



# Lithium Ion rechargeable Battery Module

## Safety Data Sheet

A safety data sheet is not required for this product under Article 31 of REACH. This Product Safety Information Sheet has been created on a voluntary basis  
Date of issue: 04/09/2024 Version: 1.2

### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1. Product identifier

Product form : Article  
Product name : Lithium Ion rechargeable Battery Module  
Product code : LIM50EN-6G6-C1, LIM50EN-7G6-C1, LIM50EN-8G4-C1, LIM50EN-12G4-C2, LIM50EN-12G4-C2-P1, LIM50EN-12S0-D1, LIM50EN-8S2-F2, LIM50EN-12S2-F2, LIM50EN-12S2-F2-P1, LIM50EN-12S2-F2-2, LIM50EN-12S2-F2-L, LIM50EN-13T1-J1, LIM50EN-14T1-J1, LIM50EL-8S2-F2, LIM50EL-8S3-F1, LIM50EL-12S2-F2, LIM50EL-12S2-F2-1, LIM50EL-12S2-F2-P1, LIM50EL-12S2-U2, LIM50EL-13T1-J1, LIM50EL-14T1-J1

#### 1.2. Relevant identified uses of the substance or mixture and uses advised against

##### 1.2.1. Relevant identified uses

Use of the substance/mixture : Renewable energy and microgrids  
Diesel generator hybrid systems  
UPS Systems  
Transportable energy storage  
Marine vessel propulsion  
Material handling and automated guided vehicles

##### 1.2.2. Uses advised against

Restrictions on use : Anything other than the above

#### 1.3. Details of the supplier of the safety data sheet

GS Yuasa Battery Europe Limited  
Unit 8, Ignition Park  
Swindon  
Wiltshire  
SN3 5FB

E-mail: info@gs-yuasa.uk  
Telephone: +44 (0) 1793 833555

#### 1.4. Emergency telephone number

Emergency number : United Kingdom  
GS Yuasa Battery Manufacturing (UK) Limited  
Responsible Person: Mike TAYLOR (Product Manager)  
Telephone: +44 (0)1495 354 000  
E-mail: manufacturing@gs-yuasa.uk  
Language: English  
Monday - Friday 8am – 4pm

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

##### Classification according to Regulation (EC) No. 1272/2008 [CLP]

Acute Tox. 2 (Inhalation:dust,mist) H330  
Carc. 1B H350  
STOT RE 1 H372  
Aquatic Chronic 4 H413  
Full text of hazard classes, H- and EUH-statements: see section 16

##### Adverse physicochemical, human health and environmental effects

No additional information available

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### 2.2. Label elements

#### Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP)



GHS06

GHS08

Signal word (CLP)

: Danger

Contains

: Lithium manganese oxide; Cobalt lithium manganese nickel oxide; Graphite; Organic electrolyte

Hazard statements (CLP)

: H330 - Fatal if inhaled.  
H350 - May cause cancer.  
H372 - Causes damage to organs through prolonged or repeated exposure.  
H413 - May cause long lasting harmful effects to aquatic life.

Precautionary statements (CLP)

: P201 - Obtain special instructions before use.  
P202 - Do not handle until all safety precautions have been read and understood.  
P270 - Do not eat, drink or smoke when using this product.  
P273 - Avoid release to the environment.  
P314 - Get medical advice/attention if you feel unwell.  
P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

### 2.3. Other hazards

Other hazards which do not result in classification : This product meets the definition of an "article" as defined in Regulation (EC) No. 1907/2006 (REACH), and is therefore out of scope of CLP. Risk of exposure only occurs if the battery cell is mechanically, thermally, or electrically abused and the enclosure is compromised. If this occurs, exposure to electrolyte solutions contained in the battery cell may occur by inhalation, eye contact, skin contact, or ingestion.

