Information Sheet

Compliant with the safety data sheet format defined in Ann. II to the REACH Reg., but not required by art. 31

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

1.1 Product identifier

Item code	KNO3 1M
Product name	Electrolyte KNO3 1M

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

Intended use
Storage solution. Applies to code 32208033

1.3 Details of the supplier of the Information Sheet

Business name	GIORGIO BORMAC srl
Full address	via della meccanica, 25
Town	Carpi
Postal code	41012
Province	MO
Country	Italy
Phone number	+39 059 653274
e-mail address of the competent person responsible for the Information Sheet	sds@giorgiobormac.com

1.4 Emergency telephone number

For urgent inquiries refer to	+1 352-323-3500

2 Hazards identification

2.1 Classification of the substance or mixture

The product is not classified as hazardous pursuant to the provisions set forth in EC Regulation 1272/2008 (CLP) (and subsequent amendments and supplements).
However, since the product contains hazardous substances in concentrations such as to be declared in section 3, it requires a safety data sheet with appropriate information, compliant to (EU) Regulation 2020/878.

Hazard classification
None

2.2 Label elements

Hazard labelling pursuant to EC Regulation 1272/2008 (CLP) and subsequent amendments and supplements.

Hazard pictograms
None

Signal word
None

Hazard statements
None

Precautionary statements
None

Supplementary hazard statements	
EUH208	Contains 5-chloro-2-methyl-2H-isothiazol-3-one; 2-methyl-2H-isothiazol-3-one. May produce an allergic reaction.
EUH210	Safety data sheet available on request.

2.3 Other hazards

On the basis of available data, the product does not contain any PBT or vPvB in percentage ≥ than 0,1%.
The product does not contain substances with endocrine disrupting properties in concentration ≥ 0.1%.

3 Composition/information on ingredients

3.2 Mixtures

INERT

Concentration	90 %

POTASSIUM NITRATE

Concentration	10 %
CAS number	7757-79-1
EC number	231-818-8
Registration Number	01-2119488224-35-xxxx
Hazard classification	▪ Ox. Sol. 3; H272

5-chloro-2-methyl-2H-isothiazol-3-one; 2-methyl-2H-isothiazol-3-one

Concentration	0.0014 %
CAS number	55965-84-9
INDEX number	613-167-00-5
Registration Number	01-2120764691-48-XXXX
Hazard classification	▪ Acute Tox. 3; H301 ▪ Acute Tox. 2; H310 ▪ Skin Corr. 1C; H314 ▪ Skin Sens. 1A; H317 ▪ Eye Dam. 1; H318 ▪ Acute Tox. 2; H330 ▪ Aquatic Acute 1; H400 ▪ Aquatic Chronic 1; H410
M Factor (acute)	100
M Factor (chronic)	100
Specific concentration limits	▪ Skin Sens. 1A; H317: ≥ 0.0015 %
Classification note according to Annex VI to the CLP Regulation:	B
Additional classification	EUH071

The full wording of hazard (H) phrases is given in section 16 of the sheet.

4 First aid measures

4.1 Description of first aid measures

No episodes of harm to the staff authorised to use the product have been reported. The following general measures should be adopted as

necessary:
INHALATION: Remove to open air. If the subject stops breathing, administer artificial respiration. Get medical advice/attention.
INGESTION: Get medical advice/attention. Induce vomiting only if indicated by the doctor. Do not give anything by mouth to an unconscious person.
EYES and SKIN: Wash with plenty of water. In the event of persistent irritation, get medical advice/attention.

Rescuers protection

It is good practice for rescuers lending support to a person who has been exposed to a chemical substance or to a mixture to wear personal protective equipment. The nature of such protection depends on the hazard level of the substance or mixture, on the type of exposure and on the extent of the contamination. In the absence of other more specific indications, use of disposable gloves in the event of possible contact with body fluids is recommended. For the type of PPE suitable for the characteristics of the substance or mixture, see section 8.

4.2 Most important symptoms and effects, both acute and delayed

No episodes of damage to health ascribable to the product have been reported.

POTASSIUM NITRATE

After contact with the eyes: slight irritation. After ingestion: gastrointestinal disorders, malaise, vomiting, diarrhea.Ap Long contact: due to absorption, methemoglobinemia, headache, spasms, hypotension, cardiac arrhythmia, cyanosis, dyspnea.

