



Sirius Lifebuoy Light

Revision no. 3
Revision date 11/29/2023
Printed on 11/29/2023
Page no. 1/14
Replaces revision:2 (Revision date: 09/29/2016)

Safety data Sheet

SECTION 1. Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Name **Sirius**

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

Description/Use **floating buoy with LED light for lifebuoy for night-time safety signal.**

Identified Uses	Industrial	Professional	Consumption
Floating buoy with LED light for lifebuoy for night-time safety signaling.		✓	✓

1.3. Information about the supplier of the safety data sheet

Company Name
Address
City and State

ALBATROSS Srl
Viale A. Gramsci, 13
80122 Naples (NA),
Italy

Tel.: +39.081.826.5444

Opening hours to the public: 8.30am – 1.00pm; 2.00pm – 5.30pm

e-mail of the competent person,

responsible for the safety data sheet

info@albatrossrl.com

1.4. Emergency telephone number

For urgent information please contact

Tel.: +39.081.826.5444

Opening hours to the public: 8.30am – 1.00pm; 2.00pm – 5.30pm

SECTION 2. Hazard Identification

2.1. Substance or mixture classification

The product is defined as an "article" as required by Reg. (EC) 1907/2006 "REACH" and Reg. (EC) 1272/2008 "CLP" and consequently is not subject to CLP classification.

Hazard classification and indications: --

2.2. Label elements

Hazard pictograms: --

Warnings: --

Hazard Statements: --

Precautionary advice: --

2.3. Other dangers



Sirius Lifebuoy Light

Revision no. 3
Revision date 11/29/2023
Printed on 11/29/2023
Page no. 2/14
Replaces revision:2 (Revision date: 09/29/2016)

Based on available data, the product does not contain PBT or vPvB substances in percentages $\geq 0.1\%$.

The product does not contain substances with properties that interfere with the endocrine system in concentrations $\geq 0.1\%$.

The product described by this Safety Data Sheet is composed of an LED light powered by a Li-MnO₂ battery. The device consists of one unit sealed in high density polyethylene containing the internal elements completely protected by expanded polyurethane with automatic activation on contact with water. The upper shell is made of polycarbonate.

The device is only activated exclusively in contact with water. Under normal storage and transport conditions, unintentional activation of the device is not possible.

The device is not dangerous if used under normal conditions, in accordance with the manufacturer's instructions, and if in its intact state. Possible dangers that may arise from incorrect use of the contained lithium battery are: fire, overheating and development of toxic fumes.

SECTION 3. Composition/information on ingredients

3.1. Substances

Information not relevant

3.2. Mixtures

The complete text of the hazard indications (H) is shown in section 16 of the sheet.

The product is defined as an "article" as required by Reg. (EC) 1907/2006 "REACH" and Reg. (EC) 1272/2008 "CLP".

Each device is composed of a floating buoy with LED rescue light for a lifebuoy in which a lithium metal battery (Li-MnO₂ battery) is installed, enclosed by a high density polyethylene casing and completely protected by expanded polyurethane.

Contains:

Identification

x = Conc. % Classification 1272/2008 (CLP)

Manganese dioxide

INDEX - 40 \leq x < 42.5 Acute Tox. 4 H302, Acute Tox. 4 H332
 CE 215-202-6 STA Oral: 500 mg/kg, STA Inhalation mists/dusts: 1.5 mg/l
 CAS 1313-13-9

Propylene carbonate

INDEX 607-194-00-1 4 \leq x < 4.5 Eye Irrit. 2 H319
 CE 203-572-1
 CAS 108-32-7

REACH Reg. 01-2119537232-48-XXXX

1,2-dimethoxyethane

INDEX 603-031-00-3 4 \leq x < 4.5 Flam. Liq. 2 H225, Repr. 1B H360FD, Acute Tox. 4 H332, Skin Irrit. 2 H315
 CE 203-794-9 STA Inhalation of mists/dusts: 1.5 mg/l
 CAS 110-71-4

Lithium

INDEX - 2 \leq x < 2.5 Water-react. 1 H260, Skin Corr. 1B H314, Eye Dam. 1 H318
 CE 231-102-5
 CAS 7439-93-2