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII

This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

Contains no PBT and/or vPvB substances  $\geq 0.1\%$  assessed in accordance with REACH Annex XIII

The substance is not included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

Not applicable

### 3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Lithium manganese oxide	CAS-No.: 12057-17-9 EC-No.: 601-724-5	18 – 24	Acute Tox. 4 (Oral), H302 (ATE=500 mg/kg bodyweight) Acute Tox. 4 (Inhalation), H332 (ATE=1,5 mg/l/4h) Aquatic Chronic 4, H413
Cobalt lithium manganese nickel oxide	CAS-No.: 182442-95-1 EC-No.: 695-690-9	8 – 13	Acute Tox. 2 (Inhalation), H330 (ATE=0,05 mg/l/4h) Carc. 1B, H350 STOT RE 1, H372 Aquatic Chronic 3, H412

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Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Graphite	CAS-No.: 7782-42-5 EC-No.: 231-955-3	8 – 13	Not classified

Full text of H- and EUH-statements: see section 16

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

First-aid measures general	: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).
First-aid measures after inhalation	: If a battery ruptures, move to fresh air in case of accidental inhalation of mist. Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTRE or doctor/physician.
First-aid measures after skin contact	: If battery ruptures: Remove contaminated clothing immediately. Wash immediately with lots of water (15 minutes)/shower. Immediately call a POISON CENTRE or doctor/physician.
First-aid measures after eye contact	: If battery ruptures: Rinse immediately with plenty of water (for at least 15 minutes). Ensure that folded skin of eyelids is thoroughly washed with water. Remove contact lenses, if present and easy to do. Continue rinsing. Get immediate medical advice/attention.
First-aid measures after ingestion	: If battery ruptures: Rinse mouth. Do NOT induce vomiting. Give 100 - 200 ml of water to drink. Immediately call a POISON CENTRE or doctor/physician.

### 4.2. Most important symptoms and effects, both acute and delayed

Symptoms/effects after inhalation	: If a battery ruptures, may be harmful or fatal if inhaled in a confined area. Fatal if inhaled.
Symptoms/effects after ingestion	: Harmful if swallowed.
Chronic symptoms	: May cause cancer. Causes damage to organs through prolonged or repeated exposure.

### 4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

Suitable extinguishing media	: Plenty of water, carbon dioxide gas, nitrogen gas, chemical powder fire extinguishing medium, fire foam, HFC227ea (FM200).
Unsuitable extinguishing media	: None known.

### 5.2. Special hazards arising from the substance or mixture

Fire hazard	: Battery may rupture due to pressure buildup when exposed to excessive heat and may be result in the release of corrosive materials.
Hazardous decomposition products in case of fire	: Metal oxides. Carbon monoxide. Carbon dioxide. Lithium Oxide.

### 5.3. Advice for firefighters

Precautionary measures fire	: Remove all sources of ignition.
Firefighting instructions	: Exercise caution when fighting any chemical fire. Use water spray or fog for cooling exposed containers. Avoid fire-fighting water entering the environment. Extinguish a fire downwind as much as possible not to inhale the fumes produced from the battery.
Protection during firefighting	: Do not enter fire area without proper protective equipment, including respiratory protection.

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### SECTION 6: Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

##### 6.1.1. For non-emergency personnel

- Protective equipment : Use personal protective equipment as required.
- Emergency procedures : Ventilate area. Evacuate unnecessary personnel. Do not get in eyes, on skin, or on clothing. Do not breathe gas.

##### 6.1.2. For emergency responders

- Protective equipment : Wear self-contained breathing apparatus.
- Emergency procedures : Ventilate area. Do not get in eyes, on skin, or on clothing. Do not breathe dust. Do not breathe gas.

#### 6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if large amounts of the product enters sewers or public waters. Do not allow contact with water.

#### 6.3. Methods and material for containment and cleaning up

- For containment : Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.
- Methods for cleaning up : Small spills: collect all released material in a plastic lined metal container. Large spills: Take up liquid spill into absorbent material, e.g.: sand/earth. Dispose in a safe manner in accordance with local/national regulations.

#### 6.4. Reference to other sections

SECTION 8: Exposure controls/personal protection. SECTION 13: Disposal considerations.

### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

- Precautions for safe handling : Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe gas. Do not get in eyes, on skin, or on clothing. Do not disassemble the battery module. Do not make a hole or apply pressure. Do not heat or place near fire. Do not short-circuit the (+) and the (-) sides. Use only exclusive charger or keep on specified charging condition. Use only in well ventilated areas.
- Hygiene measures : Do not eat, drink or smoke when using this product. Handle in accordance with good industrial hygiene and safety practice. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Wash contaminated clothing before reuse.

#### 7.2. Conditions for safe storage, including any incompatibilities

- Technical measures : Take precautionary measures against static discharge. Provide local exhaust or general room ventilation. Prevent short circuit.
- Storage conditions : Store in a dry, cool and well-ventilated place. Store away from direct sunlight or other heat sources. Do not expose to temperatures exceeding 50 °C/ 122 °F. Do not disassemble, short circuit, puncture, incinerate, crush, or puncture the battery. Use only exclusive charger or keep on specified charging condition.
- Incompatible materials : Strong oxidising agents. Water. Strong acids. Conducting material. Sea water.