5-chloro-2-methyl-2H-isothiazol-3-one; 2-methyl-2H-isothiazol-3-one

Symptoms: gastrointestinal disorders, severe allergic skin reaction, bronchial spasm and anaphylactic shock, severely corrosive and necrotizing tissues.
Vent. Swollen corrosion of the mucous membranes. Blurred vision. Nausea. Itchy. Dermatitis. Local irritation.
Risks: May cause an allergic skin reaction. Causes serious eye damage. Causes serious burns.

4.3 Indication of any immediate medical attention and special treatment needed

If symptoms occur, whether acute or delayed, consult a doctor.

Means to have available in the workplace for specific and immediate treatment

Running water for skin and eye wash.

5-chloro-2-methyl-2H-isothiazol-3-one; 2-methyl-2H-isothiazol-3-one

Treat symptomatically

5 Firefighting measures

The product is not flammable and does not feed the flames

5.1 Extinguishing media

SUITABLE EXTINGUISHING EQUIPMENT
The extinguishing equipment should be of the conventional kind: carbon dioxide, foam, powder and water spray.
UNSUITABLE EXTINGUISHING EQUIPMENT
None in particular.

5.2 Special hazards arising from the substance or mixture

HAZARDS CAUSED BY EXPOSURE IN THE EVENT OF FIRE
Do not breathe combustion products.

POTASSIUM NITRATE

In case of fire, the following can be released: Nitrogen oxide (NO2)

5-chloro-2-methyl-2H-isothiazol-3-one; 2-methyl-2H-isothiazol-3-one

Dangerous combustion products:

Nitrogen oxides (NOX)
Magnesium oxides
Carbon dioxide (CO2)
Carbon monoxide
Hydrochloric acid gas

5.3 Advice for firefighters

GENERAL INFORMATION
Use jets of water to cool the containers to prevent product decomposition and the development of substances potentially hazardous for health. Always wear full fire prevention gear. Collect extinguishing water to prevent it from draining into the sewer system. Dispose of contaminated water used for extinction and the remains of the fire according to applicable regulations.
SPECIAL PROTECTIVE EQUIPMENT FOR FIRE-FIGHTERS
Normal fire fighting clothing i.e. fire kit (BS EN 469), gloves (BS EN 659) and boots (HO specification A29 and A30) in combination with self-contained open circuit positive pressure compressed air breathing apparatus (BS EN 137).

6 Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Use breathing equipment if fumes or powders are released into the air. These indications apply for both processing staff and those involved in emergency procedures.

6.2 Environmental precautions

The product must not penetrate into the sewer system or come into contact with surface water or ground water.

6.3 Methods and material for containment and cleaning up

Confine using earth or inert material. Collect as much material as possible and eliminate the rest using jets of water. Contaminated material should be disposed of in compliance with the provisions set forth in point 13.

6.4 Reference to other sections

Any information on personal protection and disposal is given in sections 8 and 13.

7 Handling and storage

7.1 Precautions for safe handling

Before handling the product, consult all the other sections of this material safety data sheet. Avoid leakage of the product into the environment. Do not eat, drink or smoke during use.

7.2 Conditions for safe storage, including any incompatibilities

Keep the product in clearly labelled containers. Keep containers away from any incompatible materials, see section 10 for details.

Storage class TRGS 510 (Germany)
None

POTASSIUM NITRATE

Keep away from flammable substances, sources of fireproof and heat. Do not keep in contact with oxidants. Keep closed in a dry place.

7.3 Specific end use(s)

Information not available

8 Exposure controls/personal protection

8.1 Control parameters

POTASSIUM NITRATE

Predicted no-effect concentration - PNEC	
Normal value of STP microorganisms	18 mg/l
Normal value in fresh water	0.45 mg/l
Normal value in marine water	0.04 mg/l
Normal value for water, intermittent release	4.5 mg/l

Health - Derived no-effect level - DNEL / DMEL	Local effect	Systemic effect
Consumers, short-term, oral	Not available	12.5 mg/kg/d
Consumers, long-term, dermal		12.5 mg/kg/d
Consumers, long-term, inhalation		10.9 mg/m³
Workers, long-term, dermal		20.8 mg/kg/d
Workers, long-term, inhalation		36.7 mg/kg

8.2 Exposure controls

The product is not classified as dangerous in accordance with the provisions of Annex I, part 3 of the Reg. (EC) 1272/2008 (CLP) and as such not
It would require specific measures for exposure control. However, for precautionary purposes, the following measures are provided.

