful if swallowed.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H317 May cause an allergic skin reaction.
H341 Suspected of causing genetic defects.
H350 May cause cancer.
H360FD May damage fertility. May damage the unborn child.
H372 Causes damage to the respiratory system through prolonged or repeated exposure. Route of exposure: Inhalation.
H410 Very toxic to aquatic life with long lasting effects.

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Precautionary statements
P101 If medical advice is needed, have product container or label at hand.
P102 Keep out of reach of children.
P103 Read label before use.
P260 Do not breathe dust/fume/gas/mist/vapours/spray.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P284 [In case of inadequate ventilation] wear respiratory protection.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P405 Store locked up.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· ***Additional information:***
Restricted to professional users.
·
2.3 Other hazards:
·
Results of PBT and vPvB assessment
· ***PBT:*** *Not applicable.*
· ***vPvB:*** *Not applicable.*

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3. COMPOSITION/IDENTIFICATION OF INGREDIENTS

3.2 Mixtures

· **Description:**

Mixture of the substances listed below with nonhazardous additions. For the wording of the listed hazard statements refer to section 16.

· **Composition:**		
CAS: 7440-02-0 EINECS: 231-111-4 Index number: 028-002-00-7	Nickel Carc. 2, H351; STOT RE 1, H372; Skin Sens. 1, H317	35.50%
CAS: 12054-48-7 EINECS: 235-008-5 Index number: 028-008-00-X	Nickel dihydroxide Resp. Sens. 1, H334; Muta. 2, H341; Carc. 1A, H350i; Repr. 1B, H360D; STOT RE 1, H372; Aquatic Acute 1, H400; Aquatic Chronic 1, H410; Acute Tox. 4, H302; Acute Tox. 4, H332; Skin Irrit. 2, H315; Skin Sens. 1, H317	28.50%
CAS: 7439-91-0 EINECS: 231-099-0	Lanthanum	12.50%
CAS: 7440-45-1 EINECS: 231-154-9	Cerium Flam. Sol. 1, H228	11.00%
CAS: 7440-48-4 EINECS: 231-158-0 Index number: 027-001-00-9	Cobalt Resp. Sens. 1, H334; Muta. 2, H341; Carc. 1B, H350; Repr. 1B, H360F; Skin Sens. 1, H317; Aquatic Chronic 4, H413	7.60%
CAS: 7439-96-5 EINECS: 231-105-1	Manganese substance with a Community workplace exposure limit	3.00%
CAS: 1310-58-3 EINECS: 215-181-3 Index number: 019-002-00-8	potassium hydroxide Skin Corr. 1A, H314; Acute Tox. 4, H302	1.00%
CAS: 1310-73-2 EINECS: 215-185-5 Index number: 011-002-00-6	sodium hydroxide Skin Corr. 1A, H314	0.50%
CAS: 1310-65-2 EINECS: 215-183-4	Lithium hydroxide Skin Corr. 1A, H314; Eye Dam. 1, H318; Acute Tox. 4, H302	0.30%
CAS: 7440-00-8 EINECS: 231-109-3	Neodymium	0.10%

4. FIRST AID MEASURES

4.1 Description of first aid measures

· **General description:**

Immediately remove any clothing soiled by the product. Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

.

After inhalation:

Supply fresh air and to be sure call for a doctor. In case of unconsciousness place patient stably in side position for transportation.

.

After skin contact: *Immediately wash with water and soap and rinse thoroughly.*

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After eye contact:
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
After swallowing: *Call for a doctor immediately.*

4.2 Most important symptoms and effects, both acute and delayed:
No further relevant information available.

4.3 Indication of any immediate medical attention and special treatment needed: *No further relevant information available.*

5. FIRE-FIGHTING MEASURES

5.1 Extinguishing media
· ***Suitable extinguishing agents:*** *Use fire extinguishing methods suitable to surrounding conditions.*

5.2 Special hazards arising from the substance or mixture:
During heating or in case of fire poisonous gases are produced.

5.3 Advice for firefighters
· ***Protective equipment:*** *Mouth respiratory protective device.*

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures:
Mount respiratory protective device.

6.2 Environmental precautions:
Do not allow product to reach sewage system or any water sourse. Inform respective authorities in case of seepage into water course or sewage system. Do not allow to enter sewers/ surface or ground water.

6.3 Methods and material for containment and cleaning up: *Dispose contaminated material as waste according to Point 13. Ensure adequate ventilation.*

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6.4 Reference to other sections:
See Point 7 for information on safe handling.
See Point 8 for information on personal protection equipment.
See Point 13 for disposal information.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling:
Ensure good ventilation/exhaustion at the workplace. Open and handle receptacle with care. For the general occupational hygienic measures refer to Point 8.