#### 7.3. Specific end use(s)

Use only for intended purpose in section 1.2.1.

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### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

##### 8.1.1 National occupational exposure and biological limit values

Lithium Ion rechargeable Battery Module	
<b>Ireland - Occupational Exposure Limits</b>	
Local name	Graphite (all forms except fibres)
OEL (8 hours ref) (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup> R (Respirable Fraction)
Regulatory reference	Chemical Agents Code of Practice 2021
<b>United Kingdom - Occupational Exposure Limits</b>	
Local name	Graphite
WEL TWA (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup> inhalable dust 4 mg/m <sup>3</sup> respirable
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE
<b>Graphite (7782-42-5)</b>	
<b>Ireland - Occupational Exposure Limits</b>	
Local name	Graphite (all forms except fibres)
OEL (8 hours ref) (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup> R (Respirable Fraction)
Regulatory reference	Chemical Agents Code of Practice 2021

##### 8.1.2. Recommended monitoring procedures

No additional information available

##### 8.1.3. Air contaminants formed

No additional information available

##### 8.1.4. DNEL and PNEC

No additional information available

##### 8.1.5. Control banding

No additional information available

#### 8.2. Exposure controls

##### 8.2.1. Appropriate engineering controls

###### Appropriate engineering controls:

No special protection is needed in normal use. Since the chemical is enclosed within the metal case and sealed up, the person cannot touch the chemical directly. However, there is the possibility of the liquid leakage, generation of heat, and the gas formation when not properly used. However, ventilate the area well if improper usage occurs and the battery leaks electrolyte and volatile gas is released.

##### 8.2.2. Personal protection equipment

###### Personal protective equipment:

Avoid all unnecessary exposure.

###### 8.2.2.1. Eye and face protection

###### Eye protection:

Wear goggles or safety glasses with side shields if contact with the eyes is possible. (EN 166)

###### 8.2.2.2. Skin protection

###### Skin and body protection:

Long-sleeved protective clothing

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### Hand protection:

Not required for normal conditions of use. Use neoprene or natural rubber gloves if handling an open or leaking battery. (EN 374). The exact breakthrough time has to be found out by the manufacturer of the protective gloves and has to be observed. Gloves should be removed and replaced if there are any signs of degradation or breakthrough.

### 8.2.2.3. Respiratory protection

#### Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment

### 8.2.2.4. Thermal hazards

#### Thermal hazard protection:

Not required for normal conditions of use.

### 8.2.3. Environmental exposure controls

#### Environmental exposure controls:

Avoid release to the environment. Do not allow to enter drains or water courses.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state	: Solid
Colour	: Not available
Appearance	: Electrolyte. Non-aqueous. Volatile.
Odour	: Not available
Odour threshold	: Not available
Melting point	: Not applicable
Freezing point	: Not available
Boiling point	: Not available
Flammability (solid, gas)	: Not available
Lower explosion limit	: Not applicable
Upper explosion limit	: Not applicable
Flash point	: 25 °C
Auto-ignition temperature	: 400 °C
Decomposition temperature	: Not available
pH	: Not available
pH solution	: Not available
Viscosity, kinematic	: Not applicable
Solubility	: Not applicable.
Log Kow	: Not available
Vapour pressure	: Not applicable
Vapour pressure at 50°C	: Not available
Density	: Not available
Relative density	: Not available
Relative vapour density at 20°C	: Not applicable
Particle size	: Not available

### 9.2. Other information

#### 9.2.1. Information with regard to physical hazard classes

No additional information available

#### 9.2.2. Other safety characteristics

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Stable under recommended handling and storage conditions (see section 7).

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### 10.2. Chemical stability

Stable under recommended handling and storage conditions (see section 7).

### 10.3. Possibility of hazardous reactions

Hazardous polymerisation will not occur.

### 10.4. Conditions to avoid

Overcharging. Avoid high temperatures. Remove all sources of ignition. If battery ruptures, avoid contact with organic materials and alkaline materials. Mechanical impacts. There is a possibility of the liquid leakage, generation of heat, and the gas formation when overheating is received from the outside. Do not short-circuit the (+) and the (-) sides.

