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Safety Data Sheet

According to Annex II to REACH - Regulation 2015/830

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

1.1. Product identifier

Code MI528-0 Product name Iron Reagent

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

Determination of Iron in Water Samples.

1.3. Details of the supplier of the safety data sheet

Milwaukee Electronics Kft. Full address Alsókikötő sor 11. **District and Country** H6726 Szeged Hungary Tel. +36-62-428-050

Fax +36-62-428-051 e-mail address of the competent person

responsible for the Safety Data Sheet

1.4. Emergency telephone number

For urgent inquiries refer to

Austria tel.: +431 406 43 43 - Belgium tel.: 070/245.245 - Bulgaria tel.: +359 2 9154409 - Czech Republic tel.: +420 224 919 293, +420 224 915 402 - Denmark tel.: 8212 12 12 - Estonia tel.: 112 - Finland tel.: (09) 471 977 (direct) or (09) 4711 (exchange) - France tel. ORFILA (INRS) : + 33 (0)1 45 42 59 59 - Ireland tel.: 01 8092166 - Lithuania tel.: +370 5 236 20 52, +370 687 53378 - Malta tel: 2545 0000, Medicines & Poisons Info Office tel.: 2545 6504 - Norway tel.: 22 59 13 00 -Portugal tel.: 808 250 143 - Romania tel. 021.318.36.06 (8:00 - 15:00) - Slovakia tel.: +421 2 5477 4166 - Spain tel.: + 34 91 562 04 20 - Sweden tel.: 112; 08-331231 (9:00-17:00)

SECTION 2. Hazards identification

2.1. Classification of the substance or mixture

The product is classified as hazardous pursuant to the provisions set forth in (EC) Regulation 1272/2008 (CLP) (and subsequent amendments and supplements). The product thus requires a safety datasheet that complies with the provisions of (EU) Regulation 2015/830

info@milwaukeeinst.com

Any additional information concerning the risks for health and/or the environment are given in sections 11 and 12 of this sheet.

Hazard classification and indication:

H302 Acute toxicity, category 4 Harmful if swallowed Serious eye damage, category 1 H318 Causes serious eye damage. H412

Harmful to aquatic life with long lasting effects. Hazardous to the aquatic environment, chronic

toxicity, category 3

2.2. Label elements

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

Hazard pictograms:



Signal words: Danger



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SECTION 2. Hazards identification

Hazard statements:

Harmful if swallowed. H302 H318 Causes serious eye damage.

H412 Harmful to aquatic life with long lasting effects. **EUH031** Contact with acids liberates toxic gas.

Precautionary statements:

Wear protective gloves / eye protection / face protection. P280

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continue rinsing.

P310 Immediately call a POISON CENTER or doctor.

Contains: SODIUM METABISULFITE

> SODIUM DITHIONITE 1,10-PHENANTHROLINE

2.3. Other hazards

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

SECTION 3. Composition/information on ingredients

3.2. Mixtures

Contains:

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

SODIUM METABISULFITE

CAS 7681-57-4 $9 \le x < 30$ Acute Tox. 4 H302, Eye Dam. 1 H318, EUH031

EC 231-673-0 INDEX 016-063-00-2 Rea. no.

01-2119531326-45 **SODIUM DITHIONITE**

7775-14-6 $9 \le x < 25$ CAS

EC 231-890-0 INDEX 016-028-00-1 1,10-PHENANTHROLINE

5144-89-8 Acute Tox. 3 H301, Aquatic Acute 1 H400 M=10, Aquatic Chronic 1 H410 M=1 $0.5 \le x < 1$ CAS

Self-heat. 1 H251, Acute Tox. 4 H302, EUH031

EC 200-629-2 INDEX 613-092-00-8

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

EYES: Remove contact lenses, if present. Wash immediately with plenty of water for at least 15 minutes, opening the eyelids fully. If problem persists, seek medical advice.

SKIN: Remove contaminated clothing. Rinse skin with a shower immediately. Get medical advice/attention immediately. Wash contaminated clothing before using it again.

INHALATION: Remove to open air. If the subject stops breathing, administer artificial respiration. Get medical advice/attention immediately.