Lithium perchlorate

INDEX - 1 \leq x < 1.5 Ox. Sol. 2 H272, Eye Irrit. 2 H319, Skin Irrit. 2 H315, STOT SE 3 H335
 CE 232-237-2



Sirius Lifebuoy Light

Revision no. 3
Revision date 11/29/2023
Printed on 11/29/2023
Page no. 3/14
Replaces revision:2 (Revision date: 09/29/2016)

CAS 7791-03-9

Carbon

INDEX - 1 ÿ x < 1.5

CE 931-328-0

CAS 7440-44-0

REACH Reg. 01-2119488894-16-XXXX

SECTION 4. First aid measures

4.1. Description of first aid measures

EYES: Remove any contact lenses. Wash immediately and abundantly with water for at least 30/60 minutes, opening the eyelids wide. Consult a doctor immediately.

SKIN: Take off contaminated clothing. Shower immediately. Consult a doctor immediately.

INGESTION: Drink as much water as possible. Consult a doctor immediately. Do not induce vomiting unless specifically authorized by your doctor.

INHALATION: Call a doctor immediately. Move the person to fresh air, away from the scene of the accident. If breathing stops, give artificial respiration. Adopt adequate precautions for the rescuer.

4.2. Main symptoms and effects, both acute and delayed

Inhalation: in case of inhalation of the organic electrolyte contained in the battery, risk of irritation to the respiratory tract and mucous membranes.

Contact with skin: in case of contact with the organic electrolyte contained in the battery, risk of skin irritation.

Contact with eyes: in case of contact with the organic electrolyte contained in the battery, risk of eye irritation.

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

If symptoms appear in the patient, contact a doctor urgently

SECTION 5. Fire fighting measures

5.1. Fire fighting

SUITABLE EXTINGUISHING MEANS

The extinguishing media are: carbon dioxide and chemical powder. For product leaks and spills that have not ignited, water spray can be used to disperse flammable vapors and protect those trying to stop the leak.

UNSUITABLE EXTINGUISHING MEANS

Do not use water jets.

Water is not effective in extinguishing fires however it can be used to cool closed containers exposed to flames preventing explosions.

5.2. Special hazards arising from the substance or mixture

DANGERS DUE TO EXPOSURE IN THE EVENT OF FIRE

The product, if involved in a large quantity in a fire, can significantly aggravate it. Avoid breathing combustion products.

5.3. Recommendations for fire fighters

GENERAL INFORMATION

In the event of fire, cool the containers immediately to avoid the risk of explosions (decomposition of the product, overpressures) and the development of substances potentially dangerous to health. Always wear full fire protection equipment. If possible without risk, remove the containers containing the product from the fire.

EQUIPMENT

Normal fire-fighting clothing, such as open circuit compressed air breathing apparatus (EN 137), flame retardant suit (EN469), gloves



Sirius Lifebuoy Light

Revision no. 3
Revision date 11/29/2023
Printed on 11/29/2023
Page no. 4/14
Replaces revision:2 (Revision date: 09/29/2016)

flame retardant (EN 659) and boots for firefighters (HO A29 or A30).

SECTION 6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Avoid dust formation by spraying the product with water if there are no contraindications.

Wear appropriate protective equipment (including personal protective equipment referred to in section 8 of the safety data sheet) to prevent contamination of skin, eyes and personal clothing. These indications are valid both for workers and for emergency interventions.

6.2. Environmental precautions

Prevent the product from entering sewers, surface waters and groundwater.

6.3. Methods and materials for containment and cleanup

Collect the spilled product and place it in containers for recovery or disposal. Remove the residue with jets of water if there are no contraindications.

Provide sufficient ventilation of the area affected by the leak. Evaluate the compatibility of the container to be used with the product, checking section 10. Disposal of contaminated material must be carried out in accordance with the provisions of point 13.

6.4. Reference to other sections

Any information regarding personal protection and disposal is reported in sections 8 and 13.