As the use of adequate technical equipment must always take priority over personal protective equipment, make sure that the workplace is well aired through effective local aspiration.

HAND PROTECTION
Protect hands with category III work gloves (see standard EN 374).
The following should be considered when choosing work glove material: compatibility, degradation, failure time and permeability.
The work gloves' resistance to chemical agents should be checked before use, as it can be unpredictable. The gloves' wear time depends on the duration and type of use.

SKIN PROTECTION
Wear category I professional long-sleeved overalls and safety footwear (see Regulation 2016/425 and standard EN ISO 20344). Wash body with soap and water after removing protective clothing.

EYE PROTECTION
We recommend wearing airtight protective glasses (ref. EN ISO 16321 standard).

RESPIRATORY PROTECTION
The use of respiratory protection means is necessary if the technical measures adopted are not sufficient to limit the worker's exposure to the threshold values taken into consideration. It is advisable to wear a mask with a type B filter whose class (1, 2 or 3) must be chosen in relation to the limit concentration for use. (ref. standard EN 14387).
In the event that the substance considered is odorless or its olfactory threshold is higher than the relevant TLV-TWA and in case of emergency, wear an open-circuit compressed air breathing apparatus (ref. EN 137 standard) or a fresh air respirator (ref. EN 138 standard).
For the correct choice of respiratory protection device, refer to the EN 529 standard.

ENVIRONMENTAL EXPOSURE CONTROLS
The emissions generated by manufacturing processes, including those generated by ventilation equipment, should be checked to ensure compliance with environmental standards.

9 Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance	liquid	

Colour	colourless	
Odour	odourless	
Odour threshold	Not relevant	
Melting point / freezing point	Not applicable	
Initial boiling point	> 100 °C (> 212 °F)	
Flammability	not flammable	
Lower explosive limit	Not applicable	
Upper explosive limit	Not applicable	
Flash point	Not available	
Auto-ignition temperature	Not applicable	
Decomposition temperature	Not available	
pH	4.5 ≤ x ≤ 8.5	Solution concentration: 5 %
Kinematic viscosity (40 °C)	Not available	
Solubility	soluble in water	
Partition coefficient: n-octanol/water	Not available	
Vapour pressure	Not available	
Density and/or relative density	1.06 kg/l	
Relative vapour density	Not available	

Particle characteristics

Information not available.

9.2 Other information

9.2.1 Information with regard to physical hazards

Information not available.

9.2.2 Other safety characteristics

Explosive properties	not explosive	
Oxidising properties	Non-oxidizing	

10 Stability and reactivity

In the absence of information on the mixture, the literature information on the components is reported. This information is not characteristic of the solution but of the dangerous components.

10.1 Reactivity

There are no particular risks of reaction with other substances in normal conditions of use.

POTASSIUM NITRATE

Comburent substance

10.2 Chemical stability

The product is stable in normal conditions of use and storage.

10.3 Possibility of hazardous reactions

No hazardous reactions are foreseeable in normal conditions of use and storage.

POTASSIUM NITRATE

Possibility of explosion. Avoid exposure to: ignition sources.

10.4 Conditions to avoid

None in particular. However the usual precautions used for chemical products should be respected.

POTASSIUM NITRATE

Avoid dust formation.

10.5 Incompatible materials

POTASSIUM NITRATE

Powder metals, organic compounds, combustible substances, magnesium, phosphorus, sulfur, boron, carbon.

10.6 Hazardous decomposition products

POTASSIUM NITRATE

Nitrous gas

5-chloro-2-methyl-2H-isothiazol-3-one; 2-methyl-2H-isothiazol-3-one

Nitrogen oxides, sulfur oxides, carbon oxides

11 Toxicological information

In the absence of experimental data for the product itself, health hazards are evaluated according to the properties of the substances it contains, using the criteria specified in the applicable regulation for classification.
It is therefore necessary to take into account the concentration of the individual hazardous substances indicated in section 3, to evaluate the toxicological effects of exposure to the product.

