

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	V83708
Product name	MINI MARKER INK (BLACK)

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

Intended use
Water-based ink of markers for use in recreational activities. Consumer use.

1.3 Details of the supplier of the Information Sheet

Company name	CLEMENTONI SPA
Full address	ZONA INDUSTRIALE FONTENOCE
Town	RECANATI
Postal code	62019
Province	MC
Country	Italy
Phone number	07175811 - Opening hours: 08:30 - 17:30
e-mail address of the competent person responsible for the Information Sheet	info@clementoni.it

1.4 Emergency telephone number

For urgent inquiries refer to	Telephone numbers for the main European poison control centres (open 24/7) • European emergency number: 112 • France: +33 145425959 - Paris Poison Control Centre • Germany: +49 3019240 - Berlin Poison Control Centre • Spain: +34 915620420 - Toxicology Information Service • Netherlands: +31 302748888 - Dutch Poisons Information Centre • CHEMTREC (UK): +44 2032398700 • Poison Control Centre – Bambino Gesù Children's Hospital (Rome): +39 06 68593726 • Poison Control Centre – Cardarelli Hospital (Naples): +39 081 5453333 • Poison Control Centre – Careggi University Hospital (Florence): +39 055 7947819 • Poison Control Centre – Niguarda Ca' Granda Hospital (Milan): +39 02 66101029
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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).

Hazard classification
None

2.2 Label elements

Hazard pictograms

None

Signal word

None

Hazard statements

None

Precautionary statements

None

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%.

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

3 Composition/information on ingredients

3.2 Mixtures

WATER

Concentration	$80 \leq x < 100 \%$
CAS number	7732-18-5
EC number	231-791-2

GLYCEROL

Concentration	$9 \leq x < 14 \%$
CAS number	56-81-5
EC number	200-289-5

Disodium 4-amino-3,6-bis[[4-[(2,4-diaminophenyl)azo]phenyl]azo]-5-hydroxynaphthalene-2,7-disulphonate

Concentration	$4.5 \leq x < 7 \%$
CAS number	6428-31-5
EC number	229-208-1

2-PHENOXYETHANOL

Concentration	$0.5 \leq x < 1 \%$
CAS number	122-99-6
EC number	204-589-7
INDEX number	603-098-00-9
Hazard classification	- Acute Tox. 4; H302 - Eye Dam. 1; H318 - STOT SE 3; H335

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 effects requiring implementation of special first aid measures are expected. The following information represents practical indications of correct behaviour in the event of contact with a chemical product, even if not hazardous.

In case of doubt or in the presence of symptoms contact a doctor and show him this document.

In case of more severe symptoms, ask for immediate medical aid.

EYES: Wash immediately and thoroughly with running water. Get medical advice if you feel symptoms.

SKIN: Wash with plenty of water. Get medical advice if you feel symptoms.

INGESTION: Do not induce vomiting unless explicitly authorised by a doctor. Do not give anything by mouth to an unconscious person. Get medical advice.

INHALATION: Remove to open air. Get medical advice if you feel symptoms.

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

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

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 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).

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6 Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Block the leakage if there is no hazard.

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 into a suitable container. Evaluate the compatibility of the container to be used, by checking section 10.

Absorb the remainder with inert absorbent material.

Make sure the leakage site is well aired. 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 information sheet. Avoid leakage of the product into the environment. 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. Store the containers sealed, in a well ventilated place, away from direct sunlight. Keep containers away from any incompatible materials, see section 10 for details.

Storage class TRGS 510 (Germany)

None

7.3 Specific end use(s)

Information not available.

8 Exposure controls/personal protection

8.1 Control parameters

Regulatory references

Ireland-OELV	2020 Code of Practice for the Safety, Health and Welfare at Work (Chemical Agents) Regulations (2001-2015) and the Safety, Health and Welfare at Work (Carcinogens) Regulations (2001-2019)
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2-PHENOXYETHANOL

Predicted no-effect concentration - PNEC

Normal value of STP microorganisms	36 mg/l
Normal value in fresh water	0.943 mg/l

Predicted no-effect concentration - PNEC

Normal value for fresh water sediment	7,237 mg/kg/d
Normal value in marine water	0.094 mg/l
Normal value for marine water sediment	0.724 mg/kg/d
Normal value for the terrestrial compartment	1.31 mg/kg/d
Normal value for the atmosphere	No hazard identified
Normal value for fresh water, intermittent release	3.44 mg/l

Health - Derived no-effect level - DNEL / DMEL
Local effect
Systemic effect

Consumers, short-term, dermal	No hazard identified	No hazard identified
Consumers, short-term, inhalation	No hazard identified	No hazard identified
Consumers, short-term, oral		9.23 mg/kg bw/d
Consumers, long-term, dermal	No hazard identified	10.42 mg/kg bw/d
Consumers, long-term, inhalation	2.41 mg/m ³	2.41 mg/m ³
Consumers, long-term, oral		9.23 mg/kg bw/d
Workers, short-term, dermal	No hazard identified	No hazard identified
Workers, short-term, inhalation	No hazard identified	No hazard identified
Workers, long-term, dermal	No hazard identified	20.83 mg/kg bw/d
Workers, long-term, inhalation	5.7 mg/m ³	5.7 mg/m ³