SECTION 7. Handling and storage

7.1. Precautions for Safe Handling

Avoid contact with eyes and skin. Do not inhale any dust, vapor or mists. Avoid dispersing the product into the environment. Operate in adequately ventilated areas. Avoid flames and sparks. Do not eat, drink or smoke during use. Remove contaminated clothing and protective equipment before entering eating areas.

7.2. Conditions for safe storage, including any incompatibilities

Store only in the original container. Keep product in clearly labeled containers. Keep containers tightly closed.

Absolutely avoid contact with water or anything that can absorb moisture. Avoid violent impacts. Avoid overheating. Store in a ventilated place, away from sources of ignition. Store containers away from any incompatible materials, checking section 10.

7.3. Specific end uses

Information not available

SECTION 8. Exposure controls/personal protection

8.1. Control parameters

Normative requirements:

DEU Deutschland

Technischen Regeln für Gefahrstoffe (TRGS 900) - Liste der Arbeitsplatzgrenzwerte und Kurzzeitwerte. MAK- und BAT-Werte-Liste 2020, Ständige Senatskommission zur Prüfung gesundheitsschädlicher Arbeitsstoffe, Mitteilung 56



Sirius Lifebuoy Light

Revision no. 3
 Revision date 11/29/2023
 Printed on 11/29/2023
 Page no. 5/14
 Replaces revision:2 (Revision date:
 09/29/2016)

LTU Lietuva

Jsakymas dyl lietuvas higienos normos hn 23:2011 „cheminiy medziagy profesinio poveikio ribiniai dydziai.
 Matavimo ir poveikio vertinimo bendrieji reikalavimai“
 patvirtinimo

Propylene carbonate Threshold limit value

Guy	State	TWA/8h		STEL/15min		Note / Observations
		mg/m3	ppm	mg/m3	ppm	
AGW	DEU	8.5	2	8.5 (C)	2 (C)	INHALAB
MAK	DEU	8.5	2	8.5 (C)	2 (C)	INHALAB
RD	LTU	7				
Predicted no-effect concentration on the environment - PNEC						
Reference value in fresh water				0.9	mg/l	
Reference value in sea water				0.09	mg/l	
Reference value for sea water, intermittent release				9	mg/l	
Reference value for fresh water, intermittent release				0.9	mg/l	
Reference value for STP microorganisms				7400	mg/l	
Reference value for the terrestrial compartment				0.81	mg/kg/d	

Health - Derived no effect level - DNEL / DMEL

Exhibition Street	Effects on consumers			Effects on workers				
	Acute rooms	Acute systemic	Chronic premises	Chronic systemic	Acute rooms	Acute systemic	Chronic local	Chronic systemic
Oral		NPI		10 mg/kg bw/d				
Inhalation	NPI	NPI	10 mg/m3	17.4 mg/m3 NPI 10 mg/		NPI	20 mg/m3	70.53 mg/m3
Dermal	NPI	NPI	NPI	kg bw/d	NPI	NPI	10 mg/kg bw/d	20 mg/kg bw/d

Carbon

Predicted no-effect concentration on the environment - PNEC								
Reference value for the terrestrial compartment				10	mg/kg			
Health - Derived no effect level - DNEL / DMEL								
Exhibition Street	Effects on consumers			Effects on workers				
	Acute rooms	Acute systemic	Chronic premises	Chronic systemic	Acute rooms	Acute systemic	Chronic local	Chronic systemic
Inhalation			0.9 mg/m3				1.84 mg/m3	

Legend:

(C) = CEILING ; INALAB = Inhalable Fraction; RESPIR = Respirable Fraction; TORAC = Thoracic Fraction.

VND = hazard identified but no DNEL/PNEC available; NEA = no expected exposure; NPI = no hazard identified; LOW = low danger; MED = medium danger; HIGH = high danger.

8.2. Exposure controls

Considering that the use of adequate technical measures should always take priority over personal protective equipment, ensure good ventilation in the workplace through effective local extraction.

HAND PROTECTION

If prolonged contact with the product is expected, it is recommended to protect your hands with penetration-resistant work gloves (ref. standard EN 374).