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

11.1.1 Metabolism, toxicokinetics, mechanism of action and other information

5-chloro-2-methyl-2H-isothiazol-3-one; 2-methyl-2H-isothiazol-3-one

Symptoms:
Gastrointestinal dusturbs
Severe allergic leather reaction, bronchial spasm and anaphylactic shock
Seriously corrosive and necrotizing the tissues
Outburst
Enfiata corrosion of the mucous membranes
Annexed view
Nausea
Itchy
Dermatitis
Local irritation
Risks:
It can cause an allergic skin reaction
Causes serious eye injuries
Causes serious burns

11.1.2 Information on likely routes of exposure

5-chloro-2-methyl-2H-isothiazol-3-one; 2-methyl-2H-isothiazol-3-one

Inhalation, eye contact, skin contact, ingestion

11.1.3 Delayed and immediate effects as well as chronic effects from short and long-term exposure

Information not available.

11.1.4 Interactive effects

Information not available.

11.1.5 ACUTE TOXICITY

POTASSIUM NITRATE

LD50 (Oral):	3,015 mg/kg	Species/guidelines: Ratto

5-chloro-2-methyl-2H-isothiazol-3-one; 2-methyl-2H-isothiazol-3-one

LD50 (Oral):	64 mg/kg	Species/guidelines: STA ratto Metodo:calcolo
LD50 (Dermal):	87 mg/kg	Species/guidelines: STA coniglio Metodo: coniglio
LC50 (Inhalation mists/powders):	0.33 mg/l	Exposure duration: 4 hours Species/guidelines: STA ratto Atmosfera: polvere/nebbia. Metodo: calcolo.

11.1.6 SKIN CORROSION/IRRITATION

Does not meet the classification criteria for this hazard class

5-chloro-2-methyl-2H-isothiazol-3-one; 2-methyl-2H-isothiazol-3-one

Corrosive for the rabbit.
Corrosivo, category 1C -when exposure reactions between 1 and 4 hours and observation times up to 14 days

11.1.7 SERIOUS EYE DAMAGE / IRRITATION

Does not meet the classification criteria for this hazard class

5-chloro-2-methyl-2H-isothiazol-3-one; 2-methyl-2H-isothiazol-3-one

It can cause irreversible damage to the eyes - rabbit.

11.1.8 RESPIRATORY OR SKIN SENSITISATION

Does not meet the classification criteria for this hazard class

Skin sensitization

5-chloro-2-methyl-2H-isothiazol-3-one; 2-methyl-2H-isothiazol-3-one

The product is a sensitivity of the skin, subcategory 1A.

11.1.9 GERM CELL MUTAGENICITY

Does not meet the classification criteria for this hazard class

11.1.10 CARCINOGENICITY

Does not meet the classification criteria for this hazard class

5-chloro-2-methyl-2H-isothiazol-3-one; 2-methyl-2H-isothiazol-3-one

Animal testing did not reveal any carcinogenic effects

11.1.11 REPRODUCTIVE TOXICITY

Does not meet the classification criteria for this hazard class

5-chloro-2-methyl-2H-isothiazol-3-one; 2-methyl-2H-isothiazol-3-one

It does not contain ingredients included in the list of toxic products for reproduction

11.1.12 STOT - SINGLE EXPOSURE

Does not meet the classification criteria for this hazard class

11.1.13 STOT - REPEATED EXPOSURE

Does not meet the classification criteria for this hazard class

11.1.14 ASPIRATION HAZARD

Does not meet the classification criteria for this hazard class

11.2 Information on other hazards

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

12 Ecological information

Use this product according to good working practices. Avoid littering. Inform the competent authorities, should the product reach waterways or contaminate soil or vegetation.

12.1 Toxicity

POTASSIUM NITRATE

EC50 - for Crustacea	490 mg/l	Exposure duration: 48 hours Species/guidelines: Daphnia magna
LC50 - for Fish	1,378 mg/l	Exposure duration: 96 hours Species/guidelines: Poecilia reticulata

5-chloro-2-methyl-2H-isothiazol-3-one; 2-methyl-2H-isothiazol-3-one

EC50 - for Crustacea	0.16 mg/l	Exposure duration: 48 hours Species/guidelines: Daphnia magna
LC50 - for Fish	0.19 mg/l	Exposure duration: 96 hours Species/guidelines: Oncorhynchus mykiss
EC50 - for Algae / Aquatic Plants	0.027 mg/l	Exposure duration: 72 hours Species/guidelines: Pseudokirchneriella subcapitata

CL50 (Lepomis macrochirus (Bluegill fish-back)): 0.28 mg/l/96 h
Ce50 (active mud): 4.5 mg/l type of test: breathing inhibitor
Acute M factor: 100
Chronic M factor: 100

12.2 Persistence and degradability

POTASSIUM NITRATE

Solubility in water	> 10,000 mg/l
Degradability	Rapidly degradable

Quickly biodegradable.

