

EC 1413  $\mu\text{S}/\text{cm}$  - Standard Conductivity 1413  $\mu\text{S} / \text{cm}$ 

## Safety Data Sheet

According to Annex II to REACH - Regulation 2020/878 and to Annex II to UK REACH

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

## 1.1. Product identifier

Code: EC 1413  $\mu\text{S}/\text{cm}$   
Product name: Standard Conductivity 1413  $\mu\text{S} / \text{cm}$

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

Intended use: Standard solution for process verification and control. Applies to codes 51100533, 51100633, 51100733, 51101053, 51102053, 51102223, 51102253, 51102263, 51300343, 60000423, EE51100633, EH51100633, EE60000423

Identified Uses	Industrial	Professional	Consumer
Standard solution for the verification and quality control of redox potential measurement systems.	✓	✓	-

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

Name: GIORGIO BORMAC srl  
Full address: via della meccanica, 25  
District and Country: 41012 Carpi Italia (MO)  
Tel.: +39 059 653274  
Fax: +39 059 653282

e-mail address of the competent person responsible for the Safety Data Sheet: sds@giorgiobormac.com

Supplier: GIORGIO BORMAC srl

## 1.4. Emergency telephone number

For urgent inquiries refer to: +44 121 507 4123

## SECTION 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). However, since the product contains hazardous substances in concentrations such as to be declared in section no. 3, it requires a safety data sheet with appropriate information, compliant to (EU) Regulation 2020/878.

Hazard classification and indication: --

## 2.2. Label elements

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

Hazard pictograms: --

Signal words: --

Hazard statements:  
EUH210 Safety data sheet available on request.

Precautionary statements: --

## 2.3. Other hazards

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

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The product does not contain substances with endocrine disrupting properties in concentration  $\geq 0.1\%$ .

### SECTION 3. Composition/information on ingredients

#### 3.2. Mixtures

Contains:

Identification	x = Conc. %	Classification (EC) 1272/2008 (CLP)
<b>MERCURY IODIDE</b>		
44% - metallic element		
INDEX	080-002-00-6	$0 \leq x < 0,01$
EC	231-873-8	<b>Acute Tox. 1 H310, Acute Tox. 2 H300, Acute Tox. 2 H330, STOT RE 2 H373, Eye Dam. 1 H318, Aquatic Acute 1 H400 M=1, Aquatic Chronic 1 H410 M=1, Classification note according to Annex VI to the CLP Regulation: 1, A STOT RE 2 H373: <math>\geq 0,1\%</math> LD50 Oral: 18 mg/kg, STA Dermal: 5 mg/kg, LC50 Inhalation vapours: 1 mg/l/4h</b>
CAS	7774-29-0	

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

### SECTION 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.

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

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

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

Information not available

### SECTION 5. Firefighting measures

#### 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.

#### 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).

EC 1413  $\mu\text{S}/\text{cm}$  - Standard Conductivity 1413  $\mu\text{S} / \text{cm}$ **SECTION 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.

**SECTION 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.

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

Information not available

**SECTION 8. Exposure controls/personal protection****8.1. Control parameters**

Regulatory References:

EU	OEL EU	Directive (EU) 2022/431; Directive (EU) 2019/1831; Directive (EU) 2019/130; Directive (EU) 2019/983; Directive (EU) 2017/2398; Directive (EU) 2017/164; Directive 2009/161/EU; Directive 2006/15/EC; Directive 2004/37/EC; Directive 2000/39/EC; Directive 98/24/EC; Directive 91/322/EEC.
	TLV-ACGIH	ACGIH 2021

**MERCURY IODIDE****Threshold Limit Value**

Type	Country	TWA/8h mg/m <sup>3</sup>	ppm	STEL/15min mg/m <sup>3</sup>	ppm	Remarks / Observations
OEL	EU	0,02				(come Hg)
TLV-ACGIH		0,025				SKIN A4, IBE

Legend:

(C) = CEILING ; INHAL = Inhalable Fraction ; RESP = Respirable Fraction ; THORA = Thoracic Fraction.

**8.2. Exposure controls**

Comply with the safety measures usually applied when handling chemical substances.

HAND PROTECTION

None required.

SKIN PROTECTION

None required.