GLYCEROL

	TWA		STEL		CEILING		Remarks
	mg/m ³	ppm	mg/m ³	ppm	mg/m ³	ppm	
Ireland-OELV	10						--

Predicted no-effect concentration - PNEC

Normal value of STP microorganisms	No hazard identified
Normal value in fresh water	No hazard identified
Normal value for fresh water sediment	No hazard identified
Normal value in marine water	No hazard identified
Normal value for marine water sediment	No hazard identified
Normal value for the terrestrial compartment	No hazard identified
Normal value for the atmosphere	No hazard identified
Normal value for fresh water, intermittent release	No hazard identified
Normal value for marine water, intermittent release	No hazard identified

Health - Derived no-effect level - DNEL / DMEL
Local effect
Systemic effect

Consumers, short-term, dermal	No hazard identified	No hazard identified
Consumers, short-term, inhalation	No hazard identified	No hazard identified
Consumers, short-term, oral		No hazard identified
Consumers, long-term, dermal	No hazard identified	No hazard identified
Consumers, long-term, inhalation	No hazard identified	No hazard identified
Consumers, long-term, oral		No hazard identified
Workers, short-term, dermal	No hazard identified	No hazard identified
Workers, short-term, inhalation	No hazard identified	No hazard identified
Workers, long-term, dermal	No hazard identified	No hazard identified
Workers, long-term, inhalation	No hazard identified	No hazard identified

Disodium 4-amino-3,6-bis[[4-[(2,4-diaminophenyl)azo]phenyl]azo]-5-hydroxynaphthalene-2,7-disulphonate

Predicted no-effect concentration - PNEC	
Normal value of STP microorganisms	1 mg/l
Normal value in fresh water	876 µg/l
Normal value for fresh water sediment	746 µg/kg
Normal value in marine water	87.6 µg/l
Normal value for marine water sediment	74.6 µg/kg
Normal value for the terrestrial compartment	152 µg/kg
Normal value for the atmosphere	No hazard identified
Normal value for fresh water, intermittent release	8.76 mg/l

Health - Derived no-effect level - DNEL / DMEL	Local effect	Systemic effect
Consumers, short-term, dermal		No hazard identified
Consumers, short-term, inhalation		No hazard identified
Consumers, short-term, oral		No hazard identified
Consumers, long-term, dermal	No hazard identified	133 µg/kg
Consumers, long-term, inhalation	No hazard identified	232 µg/m ³
Consumers, long-term, oral		133 µg/kg
Workers, short-term, dermal	No hazard identified	No hazard identified
Workers, short-term, inhalation	No hazard identified	No hazard identified
Workers, long-term, dermal	No hazard identified	373 µg/kg
Workers, long-term, inhalation	No hazard identified	1.32 mg/m ³

8.2 Exposure controls

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

When choosing risk management measures and operating conditions, consult the exposure scenarios attached.

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 A 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.

9 Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	liquid	
Colour	black	
Odour	odourless	
Odour threshold	Not relevant	
Melting point / freezing point	Not determined	
Initial boiling point	100 °C (212 °F)	
Flammability	not flammable	
Lower explosive limit	Not determined	
Upper explosive limit	Not determined	
Flash point	> 191 °C (> 375.8 °F)	
Auto-ignition temperature	400 °C (752 °F)	Substance: GLYCEROL
Decomposition temperature	> 290 °C (> 554 °F)	Substance: GLYCEROL
pH	Not determined	
Kinematic viscosity	Not determined	
Solubility	soluble in water	
Partition coefficient: n-octanol/water	Not applicable	
Vapour pressure	2.2778 kPa	
Density and/or relative density	1.0514 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	not oxidizing	
Total solids 250°C	15 %	

10 Stability and reactivity

10.1 Reactivity

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

2-PHENOXYETHANOL

In water at 1% reacts to form a weak acid (pH=6).

10.2 Chemical stability

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

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10.3 Possibility of hazardous reactions

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

10.4 Conditions to avoid

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

10.5 Incompatible materials

2-PHENOXYETHANOL

Incompatible with: strong oxidants

10.6 Hazardous decomposition products

Information not available.

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

Information not available.

11.1.2 Information on likely routes of exposure

Information not available.