INGESTION: Get medical advice/attention immediately. Do not induce vomiting. Do not administer anything not explicitly authorised by a doctor.

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

Specific information on symptoms and effects caused by the product are unknown.

SODIUM METABISULFITE

Irritation and corrosion. Risk of serious damage to eyes.

SODIUM DITHIONITE

Irritant effects, Cough, respiratory paralysis, Shortness of breath, pain, Diarrhoea, Nausea, Vomiting, collapse, muscular weakness, death.



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SECTION 4. First aid measures .../>>

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. The product is combustible and, when the powder is released into the air in sufficient concentrations and in the presence of a source of ignition, it can create explosive mixtures with air. Fires may start or get worse by leakage of the solid product from the container, when it reaches high temperatures or through contact with sources of ignition.

SODIUM METABISULFITE

Not combustible. Ambient fire may liberate hazardous vapours. Fire may cause evolution of: Sulphur oxides.

SODIUM DITHIONITE

Combustible material, danger of spontaneous combustion! Risk of dust explosion. Development of hazardous combustion gases or vapours possible in the event of fire. Fire may cause evolution of: Sulphur oxides.

1,10-PHENANTHROLINE

Combustible. Development of hazardous combustion gases or vapours possible in the event of fire. Fire may cause evolution of: nitrogen oxides.

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).

SECTION 6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

If there are no contraindications, spray powder with water to prevent the formation of dust.

Wear suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing. 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

Collect the leaked product and place it in containers for recovery or disposal. If there are no contraindications, use jets of water to eliminate product residues.

Make sure the leakage site is well aired. Evaluate the compatibility of the container to be used, by checking section 10. 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.



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SECTION 7. Handling and storage

7.1. Precautions for safe handling

Ensure that there is an adequate earthing system for the equipment and personnel. In order to avoid the risk of fires and explosions, never use compressed air when handling. Keep away from heat, sparks and naked flames; do not smoke or use matches or lighters. Avoid leakage of the product into the environment. Avoid contact with eyes and skin. Do not breathe powders, vapours or mists. Do not eat, drink or smoke during use. Remove any contaminated clothes and personal protective equipment before entering places in which people eat.

7.2. Conditions for safe storage, including any incompatibilities

Store only in the original container. Keep the product in clearly labelled containers. Keep containers well sealed. Store in a ventilated and dry place, far away from sources of ignition. Avoid violent blows. Avoid overheating. Avoid contact with water.

7.3. Specific end use(s)

Information not available

SECTION 8. Exposure controls/personal protection

8.1. Control parameters

Regulatory References:

BEL	Belgique	AR du 11/3/2002. La liste est mise à jour pour 2017
DNK	Danmark	Bekendtgørelse om grænseværdier for stoffer og materialer - BEK nr 1458 af 13/12/2019
ESP	España	LÍMITES DE EXPOSICIÓN PROFESIONAL PARA AGENTES QUÍMICOS EN ESPAÑA 2019 (INSST)
FRA	France	Valeurs limites d'exposition professionnelle aux agents chimiques en France. ED 984 - INRS
GRC	Ελλάδα	ΕΦΗΜΕΡΙΔΑ ΤΗΣ ΚΥΒΕΡΝΗΣΕΩΣ - ΤΕΥΧΟΣ ΠΡΩΤΟ Αρ. Φύλλου 152 - 21 Αυγούστου 2018
HRV	Hrvatska	Pravilnik o zaštiti radnika od izloženosti opasnim kemikalijama na radu, graničnim vrijednostima izloženosti i biološkim graničnim vrijednostima (NN 91/18)
IRL	Éire	2018 Code of Practice for the Chemical Agents Regulations Safety Authority
NOR	Norge	Fastsatt av Arbeids- og sosialdepartementet 21. august 2018 med hjemmel i lov 17. juni 2005 nr. 62 om arbeidsmiljø, arbeidstid, stillingsvern mv. (arbeidsmiljøloven) § 1-3, § 1-4 og § 4-5
NLD	Nederland	Regeling van de Staatssecretaris van Sociale Zaken en Werkgelegenheid van 13 juli 2018, 2018-0000118517 tot wijziging van de Arbeidsomstandighedenregeling in verband met de implementatie van Richtlijn 2017/164 in Bijlage XIII
GBR	United Kingdom TLV-ACGIH	EH40/2005 Workplace exposure limits (Third edition, published 2018) ACGIH 2020