Sirius Lifebuoy Light

Revision no. 3
Revision date 11/29/2023
Printed on 11/29/2023
Page no. 6/14
Replaces revision:2 (Revision date: 09/29/2016)

For the final choice of work glove material, the process of using the product and any additional products resulting from it must also be evaluated. Please also remember that latex gloves can give rise to sensitization phenomena.

SKIN PROTECTION

Wear work clothes with long sleeves and safety footwear for professional category I use (ref. Regulation 2016/425 and standard EN ISO 20344). Wash with soap and water after removing protective clothing.

EYE PROTECTION

We recommend wearing airtight protective glasses (ref. standard EN 166).

RESPIRATORY PROTECTION

Not necessary, unless otherwise indicated in the chemical risk assessment.

ENVIRONMENTAL EXPOSURE CONTROLS

Emissions from production processes, including those from ventilation equipment, should be controlled for compliance with environmental protection legislation.

SECTION 9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Property	Solid value	Information
Physical State		
Color	orange	
Odor	odorless	
Melting or freezing point	not available	
Initial boiling point	Not applicable	
Flammability	not available	
Lower explosive limit	not available	
Upper explosive limit	not available	
Flash point	Not applicable	
Auto-ignition temperature	not available	
Decomposition temperature	not available	
pH	not available	
Kinematic viscosity	not available	
Solubility	not available	
Partition coefficient: n-octanol/water	not available	
Vapor pressure	not available	
Density and/or Relative density	not available	
Relative vapor density	not available	
Characteristics of the particles	not available	

9.2. More information

9.2.1. Information regarding physical hazard classes

Information not available

9.2.2. Other safety features



Sirius Lifebuoy Light

Revision no. 3
Revision date 11/29/2023 Printed
on 11/29/2023 Page n. 7/14
Replaces revision:2
(Revision date: 09/29/2016)

Information not available

SECTION 10. Stability and reactivity

10.1. Reactivity

Information not available

10.2. Chemical stability

Information not available

10.3. Possibility of dangerous reactions

The product may react violently with water.

10.4. Conditions to avoid

Avoid overheating. Prevent moisture or water from entering the containers.

10.5. Incompatible materials

Information not available

10.6. Hazardous decomposition products

Information not available

SECTION 11. Toxicological information

In the absence of experimental toxicological data on the product itself, any health hazards of the product were assessed based on the properties of the substances contained, according to the criteria established by the reference legislation for classification. Therefore, consider the concentration of the individual dangerous substances possibly mentioned in section. 3, to evaluate the toxicological effects resulting from exposure to the product.

11.1. Information on the hazard classes defined in Regulation (EC) no. 1272/2008

Metabolism, kinetics, mechanism of action and other information

Information not available

Information on likely routes of exposure

Information not available



Sirius Lifebuoy Light

Revision no. 3
Revision date 11/29/2023
Printed on 11/29/2023
Page no. 8/14
Replaces revision:2 (Revision date: 09/29/2016)

Immediate, delayed and chronic effects resulting from short- and long-term exposures

Information not available

Interactive effects

Information not available

ACUTE TOXICITY

ATE (Inhalation - mists / dusts) of the mixture:	3.2 mg/l
ATE (Oral) of the mixture:	1176.47 mg/kg
ATE (Dermal) of the mixture:	Not classified (no relevant component)

Manganese dioxide

STA (Oral):	500 mg/kg estimated from table 3.1.2 of Annex I of CLP (data used to calculate the estimate of the acute toxicity of the mixture)
STA (Inhalation of mists/dusts):	1.5 mg/l estimated from table 3.1.2 of Annex I of CLP (data used to calculate the estimate of the acute toxicity of the mixture)

1,2-dimethoxyethane

STA (Inhalation of mists/dusts):	1.5 mg/l estimated from table 3.1.2 of Annex I of CLP (data used to calculate the estimate of the acute toxicity of the mixture)
----------------------------------	---