Information about fire - and explosion protection: *Keep respiratory protective device available.*

7.2 Conditions for safe storage, including any incompatibilities
Requirements to be met by storerooms and receptacles: *No special requirements.*
Information about storage in one common storage facility: *Not required.*
Further information about storage conditions: *Keep container tightly sealed.*

7.3 Specific end use(s): *No further relevant information available.*

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

· *Ingredients with limit values that require monitoring at the workplace:*	
7440-02-0 Nickel (35.50%)	
WEL (Great Britain)	*Long-term value: 0.5 mg/m³* *as Ni; Sk; Carc*

AGW (Germany)	Long-term value: 0.006A; 0.030E* mg/m³ 8(II);AGS, 24, Sh, Y, 10*, 31*
VLEP (France)	Long-term value: 1 mg/m³ C2
12054-48-7 Nickel dihydroxide (28.50%)	
WEL (Great Britain)	Long-term value: 0.5 mg/m³ as Ni; Sk; Carc
AGW (Germany)	Long-term value: 0.030E mg/m³ 8(II);AGS, Sh, Y, 10, 24, 31
TRGS 910 (Germany)	Short-term value: 0.006 (A) mg/m³ Long-term value: 0.006 (A) mg/m³ 8, Konzentrationen beziehen sich auf Ni-Gehalt
VLEP (France)	Long-term value: 1 mg/m³ C1A, M2, R1B
7440-48-4 Cobalt (7.60%)	
WEL (Great Britain)	Long-term value: 0.1 mg/m³ as Co; Carc, Sen
MAK (Germany)	einatembare Fraktion; vgl.Abschn.XIII
7439-96-5 Manganese (3.00%)	
IOELV (EU)	Long-term value: 0.2* 0.05** mg/m³ as Mn; *inhalable, **respirable fraction
WEL (Great Britain)	Long-term value: 0.2* 0.05** mg/m³ as Mn *inhalable fraction **respirable fraction
AGW (Germany)	Long-term value: 0.02A; 0.2E mg/m³ 8(II);DFG,Y,10, 20
VLEP (France)	Long-term value: 0.05* 0.20** mg/m³ *fraction alvéolaire **inhalable; en manganèse
1310-58-3 potassium hydroxide (1.00%)	
WEL (Great Britain)	Short-term value: 2 mg/m³
VLEP (France)	Short-term value: 2 mg/m³
1310-73-2 sodium hydroxide (0.50%)	
WEL (Great Britain)	Short-term value: 2 mg/m³
MAK (Germany)	vgl.Abschn.IIb
VLEP (France)	Long-term value: 2 mg/m³
1310-65-2 Lithium hydroxide (0.30%)	
WEL (Great Britain)	Short-term value: 1 mg/m³
MAK (Germany)	vgl. Abschn. IIb

Regulatory information
WEL (Great Britain): EH40/2020
AGW (Germany): TRGS 900
VLEP (France): ED 1487 12.2019
MAK (Germany): MAK- und BAT-Liste
IOELV (EU): (EU) 2019/1831
· ***DNELs:*** *Not available*
· ***PNECs:*** *Not available*

· **Ingredients with biological limit values:**	
7439-96-5 Manganese	
BGW (Germany)	20 µg/l Untersuchungsmaterial: Vollblut Probennahmezeitpunkt: bei Langzeitexposition: am Schichtende nach mehreren vorangegangenen Schichten, Expositionsende bzw. Schichtende Parameter: Mangan

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Additional information: *The lists valid during the making were used as basis.*

· ***8.2 Exposure controls***
Based on the composition shown in Section 3, the following measures are suggested for occupational safety measure.

· ***Appropriate engineering controls:***
Keep away from foodstuffs, beverages and feed. Immediately remove all soiled and contaminated clothing Wash hands before breaks and at the end of work. Store protective clothing separately. Avoid contact with the eyes and skin. See Section 7 for information about design of technical facilities.

· ***Personal protective equipment***
· ***Respiratory protection:***

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

· ***Protection of hands:***


Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.

· ***Material of gloves***
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· ***Penetration time of glove material:***
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· ***Eye protection:***


Tightly sealed goggles

· ***Environmental exposure controls:***
Control measures must be made in accordance with Community environmental protection legislation.