5-chloro-2-methyl-2H-isothiazol-3-one; 2-methyl-2H-isothiazol-3-one

Degradability	NOT rapidly degradable

Result: Not immediately biodegradable.
Biodegradation: 30%
Exposure time: 28 d
Method: OECD Test Guideline 301B

12.3 Bioaccumulative potential

POTASSIUM NITRATE

It does not accumulate in organisms.

12.4 Mobility in soil

Information not available.

12.5 Results of PBT and vPvB assessment

On the basis of available data, the product does not contain any PBT or vPvB in percentage ≥ than 0,1%.

12.6 Endocrine disrupting properties

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

12.7 Other adverse effects

POTASSIUM NITRATE

It can contribute to the eutrophication of water resources.

13 Disposal considerations

13.1 Waste treatment methods

Disposal must be performed through an authorised waste management firm, in compliance with national and local regulations.
Reuse, when possible. Neat product residues should be considered special non-hazardous waste.
CONTAMINATED PACKAGING
Contaminated packaging must be recovered or disposed of in compliance with national waste management regulations.

Hazardous waste classification - Reg. (UE) 1357/2014
None

14 Transport information

The product is not dangerous under current provisions of the Code of International Carriage of Dangerous Goods by Road (ADR) and by Rail (RID), of the International Maritime Dangerous Goods Code (IMDG), and of the International Air Transport Association (IATA) regulations.

14.1 UN number or ID number

Not applicable

14.2 UN proper shipping name

Not applicable

14.3 Transport hazard class(es)

Not applicable

14.4 Packing group

Not applicable

14.5 Environmental hazards

Not applicable

14.6 Special precautions for user

Not applicable

14.7 Maritime transport in bulk according to IMO instruments

Not applicable

15 Regulatory information

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

Seveso Category - Directive 2012/18/EU:
None

Restrictions relating to the product or contained substances pursuant to Annex XVII to EC Regulation 1907/2006		
	Restrictions	Registration Number EU
Product restrictions	--	
Contained substance		
	75	

Regulation (EU) 2019/1148 - on the marketing and use of explosives precursors
Regulated explosives precursor The acquisition, introduction, possession or use of that regulated explosives precursor by members of the general public is subject to reporting obligations as set out in Article 9. All suspicious transactions and significant disappearances and thefts must be reported to the relevant national contact point.

Substances in Candidate List (Art. 59 REACH)	Registration Number EU
On the basis of available data, the product does not contain any SVHC in percentage ≥ than 0,1%.	

Substances subject to authorisation (Annex XIV REACH)	Authorisation Number	Sunset date	Registration Number EU
None			

Substances subject to exportation reporting pursuant to Regulation (EU) 649/2012:
None

Substances subject to the Rotterdam Convention:
None

Substances subject to the Stockholm Convention:
None

Regulation (EU) 2019/1021 - on persistent organic pollutants
None

German regulation on the classification of substances hazardous to water (AwSV, vom 18. April 2017)
None

15.2 Chemical safety assessment

A chemical safety assessment has been performed for the following contained substances

POTASSIUM NITRATE

16 Other information

Text of hazard (H) indications mentioned in section 2-3 of the sheet:	
Acute Tox. 2	Acute toxicity, category 2
Acute Tox. 3	Acute toxicity, category 3
Aquatic Acute 1	Hazardous to the aquatic environment, acute toxicity, category 1
Aquatic Chronic 1	Hazardous to the aquatic environment, chronic toxicity, category 1
Eye Dam. 1	Serious eye damage, category 1
Ox. Sol. 3	Oxidising solid, category 3
Skin Corr. 1C	Skin corrosion, category 1C
Skin Sens. 1A	Skin sensitization, category 1A
EUH071	Corrosive to the respiratory tract.
H272	May intensify fire; oxidiser.
H301	Toxic if swallowed.
H310	Fatal in contact with skin.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H330	Fatal if inhaled.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