### 10.5. Incompatible materials

Strong oxidising agents. Water. Strong acids. Conducting material. Sea water.

### 10.6. Hazardous decomposition products

Metal oxides. Carbon monoxide. Carbon dioxide. Lithium Oxide.

## SECTION 11: Toxicological information

### 11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity (oral) : Not classified  
Acute toxicity (dermal) : Not classified  
Acute toxicity (inhalation) : Inhalation:dust,mist: Fatal if inhaled.

#### Lithium Ion rechargeable Battery Module

ATE CLP (dust,mist)	0,362 mg/l/4h
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#### Graphite (7782-42-5)

LD50 oral, rat	> 2000 mg/kg bodyweight (OECD 423 method)
LC50 inhalation, rat (mg/l)	> 2000 mg/m <sup>3</sup> air - 4 Hours (OECD 403 method)

Skin corrosion/irritation : Not classified  
Serious eye damage/irritation : Not classified  
Respiratory or skin sensitisation : Not classified  
Germ cell mutagenicity : Not classified  
Carcinogenicity : Contains lithium manganese nickel oxide which is classified as a carcinogen.  
Reproductive toxicity : Not classified  
STOT-single exposure : Not classified  
STOT-repeated exposure : Causes damage to organs through prolonged or repeated exposure.

#### Cobalt lithium manganese nickel oxide (182442-95-1)

STOT-repeated exposure	Causes damage to organs through prolonged or repeated exposure.
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Aspiration hazard : Not classified

### 11.2. Information on other hazards

#### 11.2.1. Endocrine disrupting properties

Adverse health effects caused by endocrine disrupting properties : The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or substance(s) are not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %

#### 11.2.2. Other information

No additional information available

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### SECTION 12: Ecological information

#### 12.1. Toxicity

Hazardous to the aquatic environment, short-term (acute) : Not classified

Hazardous to the aquatic environment, long-term (chronic) : May cause long lasting harmful effects to aquatic life.

Graphite (7782-42-5)	
LC50 fish	> 100 mg/l - 96 Hours (OECD 203 method) (Danio rerio)
EC50 Daphnia	> 100 mg/l - 48 Hours (OECD 202 method) (Daphnia Magna)
EC50 72h - Algae [1]	> 100 mg/l - 72 Hours (OECD 201 method) (Raphidocelis subcapitata)

#### 12.2. Persistence and degradability

Lithium Ion rechargeable Battery Module	
Persistence and degradability	Not established.
Lithium manganese oxide (12057-17-9)	
Persistence and degradability	Not relevant for inorganic substances.
Cobalt lithium manganese nickel oxide (182442-95-1)	
Persistence and degradability	Not relevant for inorganic substances.
Graphite (7782-42-5)	
Persistence and degradability	Not relevant for inorganic substances.

#### 12.3. Bioaccumulative potential

No additional information available

#### 12.4. Mobility in soil

No additional information available

#### 12.5. Results of PBT and vPvB assessment

Lithium Ion rechargeable Battery Module	
This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII	
This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII	

#### 12.6. Endocrine disrupting properties

Adverse effects on the environment caused by endocrine disrupting properties : The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605, at a concentration equal to or greater than 0,1 % by weight.

#### 12.7. Other adverse effects

No additional information available



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### SECTION 13: Disposal considerations

#### 13.1. Waste treatment methods

Waste disposal recommendations	: Dispose in a safe manner in accordance with local/national regulations.
Ecology - waste materials	: Avoid release to the environment. Dispose in a safe manner in accordance with local/national regulations.
European List of Waste (LoW, EC 2000/532)	: 16 06 05 - other batteries and accumulators

### SECTION 14: Transport information

In accordance with ADR / IMDG / IATA

#### 14.1. UN number or ID number

UN-No. (ADR)	: UN 3480
UN-No. (IMDG)	: UN 3480
UN-No. (IATA)	: UN 3480

#### 14.2. UN proper shipping name

Proper Shipping Name	: LITHIUM ION BATTERIES
Proper Shipping Name (IMDG)	: LITHIUM ION BATTERIES
Proper Shipping Name (IATA)	: Lithium ion batteries
Transport document description (ADR)	: UN 3480 LITHIUM ION BATTERIES, 9, (E)
Transport document description (IMDG)	: UN 3480 LITHIUM ION BATTERIES, 9
Transport document description (IATA)	: UN 3480 Lithium ion batteries, 9