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SECTION 8. Exposure controls/personal protection

SODIUM METABISULFITE

Threshold Limit	Value								
Туре	Type Country		TWA/8h		STEL/15min		Remarks / Observations		
		mg/m3	ppm	mg/m3	ppm				
VLEP	BEL	5							
TLV	DNK	5							
VLA	ESP	5							
VLEP	FRA	5							
TLV	GRC	5							
GVI/KGVI	HRV	5							
OELV	IRL	5							
TLV	NOR	5							
TGG	NLD	5							
WEL	GBR	5							
TLV-ACGIH		5							
Predicted no-eff	fect concen	tration - PNE	3						
Normal value in fresh water							1	mg/l	
Normal value in marine water							0,1	mg/l	
Normal value of STP microorganisms							75,4	mg/l	
Health - Derived	l no-effect l	evel - DNEL /	DMEL						
	E	ffects on consu	cts on consumers			Effects on workers			
Route of expo	sure A	cute Acı	ute	Chronic	Chronic	Acute	Acute	Chronic	Chronic
	lo	cal sys	temic	local	systemic	local	systemic	local	systemic
Oral				VND	8,6				
Inhalation				VND	mg/kg bw/d 66			VND	225
maadon				*****	mg/m3			*****	mg/m3
					J				J -

SODIUM DITHIONITE

Predicted no-effect cor	ncentration	- PNEC								
Normal value in fresh				1	mg/l					
Normal value in marii	ne water					0,1	mg/l			
Normal value of STP				8,98	mg/l					
Health - Derived no-eff	ect level - D	NEL / DMEL								
	Effects on consumers				Effects on v	vorkers				
Route of exposure	Acute	Acute	Chronic	Chronic	Acute	Acute	Chronic	Chronic		
	local	systemic	local	systemic	local	systemic	local	systemic		
Oral			VND	7,9						
				mg/kg bw/d						
Inhalation			VND	61			VND	206		
				ma/m3				ma/m3		

Legend:

 $(C) = CEILING \hspace*{0.2cm} ; \hspace*{0.2cm} INHAL = Inhalable \hspace*{0.2cm} Fraction \hspace*{0.2cm} ; \hspace*{0.2cm} RESP = Respirable \hspace*{0.2cm} Fraction \hspace*{0.2cm} ; \hspace*{0.2cm} THORA = Thoracic \hspace*{0.2cm} Fraction.$

VND = hazard identified but no DNEL/PNEC available ; NEA = no exposure expected ; NPI = no hazard identified.

During the risk assessment process, it is essential to take into consideration the ACGIH occupational exposure levels for inert particulate not otherwise classified (PNOC respirable fraction: 3 mg/m3; PNOC inhalable fraction: 10 mg/m3). For values above these limits, use a P type filter, whose class (1, 2 or 3) must be chosen according to the outcome of risk assessment.

8.2. Exposure controls

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.

When choosing personal protective equipment, ask your chemical substance supplier for advice.

Personal protective equipment must be CE marked, showing that it complies with applicable standards.

Provide an emergency shower with face and eye wash station.

If the product may or must come into contact or react with acids, suitable technical and/or organisational measures should be taken to prevent the development of toxic and/or inflammable gases.

HAND PROTECTION

In the case of prolonged contact with the product, protect the hands with penetration-resistant work gloves (see standard EN 374).

Work glove material must be chosen according to the use process and the products that may form. Latex gloves may cause sensitivity reactions.

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

Wear airtight protective goggles (see standard EN 166).



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SECTION 8. Exposure controls/personal protection

In the presence of risks of exposure to splashes or squirts during work, adequate mouth, nose and eye protection should be used to prevent accidental absorption.

RESPIRATORY PROTECTION

Use a type P filtering facemask, whose class (1, 2 or 3) and effective need, must be defined according to the outcome of risk assessment (see standard EN 149).