Legend

- ADR: European Agreement concerning the carriage of Dangerous goods by Road
- ATE: Acute Toxicity Estimate
- CAS: Chemical Abstract Service Number
- CLP: Regulation (EC) 1272/2008
- DNEL: Derived No Effect Level
- EC50: Effective concentration (required to induce a 50% effect)
- EC: Identifier in ESIS (European archive of existing substances)
- EmS: Emergency Schedule
- GHS: Globally Harmonized System of classification and labeling of chemicals
- IATA DGR: International Air Transport Association Dangerous Goods Regulation
- IC50: Immobilization Concentration 50%
- IMDG: International Maritime Code for dangerous goods
- IMO: International Maritime Organization
- INDEX: Identifier in Annex VI of CLP
- LC50: Lethal Concentration 50%
- LD50: Lethal dose 50%
- OEL: Occupational Exposure Level
- PBT: Persistent, bioaccumulative and toxic
- PEC: Predicted environmental Concentration
- PEL: Predicted exposure level
- PMT: Persistent, mobile and toxic
- PNEC: Predicted no effect concentration
- REACH: Regulation (EC) 1907/2006
- RID: Regulation concerning the international transport of dangerous goods by train
- TLV: Threshold Limit Value
- TLV CEILING: Concentration that should not be exceeded during any time of occupational exposure.
- TWA: Time-weighted average exposure limit
- TWA STEL: Short-term exposure limit
- VOC: Volatile organic Compounds
- vPvB: Very persistent and very bioaccumulative
- vPvM: Very persistent and very mobile

Section 16

Legend

- WGK: Water hazard classes (German).

General Bibliography

1. Regulation (EC) 1907/2006 (REACH) of the European Parliament
2. Regulation (EC) 1272/2008 (CLP) of the European Parliament
3. Regulation (EU) 2020/878 (II Annex of REACH Regulation)
4. Regulation (EC) 790/2009 (I Atp. CLP) of the European Parliament
5. Regulation (EU) 286/2011 (II Atp. CLP) of the European Parliament
6. Regulation (EU) 618/2012 (III Atp. CLP) of the European Parliament
7. Regulation (EU) 487/2013 (IV Atp. CLP) of the European Parliament
8. Regulation (EU) 944/2013 (V Atp. CLP) of the European Parliament
9. Regulation (EU) 605/2014 (VI Atp. CLP) of the European Parliament
10. Regulation (EU) 2015/1221 (VII Atp. CLP) of the European Parliament
11. Regulation (EU) 2016/918 (VIII Atp. CLP) of the European Parliament
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 (UE) 2018/1480 (XIII Atp. CLP)
17. Regulation (EU) 2019/1148
18. Delegated Regulation (UE) 2020/217 (XIV Atp. CLP)
19. Delegated Regulation (UE) 2020/1182 (XV Atp. CLP)
20. Delegated Regulation (UE) 2021/643 (XVI Atp. CLP)
21. Delegated Regulation (UE) 2021/849 (XVII Atp. CLP)
22. Delegated Regulation (UE) 2022/692 (XVIII Atp. CLP)
23. Delegated Regulation (UE) 2023/707
24. Delegated Regulation (UE) 2023/1434 (XIX Atp. CLP)
25. Delegated Regulation (UE) 2023/1435 (XX Atp. CLP)

- The Merck Index. - 10th Edition
- Handling Chemical Safety
- INRS - Fiche Toxicologique (toxicological sheet)
- Patty - Industrial Hygiene and Toxicology
- N.I. Sax - Dangerous properties of Industrial Materials-7, 1989 Edition
- IFA GESTIS website
- ECHA website
- Database of SDS models for chemicals - Ministry of Health and ISS (Istituto Superiore di Sanità) - Italy

Note for users

The information contained in the present sheet are based on our own knowledge on the date of the last version. Users must verify the suitability and thoroughness of provided information according to each specific use of the product.
This document must not be regarded as a guarantee on any specific product property.
The use of this product is not subject to our direct control; therefore, users must, under their own responsibility, comply with the current health and safety laws and regulations. The producer is relieved from any liability arising from improper uses.
Provide appointed staff with adequate training on how to use chemical products.

Calculation methods for classification

Chemical and physical hazards:
Product classification derives from criteria established by the CLP Regulation, Annex I, Part 2. The data for evaluation of chemical-physical properties are reported in section 9.
Health hazards:
Product classification is based on calculation methods as per Annex I of CLP, Part 3, unless determined otherwise in Section 11.
Environmental hazards:
Product classification is based on calculation methods as per Annex I of CLP, Part 4, unless determined otherwise in Section 12.

Changes from the previous revision

This SDS has been prepared using new SDS authoring software. For this reason, it is not possible to specify which parts of the document have been changed compared to the previous version. A full reading is recommended.