Propylene carbonate

LD50 (Dermal):	2000 mg/kg rabbit
LD50 (Oral):	5000 mg/kg rat

Carbon

LD50 (Oral):	2000 mg/kg
--------------	------------

SKIN CORROSION / SKIN IRRITATION

It does not meet the classification criteria for this hazard class

SERIOUS EYE DAMAGE / EYE IRRITATION

It does not meet the classification criteria for this hazard class



Sirius Lifebuoy Light

Revision no. 3
Revision date 11/29/2023 Printed
on 11/29/2023 Page n. 9/14
Replaces revision:2
(Revision date: 09/29/2016)

RESPIRATORY OR SKIN SENSITIZATION

It does not meet the classification criteria for this hazard class

MUTAGENICITY ON GERM CELLS

It does not meet the classification criteria for this hazard class

CARCINOGENICITY

It does not meet the classification criteria for this hazard class

REPRODUCTION TOXICITY

It does not meet the classification criteria for this hazard class

SPECIFIC TARGET ORGAN TOXICITY (STOT) - SINGLE EXPOSURE

It does not meet the classification criteria for this hazard class

SPECIFIC TARGET ORGAN TOXICITY (STOT) - REPEATED EXPOSURE

It does not meet the classification criteria for this hazard class

DANGER IN CASE OF ASPIRATION

It does not meet the classification criteria for this hazard class

11.2. Information about other hazards

Based on available data, the product does not contain substances listed in the main European lists of potential or suspected endocrine disruptors with effects on human health being evaluated.

SECTION 12. Ecological information



Sirius Lifebuoy Light

Revision no. 3
Revision date 11/29/2023 Printed
on 11/29/2023 Page n. 10/14
Replaces revision:2
(Revision date: 09/29/2016)

Use according to good working practices, avoiding dispersing the product into the environment. Notify the competent authorities if the product has reached watercourses or if it has contaminated the soil or vegetation.

12.1. Toxicity

Propylene carbonate	
LC50 - Pisces	1000 mg/l/96h
EC50 - Crustaceans	1000 mg/l/48h
EC50 - Algae / Aquatic Plants	900 mg/l/72h
Chronic NOEC Algae / Aquatic Plants	900 mg/l 72h

12.2. Persistence and degradability

Propylene carbonate

Rapidly degradable 12.3.

Bioaccumulative potential

Information not available

12.4. Mobility in soil

Information not available

12.5. Results of PBT and vPvB assessment

Based on available data, the product does not contain PBT or vPvB substances in percentages \geq 0.1%.

12.6. Endocrine disrupting properties

Based on available data, the product does not contain substances listed in the main European lists of potential or suspected endocrine disruptors with effects on the environment being evaluated.

12.7. Other adverse effects

Information not available

SECTION 13. Disposal Considerations

13.1. Waste treatment methods

Reuse if possible. Residues of the product as such are to be considered non-hazardous special waste. Disposal must be entrusted to a company authorized to manage waste, in compliance with national and possibly local regulations. For solid waste, consider the possibility of disposal in an authorized landfill. Transport of waste may be subject to ADR. CONTAMINATED PACKAGING Contaminated packaging must be sent for recovery or disposal in compliance with national waste management regulations.

SECTION 14. Transportation Information

14.1. UN number or ID number



Sirius Lifebuoy Light

Revision no. 3
Revision date 11/29/2023
Printed on 11/29/2023
Page no. 11/14
Replaces revision:2 (Revision date: 09/29/2016)

ADR/RID, IMDG, IATA: 3091

14.2. Official UN shipping name

ADR / RID: LITHIUM METAL BATTERIES CONTAINED IN A DEVICE or LITHIUM METALLIC BATTERIES PACKED WITH A DEVICE
 IMDG: LITHIUM METAL BATTERIES CONTAINED IN EQUIPMENT or LITHIUM METAL BATTERIES PACKED WITH EQUIPMENT
 IATA: LITHIUM METAL BATTERIES CONTAINED IN EQUIPMENT or LITHIUM METAL BATTERIES PACKED WITH EQUIPMENT

14.3. Transport hazard classes

ADR / RID: Class: 9 Label: 9A
 IMDG: Class: 9 Label: 9A
 IATA: Class: 9 Label: 9A