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9. PHYSICAL/CHEMICAL CHARACTERISTICS

· *9.1 Information on basic physical and chemical properties*	
· *Appearance*	
Form:	*Solid*
Colour:	*Silver-white*
· *Odour:*	*Odourless*
· *Odour threshold:*	*Not available*
· *pH-value:*	*Not available*
· *Change in condition*	
Melting point/Freezing point:	*Not available*
Initial boiling point and boiling range:	*Not available*
· *Flash point:*	*Not available*
· *Flammability (solid, gas):*	*Not available*
· *Auto-ignition temperature:*	*Not available*
· *Decomposition temperature:*	*Not available*
· *Self-igniting:*	*Not available*
· *Explosive properties:*	*Not available*
· *Explosion limits*	
Lower:	*Not available*
Upper:	*Not available*
· *Oxidising properties:*	*Not available*
· *Vapour pressure:*	*Not available*
· *Density:*	*Not available*
· *Relative density:*	*Not available*
· *Vapour density:*	*Not available*
· *Evaporation rate:*	*Not available*
· *Solubility in / Miscibility with water:*	*Not available*
· *Partition coefficient: n-octanol/water:*	*Not available*
· *Viscosity*	
Dynamic:	*Not available*
Kinematic:	*Not available*
· *9.2 Other information*	*No further relevant information available.*

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10. STABILITY AND REACTIVITY

10.1 Reactivity: *Data not available*
· ***10.2 Chemical stability:*** *Data not available*
· ***10.3 Possibility of hazardous reactions:*** *No dangerous reactions known.*
· ***10.4 Conditions to avoid:*** *No further relevant information available.*
· ***10.5 Incompatible materials:*** *No further relevant information available.*
· ***10.6 Hazardous decomposition products:*** *No dangerous decomposition products known.*

11. TOXICOLOGICAL INFORMATION

· ***11.1 Information on toxicological effects***
· ***Acute toxicity***
Harmful if swallowed.

· LD/LC50 values relevant for classification:		
7440-48-4 Cobalt		
Oral	LD50	6,170 mg/kg (rat)
7439-96-5 Manganese		
Oral	LD50	9,000 mg/kg (rat)

· ***Skin corrosion/irritation:***
Causes skin irritation.
· ***Serious eye damage/irritation:***
Causes serious eye irritation.
· ***Respiratory or skin sensitization:***
May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction.
· ***Germ cell mutagenicity***
Suspected of causing genetic defects.
· ***Carcinogenicity***
May cause cancer.
· ***Reproductive toxicity***
May damage fertility. May damage the unborn child.
· ***STOT-single exposure*** *Based on available data, the classification criteria are not met.*
· ***STOT-repeated exposure***
Causes damage to the respiratory system through prolonged or repeated exposure.
Route of exposure: Inhalation.
· ***Aspiration hazard*** *Based on available data, the classification criteria are not met.*

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12. ECOLOGICAL INFORMATION

12.1 Toxicity
· ***Aquatic toxicity:*** *No further relevant information available.*

· ***12.2 Persistence and degradability:*** *No further relevant information available.*

· ***12.3 Bioaccumulative potential:*** *No further relevant information available.*

· ***12.4 Mobility in soil:*** *No further relevant information available.*

· ***12.5 Results of PBT and vPvB assessment***
· ***PBT:*** *Not applicable.*
· ***vPvB:*** *Not applicable.*

· ***12.6 Other adverse effects*** *No further relevant information available.*

· ***12.7 Additional ecological information:***
· ***General notes:***
Water hazard class 3 (German Regulation) (Self-assessment): extremely hazardous for water Do not allow product to reach ground water, water course or sewage system, even in small quantities. Danger to drinking water if even extremely small quantities leak into the ground. Also poisonous for fish and plankton in water bodies. Very toxic for aquatic organisms

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13. DISPOSAL CONDITIONS

· ***13.1 Waste treatment methods***
· ***Recommendation:***
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
· ***Uncleaned packaging***
· ***Recommendation:*** *Disposal must be made according to official regulations.*
· ***Recommended cleansing agents:*** *Water, if necessary together with cleansing agents.*

Advice on disposal

In the European Union, manufacturing, handling and disposal of batteries is regulated on the basis of the DIRECTIVE 2013/56/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on batteries and accumulators and waste batteries and accumulators. Customers can find detailed information on disposal in their specific countries using the web site of the European Portable Batteries Association (http://www.epbaeurope.net/legislation national.html).

Contaminated packaging

Disposal in accordance with local regulations.

14. TRANSPORT INFORMATION

· *14.1 UN-Number*	
· *ADR/RID/ADN, IATA*	*Not applicable*
· *IMDG*	*UN3496*
· *14.2 UN proper shipping name*	
· *ADR/RID/ADN, IATA*	*Not applicable*
· *IMDG*	*Batteries, nickel-metal hydride, MARINE POLLUTANT*
· *14.3 Transport hazard class(es)*	
· *ADR/RID/ADN, IATA*	
· *Class*	*Not applicable*
· *Label*	*-*
· *IMDG*	
	