#### 14.3. Transport hazard class(es)

##### ADR

Transport hazard class(es) (ADR)	: 9
Hazard labels	: 9A



##### IMDG

Transport hazard class(es) (IMDG)	: 9
Danger labels (IMDG)	: 9



##### IATA

Transport hazard class(es) (IATA)	: 9
Danger labels (IATA)	: 9A



#### 14.4. Packing group

Packing group	: Not applicable
Packing group (IMDG)	: Not applicable
Packing group (IATA)	: Not applicable

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### 14.5. Environmental hazards

Dangerous for the environment : No  
Marine pollutant : No  
Other information : No supplementary information available

### 14.6. Special precautions for user

#### Overland transport

Tunnel restriction code (ADR) : E  
EAC code : 2Y

#### Transport by sea

No data available

#### Air transport

No data available

### 14.7. Maritime transport in bulk according to IMO instruments

Not applicable

## SECTION 15: Regulatory information

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

#### 15.1.1. EU-Regulations

##### REACH Annex XVII (Restriction List)

Not applicable.

##### REACH Annex XIV (Authorisation List)

Contains no substance(s) listed on REACH Annex XIV (Authorisation List)

##### REACH Candidate List (SVHC)

Contains no substance(s) listed on the REACH Candidate List

##### PIC Regulation (Prior Informed Consent)

Contains no substance(s) listed on the PIC list (Regulation EU 649/2012 concerning the export and import of hazardous chemicals)

##### POP Regulation (Persistent Organic Pollutants)

Contains no substance(s) listed on the POP list (Regulation EU 2019/1021 on persistent organic pollutants)

##### Ozone Regulation (1005/2009)

Contains no substance(s) listed on the Ozone Depletion list (Regulation EU 1005/2009 on substances that deplete the ozone layer)

##### Dual-Use Regulation (428/2009)

Contains substance(s) listed on the COUNCIL REGULATION (EC) No 428/2009 of 5 May 2009 setting up a Community regime for the control of exports, transfer, brokering and transit of dual-use items: Graphite (7782-42-5)

##### Explosives Precursors Regulation (2019/1148)

Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

##### Drug Precursors Regulation (273/2004)

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

#### 15.1.2. National regulations

No additional information available

### 15.2. Chemical safety assessment

A chemical safety assessment has not been carried out by the registrant

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### SECTION 16: Other information

Abbreviations and acronyms:	
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
CAS-No.	Chemical Abstract Service number
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
BLV	Biological limit value
CLP	Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC-No.	European Community number
EC50	Median effective concentration
ED	Endocrine disrupting properties
EN	European Standard
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
IOELV	Indicative Occupational Exposure Limit Value
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
OECD	Organisation for Economic Co-operation and Development
OEL	Occupational Exposure Limit
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet
STP	Sewage treatment plant
WGK	Water Hazard Class
vPvB	Very Persistent and Very Bioaccumulative

Data sources

: REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.

Other information

: Physical hazards: On basis of test data. Health hazards: On basis of test data & Calculation method. Environmental hazards: On basis of test data & Calculation method.

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Full text of H- and EUH-statements:	
Acute Tox. 2 (Inhalation)	Acute toxicity (inhal.), Category 2
Acute Tox. 2 (Inhalation:dust,mist)	Acute toxicity (inhalation:dust,mist) Category 2
Acute Tox. 4 (Inhalation)	Acute toxicity (inhal.), Category 4
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Aquatic Chronic 3	Hazardous to the aquatic environment – Chronic Hazard, Category 3
Aquatic Chronic 4	Hazardous to the aquatic environment – Chronic Hazard, Category 4
Carc. 1B	Carcinogenicity, Category 1B
H302	Harmful if swallowed.
H330	Fatal if inhaled.
H332	Harmful if inhaled.
H350	May cause cancer.
H372	Causes damage to organs through prolonged or repeated exposure.
H412	Harmful to aquatic life with long lasting effects.
H413	May cause long lasting harmful effects to aquatic life.
STOT RE 1	Specific target organ toxicity – Repeated exposure, Category 1

### Safety Data Sheet (SDS), EU

The information given above is provided in good faith based on existing knowledge and does not constitute an assurance of safety under all conditions. It is the user's responsibility to observe all laws and regulations applicable for storage, use, maintenance or disposal of the product. If there are any queries, the supplier should be consulted. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.