ENVIRONMENTAL EXPOSURE CONTROLS

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

Product residues must not be indiscriminately disposed of with waste water or by dumping in waterways.

SECTION 9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Properties Appearance solid powder Colour ivorv Odour pungent Odour threshold Not available 5.5 - 6.0 pH, 17 q/L Melting point / freezing point Not available Initial boiling point Not applicable Boiling range Not available Flash point Not applicable Evaporation rate Not available Not available Flammability (solid, gas) Not available

Lower inflammability limit Upper inflammability limit Not available Not available Lower explosive limit Upper explosive limit Not available Vapour pressure Not available Vapour density Not available Relative density

Solubility

soluble in water Partition coefficient: n-octanol/water Not available Auto-ignition temperature Not available Decomposition temperature Not available Not available Viscosity Explosive properties not applicable Oxidising properties not applicable

9.2. Other information

Total solids (250°C / 482°F) 100,00 %

SECTION 10. Stability and reactivity

10.1. Reactivity

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

SODIUM DITHIONITE

Danger of spontaneous combustion! Self-ignition possible due to air moisture. Risk of dust explosion.

10.2. Chemical stability

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

SODIUM DITHIONITE

In case of decomposition in closed containers and tubes risk of bursting due to buildup of overpressure.

1,10-PHENANTHROLINE

Sensitivity to light.

10.3. Possibility of hazardous reactions

The powders are potentially explosive when mixed with air.

@EPY 10.1.6 - SDS 1004.13



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

SODIUM METABISULFITE

Generates dangerous gases or fumes in contact with: acids. Exothermic reaction with: Oxidizing agents, nitrites, nitrates, Sulphides.

SODIUM DITHIONITE

A risk of explosion and/or of toxic gas formation exists with the following substances: acids, Violent reactions possible with: Oxidizing agents, Water, salts of oxyhalogenic acids.

1,10-PHENANTHROLINE

Violent reactions possible with: Oxidizing agents, acids.

10.4. Conditions to avoid

Avoid environmental dust build-up.

SODIUM DITHIONITE

Exposure to moisture. Heating (decomposition). Caution! Temperatures > 50°C cause evolution of gas in closed containers. Overpressure produces a risk of bursting.

10.5. Incompatible materials

Information not available

10.6. Hazardous decomposition products

Information not available

SECTION 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 toxicological effects

SODIUM METABISULFITE

Eye irritation, Rabbit, Result: Eye irritation, Causes serious eye damage.

SODIUM DITHIONITE

Acute inhalation toxicity, Symptoms: Irritation symptoms in the respiratory tract, Cough, Shortness of breath - Skin irritation rabbit, Result: No irritation - Eye irritation, Possible damages: slight irritation - Sensitisation, May produce an allergic reaction.

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

Information not available

Interactive effects

Information not available

ACUTE TOXICITY

ATE (Inhalation) of the mixture:

ATE (Oral) of the mixture:

Not classified (no significant component)
1297,75 mg/kg

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

SODIUM METABISULFITE

LD50 (Oral) 1540 mg/kg Rat > 2000 mg/kg Rat

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SECTION 11. Toxicological information .../>>

1,10-PHENANTHROLINE

LD50 (Oral)

132 mg/kg Rat

SODIUM DITHIONITE

LD50 (Oral)

2500 mg/kg Rat

SKIN CORROSION / IRRITATION

Does not meet the classification criteria for this hazard class

SERIOUS EYE DAMAGE / IRRITATION

Causes serious eye damage

RESPIRATORY OR SKIN SENSITISATION

Does not meet the classification criteria for this hazard class

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

STOT - REPEATED EXPOSURE

Does not meet the classification criteria for this hazard class

ASPIRATION HAZARD

Does not meet the classification criteria for this hazard class

SECTION 12. Ecological information

This product is dangerous for the environment and the aquatic organisms. In the long term, it have negative effects on aquatic environment.