· *Class*	*9 Miscellaneous dangerous substances and articles.*
· *Label*	*9*
· *14.4 Packing group*	
· *ADR/RID/ADN, IMDG, IATA*	*Not applicable*
· *14.5 Environmental hazards*	
· *Marine pollutant:*	*Symbol (fish and tree)*
· *14.6 Special precautions for user:*	*Not applicable*
· *Hazard identification number (Kemler code):*	*-*
· *EMS Number:*	*F-A,S-I*
· *Stowage Category*	*A*
· *Stowage Code*	*SW1 Protected from sources of heat.*
· *14.7 Transport in bulk according to Annex II of Marpol and the IBC Code*	*Not applicable*
· *14.8 Transport/Additional information:*	
· *IMDG*	
· *Limited quantities (LQ)*	*0*
· *Excepted quantities (EQ)*	*Code: E0* *Not permitted as Excepted Quantity*

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15. REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

· MAK(German Maximum Workplace Concentration)		
7440-02-0	Nickel	1
12054-48-7	Nickel dihydroxide	1
7440-48-4	Cobalt	2

Directive 2012/18/EU
Named dangerous substances - ANNEX I *None of the ingredients is listed.*
Seveso category *E1 Hazardous to the Aquatic Environment*
Qualifying quantity (tonnes) for the application of lower-tier requirements *100 t*
Qualifying quantity (tonnes) for the application of upper-tier requirements *200 t*

· DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II
None of the ingredients is listed.

National regulations:
· ***Information about limitation of use:***
Workers are not allowed to be exposed to the hazardous carcinogenic materials contained in this preparation. Exceptions can be made by the authorities in certain cases.

· ***Waterhazard class:*** *Water hazard class 3 (Self-assessment): extremely hazardous for water.*

Other regulations, limitations and prohibitive regulations

· SVHC Candidate List of REACH Regulation Annex XIV Authorisation (8/7/2021)
None of the ingredients is listed
· REACH Regulation Annex XVII Restriction (25/1/2021) See Section 16 for information about restriction of use.
None of the ingredients is listed
· REACH Regulation Annex XIV Authorisation List (6/2/2020)
None of the ingredients is listed

· ***15.2 Chemical safety assessment:*** *A Chemical Safety Assessment has not been carried out.*

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16. Other Information

· ***Relevant hazard statements***

H228 Flammable solid.
H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H332 Harmful if inhaled.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H341 Suspected of causing genetic defects.
H350 May cause cancer. H350i May cause cancer by inhalation.
H351 Suspected of causing cancer.
H360D May damage the unborn child. H360F May damage fertility.
H372 Causes damage to the respiratory system through prolonged or repeated exposure. Route of exposure: Inhalation.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.

H413 May cause long lasting harmful effects to aquatic life.

· **Classification according to Regulation (EC) No. 1272/2008**	
Acute toxicity - oral Skin corrosion/irritation Serious eye damage/eye irritation Respiratory sensitisation Skin sensitisation Germ cell mutagenicity Carcinogenicity Reproductive toxicity Specific target organ toxicity (repeated exposure) Hazardous to the aquatic environment - short-term (acute) aquatic hazard Hazardous to the aquatic environment - long-term (chronic) aquatic hazard	The classification of the mixture is generally based on the calculation method using substance data according to Regulation (EC) No. 1272/2008.

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The contents and format of this SDS are in accordance with Regulation (EC) No 1907/2006, 1272/2008 and Regulation (EU) No 2015/830.

Disclaimer:

This safety data sheet (SDS) is issued based on the latest reference, data etc. currently available. The information in this SDS has been carefully assessed, but no guarantee is given for its accuracy. We cannot anticipate all conditions under which this product may be used. It is the user's responsibility to take appropriate safety measures for handling. Verbatim Limited cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available.

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
DNEL: Derived No-Effect Level (REACH) PNEC: Predicted No-Effect Concentration (REACH)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Flam. Sol. 1: Flammable solids – Category 1
Acute Tox. 4: Acute toxicity - oral – Category 4
Skin Corr. 1A: Skin corrosion/irritation – Category 1A
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Eye Dam. 1: Serious eye damage/eye irritation – Category 1
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
Resp. Sens. 1: Respiratory sensitisation – Category 1 Skin Sens. 1:
Skin sensitisation – Category 1
Muta. 2: Germ cell mutagenicity – Category 2
Carc. 1A: Carcinogenicity – Category 1A
Carc. 1A: Carcinogenicity – Category 1Ai Carc. 1B: Carcinogenicity – Category 1B
Carc. 2: Carcinogenicity – Category 2
Repr. 1B: Reproductive toxicity – Category 1B
Repr. 1B: Reproductive toxicity – Category 1B
Repr. 1B: Reproductive toxicity – Category 1B
STOT RE 1: Specific target organ toxicity (repeated exposure) – Category 1
Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1
Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1
Aquatic Chronic 4: Hazardous to the aquatic environment - long-term aquatic hazard – Category 4