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

2-PHENOXYETHANOL

LD50 (Oral):	1,394 mg/kg	Species/guidelines: Rat
LD50 (Dermal):	2,214 mg/kg	Species/guidelines: rabbit

GLYCEROL

LD50 (Oral):	> 10,000 mg/kg	Species/guidelines: Rat
LD50 (Dermal):	56,570 mg/kg	Species/guidelines: Guinea pig
LC50 (Inhalation mists/powders):	> 5 mg/l	Exposure duration: 4 hours Species/guidelines: Rat

Disodium 4-amino-3,6-bis[[4-[(2,4-diaminophenyl)azo]phenyl]azo]-5-hydroxynaphthalene-2,7-disulphonate

LD50 (Oral):	2,000 mg/kg	
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11.1.6 SKIN CORROSION/IRRITATION

Does not meet the classification criteria for this hazard class

11.1.7 SERIOUS EYE DAMAGE / IRRITATION

Does not meet the classification criteria for this hazard class

11.1.8 RESPIRATORY OR SKIN SENSITISATION

Does not meet the classification criteria for this hazard class

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

11.1.11 REPRODUCTIVE TOXICITY

Does not meet the classification criteria for this hazard class

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**2-PHENOXYETHANOL**

EC50 - for Crustacea	488 mg/l	Exposure duration: 48 hours Species/guidelines: daphnia magna
LC50 - for Fish	344 mg/l	Exposure duration: 96 hours Species/guidelines: pimephales promelas
EC50 - for Algae / Aquatic Plants	100 mg/l	Exposure duration: 72 hours Species/guidelines: Desmodesmus subspicatus
Chronic NOEC for Fish	23 mg/l	Species/guidelines: pimephales promelas
Chronic NOEC for Crustacea	9.43 mg/l	Species/guidelines: daphnia magna
Chronic NOEC for Algae / Aquatic Plants	46 mg/l	Species/guidelines: Desmodesmus subspicatus

GLYCEROL

EC50 - for Crustacea	2,000 mg/l	Exposure duration: 48 hours
LC50 - for Fish	11 mg/l	Exposure duration: 96 hours
EC50 - for Algae / Aquatic Plants	2,900 mg/l	Exposure duration: 72 hours

Disodium 4-amino-3,6-bis[[4-[(2,4-diaminophenyl)azo]phenyl]azo]-5-hydroxynaphthalene-2,7-disulphonate

EC50 - for Crustacea	> 100 mg/l	Exposure duration: 48 hours
LC50 - for Fish	1 g/l	Exposure duration: 48 hours
EC50 - for Algae / Aquatic Plants	> 12.988 mg/l	Exposure duration: 72 hours

12.2 Persistence and degradability**2-PHENOXYETHANOL**

Solubility in water	25,000 mg/l	
Degradability	Rapidly degradable	

GLYCEROL

Solubility in water	1,000,000 mg/l	
Degradability	Rapidly degradable	

Disodium 4-amino-3,6-bis[[4-[(2,4-diaminophenyl)azo]phenyl]azo]-5-hydroxynaphthalene-2,7-disulphonate

Solubility in water	22.67 g/l	
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12.3 Bioaccumulative potential**2-PHENOXYETHANOL**

Bioconcentration factor	0.3493	
Partition coefficient n-octanol/water	1.2 LogKow	

GLYCEROL

Partition coefficient n-octanol/water	-1.75 LogKow	
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Disodium 4-amino-3,6-bis[[4-[(2,4-diaminophenyl)azo]phenyl]azo]-5-hydroxynaphthalene-2,7-disulphonate

Bioconcentration factor	3.162	
Partition coefficient n-octanol/water	-1.5 LogKow	

12.4 Mobility in soil**2-PHENOXYETHANOL**

Partition coefficient soil/water	0.207 LogKoc	
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Disodium 4-amino-3,6-bis[[4-[(2,4-diaminophenyl)azo]phenyl]azo]-5-hydroxynaphthalene-2,7-disulphonate

Partition coefficient soil/water	12.6 LogKoc	
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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.

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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.
The management of waste arising from the use or dispersal of this product must be organised in accordance with occupational safety regulations. See section 8 for possible need for PPE.
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

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

Product restrictions	--
Contained substance	
	75

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

Not applicable

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 $\geq$ 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 not been performed for the preparation/for the substances indicated in section 3.

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

Acute Tox. 4	Acute toxicity, category 4
Eye Dam. 1	Serious eye damage, category 1
STOT SE 3	Specific target organ toxicity - single exposure, category 3
H302	Harmful if swallowed.
H318	Causes serious eye damage.
H335	May cause respiratory irritation.

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

Legend

- 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
- 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 (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)
23. Delegated Regulation (EU) 2023/707
24. Delegated Regulation (EU) 2023/1434 (XIX ATP CLP)
25. Delegated Regulation (EU) 2023/1435 (XX ATP CLP)
26. Delegated Regulation (EU) 2024/197 (XXI ATP CLP)
27. Delegated Regulation (EU) 2024/2564 (XXII ATP CLP)
28. Regulation (EU) 2024/2865
29. Delegated Regulation (EU) 2025/1222 (XXIII ATP CLP)

General Bibliography

- 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.