EYE PROTECTION

None required.

RESPIRATORY PROTECTION

If the threshold value (e.g. TLV-TWA) is exceeded for the substance or one of the substances present in the product, use a mask with a type

**EC 1413  $\mu$ S/cm - Standard Conductivity 1413  $\mu$ S / cm****SECTION 8. Exposure controls/personal protection ... / >>**

B filter whose class (1, 2 or 3) must be chosen according to the limit of use concentration. (see standard EN 14387). In the presence of gases or vapours of various kinds and/or gases or vapours containing particulate (aerosol sprays, fumes, mists, etc.) combined filters are required. Respiratory protection devices must be used if the technical measures adopted are not suitable for restricting the worker's exposure to the threshold values considered. The protection provided by masks is in any case limited.

If the substance considered is odourless or its olfactory threshold is higher than the corresponding TLV-TWA and in the case of an emergency, wear open-circuit compressed air breathing apparatus (in compliance with standard EN 137) or external air-intake breathing apparatus (in compliance with standard EN 138). For a correct choice of respiratory protection device, see standard EN 529.

**ENVIRONMENTAL EXPOSURE CONTROLS**

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

**SECTION 9. Physical and chemical properties****9.1. Information on basic physical and chemical properties**

Properties	Value	Information
Appearance	liquid	
Colour	colourless	
Odour	odourless	
Melting point / freezing point	not available	
Initial boiling point	100 °C	
Flammability	not available	
Lower explosive limit	not available	
Upper explosive limit	not available	
Flash point	not available	
Auto-ignition temperature	not available	
Decomposition temperature	not available	
pH	not available	
Kinematic viscosity	not available	
Solubility	soluble in water	
Partition coefficient: n-octanol/water	not available	
Vapour pressure	not available	
Density and/or relative density	1	
Relative vapour density	not available	
Particle characteristics	not applicable	

**9.2. Other information****9.2.1. Information with regard to physical hazard classes**

Information not available

**9.2.2. Other safety characteristics**

Danger of explosion No

**SECTION 10. Stability and reactivity****10.1. Reactivity**

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

**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.

**MERCURY IODIDE**

Reacts with: halogenated compounds,alkaline metals.

**10.4. Conditions to avoid**

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

**MERCURY IODIDE**

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### SECTION 10. Stability and reactivity ... / >>

Decomposes if exposed to: high temperatures.  
Avoid exposure to: light.

#### 10.5. Incompatible materials

MERCURY IODIDE  
Incompatible with: alkaline metals.

#### 10.6. Hazardous decomposition products

MERCURY IODIDE  
iodhydric acid, iodine, Mercury oxides.

### SECTION 11. Toxicological information

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

MERCURY IODIDE  
Contact with the skin: redness or bleaching of the skin can occur in the exposure area.  
Irritation or pain can occur on the contact site.  
Lethal for contact with the skin.  
Contact with eyes: severe pain can occur. The eyes may tear in abundance.  
Ingestion: redness and pain in the mouth and throat can occur, vomiting, convulsions, loss of knowledge. It can be lethal if ingested.  
Inhalation: lack of breath can occur with a burning sensation in the throat, convulsions, loss of knowledge. Absorption can occur through the lungs causing symptoms similar to those of ingestion. Lethal for inhalation.

#### Metabolism, toxicokinetics, mechanism of action and other information

Information not available

#### Information on likely routes of exposure

Information not available

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

MERCURY IODIDE  
Short -term exposure causes immediate effects.

#### Interactive effects

Information not available

#### ACUTE TOXICITY

ATE (Inhalation) of the mixture:	Not classified (no significant component)
ATE (Oral) of the mixture:	Not classified (no significant component)
ATE (Dermal) of the mixture:	Not classified (no significant component)

MERCURY IODIDE	
LD50 (Dermal):	75 mg/kg coniglio
STA (Dermal):	5 mg/kg estimate from table 3.1.2 of Annex I of the CLP (figure used for calculation of the acute toxicity estimate of the mixture)
LD50 (Oral):	18 mg/kg ratto
LC50 (Inhalation vapours):	1 mg/l/4h ratto

#### SKIN CORROSION / IRRITATION

Does not meet the classification criteria for this hazard class

MERCURY IODIDE  
Slight irritation.