14.4. Packing group

ADR/RID, IMDG, IATA: -

14.5. Dangers for the environment

ADR / RID: NO
 IMDG: NO
 IATA: NO

14.6. Special precautions for users

ADR / RID:	HIN - Kemler: --	Amount Limited: -	Tunnel restriction code: (E)
IMDG:	Special Arrangement: 188, 230, 310, 360, 376, 377, 387, 390, 670 EMS: FA, YES	Amount Limited: -	
IATA:	Cargo:	Maximum quantity: 35 Kg	Instructions Packaging: 970
	Passengers:	Maximum quantity: 5 Kg	Instructions Packaging: 970
	Special Provision:	A48, A88, A99, A154, A164, A181, A185, A213, A220	

14.7. Maritime transport in bulk in accordance with IMO acts



Sirius Lifebuoy Light

Revision no. 3
Revision date 11/29/2023 Printed
on 11/29/2023 Page no. 12/14
Replaces revision:2
(Revision date: 09/29/2016)

Information not relevant

SECTION 15. Regulatory information

15.1. Health, safety and environmental laws and regulations specific for the substance or mixture

Seveso Category - Directive 2012/18/EU: None

Restrictions relating to the product or substances contained according to Annex XVII Regulation (EC) 1907/2006

Product

Point 40

Substances contained

Point 75

Point 30 1,2-dimethoxyethane

Regulation (EU) 2019/1148 - relating to the placing on the market and use of explosives precursors

Not applicable

Substances in Candidate List (Art. 59 REACH)

1,2-dimethoxyethane

Substances subject to authorization (Annex XIV REACH)

None

Substances subject to export notification requirements Regulation (EU) 649/2012

None

Substances subject to the Rotterdam Convention:

None

Substances subject to the Stockholm Convention:

None

Sanitary checks

Information not available

Water pollution classification in Germany (AwSV, vom 18. April 2017)

WGK 1: Not very dangerous for water



Sirius Lifebuoy Light

Revision no. 3
Revision date 11/29/2023
Printed on 11/29/2023
Page no. 13/14
Replaces revision:2 (Revision date: 09/29/2016)

15.2. Chemical safety assessment

A chemical safety assessment has not been developed for the mixture / substances indicated in section 3.

SECTION 16. Other information

Text of the hazard statements (H) mentioned in sections 2-3 of the sheet:

Flam. Liq. 2	Flammable liquid, category 2
Water-react. 1	Substance or mixture which, in contact with water, releases flammable gas, category 1
Ox. Sol. 2	Oxidising solid, category 2
Repr. 1B	Reproductive toxicity, category 1B
Acute Tox. 4	Acute toxicity, category 4
Skin Corr. 1B	Skin corrosion, category 1B
Eye Irrit. 2	Eye irritation, category 2
Skin Irrit. 2	Skin irritation, category 2
STOT IF 3	Specific target organ toxicity - single exposure, category 3
H225	Highly flammable liquid and vapour.
H260	Contact with water releases flammable gases which can ignite spontaneously.
H272	Can aggravate a fire; oxidizer.
H360FD	It can harm fertility. May harm the fetus.
H302	Harmful if ingested.
H332	Harmful if inhaled.
H314	It causes serious skin burns and serious eye injuries.
H319	Causes serious eye irritation.
H315	Causes skin irritation.
H335	May irritate the respiratory tract.

LEGEND:

- ADR: European Agreement for the transport of dangerous goods by road
- CAS: Chemical Abstract Service Number
- CE: Identification number in ESIS (European archive of existing substances)
- CLP: Regulation (EC) 1272/2008
- DNEL: Derived no-effect level
- EC50: Concentration that gives effect to 50% of the population subject to testing
- EmS: Emergency Schedule
- GHS: Globally Harmonized System for the Classification and Labeling of Chemical Products
- IATA DGR: Regulations for the transport of dangerous goods of the International Air Transport Association
- IC50: Immobilization concentration of 50% of the population subject to testing
- IMDG: International Maritime Code for the Transport of Dangerous Goods
- IMO: International Maritime Organization
- INDEX: Identification number in Annex VI of CLP
- LC50: Lethal concentration 50%
- LD50: Lethal dose 50%
- OEL: Occupational exposure level
- PBT: Persistent, bioaccumulating and toxic according to REACH
- PEC: Predictable environmental concentration
- PEL: Predictable level of exposure
- PNEC: Predictable no-effect concentration
- REACH: Regulation (EC) 1907/2006
- RID: Regulations for the international transport of dangerous goods by train