12.1. Toxicity

SODIUM METABISULFITE

EC50 - for Crustacea 89 mg/l/48h Daphnia magna

EC50 - for Algae / Aquatic Plants 48 mg/l/72h Desmodesmus subspicatus

SODIUM DITHIONITE

LC50 - for Fish46 mg/l/96h Leuciscus idusEC50 - for Crustacea98 mg/l/48h Daphnia magnaEC50 - for Algae / Aquatic Plants206 mg/l/72h Green algae

12.2. Persistence and degradability

SODIUM METABISULFITE

Solubility in water > 10000 mg/l

Degradability: information not available

SODIUM DITHIONITE

Solubility in water > 10000 mg/l

Degradability: information not available

EPY 10.1.6 - SDS 1004.13



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SECTION 12. Ecological information .../>>

12.3. Bioaccumulative potential

SODIUM METABISULFITE

Partition coefficient: n-octanol/water -3,7 Log Kow

1,10-PHENANTHROLINE

Partition coefficient: n-octanol/water 1,78 Log Kow

SODIUM DITHIONITE

Partition coefficient: n-octanol/water < -4,7 Log Kow

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. Other adverse effects

SODIUM DITHIONITE

Biological effects: Reacts with water to form toxic decomposition products.

SECTION 13. Disposal considerations

13.1. Waste treatment methods

Reuse, when possible. Product residues should be considered special hazardous waste. The hazard level of waste containing this product should be evaluated according to applicable regulations.

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

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. Transport in bulk according to Annex II of Marpol and the IBC Code

Information not relevant



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SECTION 15. Regulatory information

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

Seveso Category - Directive 2012/18/EC: N

Restrictions relating to the product or contained substances pursuant to Annex XVII to EC Regulation 1907/2006

None

Substances in Candidate List (Art. 59 REACH)

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)

None

Substances subject to exportation reporting pursuant to (EC) Reg. 649/2012:

None

Substances subject to the Rotterdam Convention:

None

Substances subject to the Stockholm Convention:

None

Healthcare controls

Workers exposed to this chemical agent must not undergo health checks, provided that available risk-assessment data prove that the risks related to the workers' health and safety are modest and that the 98/24/EC directive is respected.

German regulation on the classification of substances hazardous to water (AwSV, vom 18. April 2017)

WGK 1: Low hazard to waters

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:

Self-heat. 1 Self-heating substance or mixture, category 1

Acute Tox. 3 Acute toxicity, category 3
Acute Tox. 4 Acute toxicity, category 4
Eye Dam. 1 Serious eye damage, category 1

Aquatic Acute 1 Hazardous to the aquatic environment, acute toxicity, category 1
Aquatic Chronic 1 Hazardous to the aquatic environment, chronic toxicity, category 1
Aquatic Chronic 3 Hazardous to the aquatic environment, chronic toxicity, category 3

H251Self-heating: may catch fire.H301Toxic if swallowed.H302Harmful if swallowed.H318Causes serious eye damage.H400Very toxic to aquatic life.

H410 Very toxic to aquatic life with long lasting effects.
H412 Harmful to aquatic life with long lasting effects.

EUH031 Contact with acids liberates toxic gas.

LEGEND:

- ADR: European Agreement concerning the carriage of Dangerous goods by Road
- CAS NUMBER: Chemical Abstract Service Number
- CE50: Effective concentration (required to induce a 50% effect)
- CE NUMBER: Identifier in ESIS (European archive of existing substances)
- CLP: EC Regulation 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%



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SECTION 16. Other information

- IMDG: International Maritime Code for dangerous goods- IMO: International Maritime Organization
- INDEX NUMBER: 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: EC Regulation 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 STEL: Short-term exposure limit
- TWA: Time-weighted average exposure limit
- 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) 790/2009 (I Atp. CLP) of the European Parliament
- 4. Regulation (EU) 2015/830 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) 2018/1480 (XIII Atp. CLP)
- 16. Regulation (EU) 2019/521 (XII Atp. CLP)
- 17. Regulation (EU) 2019/1148
- 18. Regulation (EU) 2020/217 (XIV 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:



Revision nr.4 Dated 30/09/2020 Printed on 22/06/2021 Page n. 12 / 12 Replaced revision:3 (Dated 24/06/2020) ΕN

SECTION 16. Other information .../>>

The following sections were modified: 08 / 09. @EPY 10.1.6 - SDS 1004.13