#### SERIOUS EYE DAMAGE / IRRITATION

Does not meet the classification criteria for this hazard class

MERCURY IODIDE  
Slight irritation.

#### RESPIRATORY OR SKIN SENSITISATION

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### SECTION 11. Toxicological information ... / >>

Does not meet the classification criteria for this hazard class

MERCURY IODIDE  
It's possible.

#### GERM CELL MUTAGENICITY

Does not meet the classification criteria for this hazard class

#### CARCINOGENICITY

Does not meet the classification criteria for this hazard class

#### REPRODUCTIVE TOXICITY

Does not meet the classification criteria for this hazard class

#### STOT - SINGLE EXPOSURE

Does not meet the classification criteria for this hazard class

MERCURY IODIDE  
The substance is not classified as a specific toxic of the target organs, single exposure.

#### STOT - REPEATED EXPOSURE

Does not meet the classification criteria for this hazard class

MERCURY IODIDE  
It can cause damage to the organs for prolonged or repeated exposure.

#### ASPIRATION HAZARD

Does not meet the classification criteria for this hazard class

MERCURY IODIDE  
Toxic if inhaled.  
It can cause death.

### 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.

### SECTION 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

Information not available

#### 12.2. Persistence and degradability

MERCURY IODIDE  
NOT rapidly degradable

#### 12.3. Bioaccumulative potential

Information not available

#### 12.4. Mobility in soil

Information not available

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### SECTION 12. Ecological information ... / >>

#### 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  $\geq$  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

Information not available

### SECTION 13. Disposal considerations

#### 13.1. Waste treatment methods

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

### SECTION 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

Information not relevant

### SECTION 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

Contained substance

Point 18-75 MERCURY IODIDE

Regulation (EU) 2019/1148 - on the marketing and use of explosives precursors

not applicable

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### SECTION 15. Regulatory information ... / >>

#### Substances in Candidate List (Art. 59 REACH)

On the basis of available data, the product does not contain any SVHC in percentage  $\geq$  than 0,1%.

#### Substances subject to authorisation (Annex XIV REACH)

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

#### Healthcare controls

Information not available

### 15.2. Chemical safety assessment

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

### SECTION 16. Other information

Text of hazard (H) indications mentioned in section 2-3 of the sheet:

<b>Acute Tox. 1</b>	Acute toxicity, category 1
<b>Acute Tox. 2</b>	Acute toxicity, category 2
<b>STOT RE 2</b>	Specific target organ toxicity - repeated exposure, category 2
<b>Eye Dam. 1</b>	Serious eye damage, category 1
<b>Aquatic Acute 1</b>	Hazardous to the aquatic environment, acute toxicity, category 1
<b>Aquatic Chronic 1</b>	Hazardous to the aquatic environment, chronic toxicity, category 1
<b>H310</b>	Fatal in contact with skin.
<b>H300</b>	Fatal if swallowed.
<b>H330</b>	Fatal if inhaled.
<b>H373</b>	May cause damage to organs through prolonged or repeated exposure.
<b>H318</b>	Causes serious eye damage.
<b>H400</b>	Very toxic to aquatic life.
<b>H410</b>	Very toxic to aquatic life with long lasting effects.
<b>EUH210</b>	Safety data sheet available on request.

#### LEGEND:

- ADR: European Agreement concerning the carriage of Dangerous goods by Road
- ATE: Acute Toxicity Estimate
- CAS: Chemical Abstract Service Number
- CE50: Effective concentration (required to induce a 50% effect)
- CE: Identifier in ESIS (European archive of existing substances)
- CLP: Regulation (EC) 1272/2008
- DNEL: Derived No Effect Level
- 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 as REACH Regulation
- PEC: Predicted environmental Concentration
- PEL: Predicted exposure level
- 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



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### SECTION 16. Other information ... / >>

- VOC: Volatile organic Compounds
- vPvB: Very Persistent and very Bioaccumulative as for REACH Regulation
- 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)

- 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 to previous review:

The following sections were modified:

01 / 02 / 03 / 04 / 06 / 07 / 08 / 09 / 10 / 11 / 12 / 15 / 16.