Sirius Lifebuoy Light

Revision no. 3
Revision date 11/29/2023 Printed
on 11/29/2023 Page no. 14/14
Replaces revision:2
(Revision date: 09/29/2016)

- STA: Acute Toxicity Estimate - TLV:

Threshold Limit Value - TLV

CEILING: Concentration that must not be exceeded during any moment of occupational exposure.

- TWA: Weighted average exposure limit - TWA STEL:

Short-term exposure limit - VOC: Volatile organic compound -

vPvB: Very persistent and very bioaccumulating

according to REACH - WGK: Aquatic hazard class (Germany).

GENERAL BIBLIOGRAPHY: 1.

Regulation (EC) 1907/2006 of the European Parliament (REACH)

2. Regulation (EC) 1272/2008 of the European Parliament (CLP)

3. Regulation (EU) 2020/878 (Annex II of the REACH Regulation)

4. Regulation (EC) 790/2009 of the European Parliament (I Atp. CLP)

5. Regulation (EU) 286/2011 of the European Parliament (II Atp. CLP)

6. Regulation (EU) 618/2012 of the European Parliament (III Atp. CLP)

7. Regulation (EU) 487/2013 of the European Parliament (IV Atp. CLP)

8. Regulation (EU) 944/2013 of the European Parliament (V Atp. CLP)

9. Regulation (EU) 605/2014 of the European Parliament (VI Atp. CLP)

10. Regulation (EU) 2015/1221 of the European Parliament (VII Atp. CLP)

11. Regulation (EU) 2016/918 of the European Parliament (VIII Atp. CLP)

12. Regulation (EU) 2016/1179 (IX Atp. CLP)

13. Regulation (EU) 2017/776 (X Atp. CLP)

14. Regulation (EU) 2018/669 (XI Atp. CLP)

15. Regulation (EU) 2019/521 (XII Atp. CLP)

16. Delegated Regulation (EU) 2018/1480 (XIII Atp. CLP)

17. Regulation (EU) 2019/1148 18.

Delegated Regulation (EU) 2020/217 (XIV Atp. CLP)

19. Delegated Regulation (EU) 2020/1182 (XV Atp. CLP)

20. Delegated Regulation (EU) 2021/643 (XVI Atp. CLP)

21. Delegated Regulation (EU) 2021/849 (XVII Atp. CLP)

22. Delegated Regulation (EU) 2022/692 (XVIII Atp. CLP)

- The Merck Index. - 10th Edition - Handling

Chemical Safety - INRS - Fiche

Toxicologique (toxicological sheet)

- Patty - Industrial Hygiene and Toxicology - NI Sax -

Dangerous properties of Industrial Materials-7, 1989 Edition - IFA GESTIS website - ECHA

Agency website - Database of

SDS models of chemical

substances - Ministry of Health and Istituto Superiore di Sanità

Note for the user: The

information contained in this sheet is based on the knowledge available to us at the date of the latest version. The user must ensure the suitability and completeness of the information in relation to the specific use of the product.

This document should not be interpreted as a guarantee of any specific property of the product.

Since the use of the product does not fall under our direct control, it is the user's obligation to observe the laws and regulations in force regarding hygiene and safety under his own responsibility. We do not assume responsibility for improper use.

Provide adequate training to personnel assigned to the use of chemical products.

METHODS OF CALCULATION OF THE CLASSIFICATION

Chemical-physical hazards: The classification of the product was derived from the criteria established by the CLP Regulation Annex I Part 2. The methods of evaluation of the chemical-physical properties are reported in section 9.

Health hazards: Product classification is based on the calculation methods in Annex I of CLP Part 3, unless otherwise indicated in section 11.

Environmental hazards: The classification of the product is based on the calculation methods set out in Annex I of CLP Part 4, unless otherwise indicated in section 12.