

S.C. ink Black 433C**Safety Data Sheet****SECTION 1. Identification of the substance/mixture and of the company/undertaking****1.1. Product identifier**

Name S.C. ink Black 433C

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

Description /Use Ink for use in recreational activities. Consumer use.

1.3. Information on the supplier of the safety data sheet

Company	CLEMENTONI Spa	
Address	ZONA INDUSTRIALE FONTENOCE	
	62019 RECANATI	(MC)
	ITALIA	Opening hours: 08:30 - 12:30, 13:30 - 17:30
	tel. 071 75811	
	fax 071 758123	
e-mail of the competent person responsible for the safety data sheet	info@clementoni.it	
Responsible for placing on the market:	Reparto Tecnico	

1.4. Emergency telephone number (Italy)

For urgent information contact	Centro Antiveleni - Osp. Pediatrico Bambino Gesù - Dip. Emergenza e Accettazione DEA - Roma - Tel. 06 68593726 Centro Antiveleni - Azienda Ospedaliera Universitaria - Foggia - Tel. 800183459 Centro Antiveleni - Azienda Ospedaliera A. Cardarelli - Napoli - Tel. 081 5453333 Centro Antiveleni - Policlinico Umberto I - Roma - Tel. 06 49978000 Centro Antiveleni - Policlinico A. Gemelli - Roma - Tel. 06 3054343 Centro Antiveleni - Azienda Ospedaliera Careggi U.O. Tossicologia Medica - Firenze - Tel. 055 7947819 Centro Antiveleni - Centro Nazionale di Informazione Tossicologica - Pavia - Tel. 0382 24444 Centro Antiveleni - Ospedale Niguarda Cà Granda - Milano - Tel. 02 66101029 Centro Antiveleni - Azienda Ospedaliera Papa Giovanni XXII - Bergamo - Tel. 800883300 Centro Antiveleni - Azienda Ospedaliera Integrata Verona - Verona - Tel. 800011858
--------------------------------	---

SECTION 2. Hazards identification**2.1. Classification of the substance or mixture**

The product is not classified as dangerous under the provisions of Regulation (EC) 1272/2008 (CLP) (as amended and adapted).

Classification and hazard statements	The product is not classified as dangerous under the provisions of Regulation (EC) 1272/2008 (CLP) (as amended and adapted).
--------------------------------------	--

2.2. Label elements

Hazard pictograms: None

Warnings: None

Hazard Statements: None

Precautionary advice: None

2.3. Other dangers

	CLEMENTONI SPA S.C. ink Black 433C	Revision No. 1 Revision date 11/03/2025 New issue Printed on 11/03/2025 Page no. 2 / 12 EN																																																															
SECTION 2. Hazards identification ... / >>																																																																	
According to the available data, the product does not contain PBT or vPvB substances in a proportion $\geq 0.1\%$. The product does not contain substances with endocrine-disrupting properties in concentrations $\geq 0.1\%$.																																																																	
SECTION 3. Composition / information on ingredients																																																																	
3.1. Substance Not relevant information 3.2. Mixture Contains: <table> <thead> <tr> <th>Identification</th><th>x = Conc. %</th><th>Classification 1272/2008 (CLP)</th></tr> </thead> <tbody> <tr> <td colspan="3">GLYCEROL</td></tr> <tr> <td>INDEX</td><td>$9 \leq x < 10,5$</td><td></td></tr> <tr> <td>CE 200-289-5</td><td></td><td></td></tr> <tr> <td>CAS 56-81-5</td><td></td><td></td></tr> <tr> <td colspan="3">Trisodium 1-(1-naphthylazo)-2hydroxynaphthalene-4',6,8-trisulphonate</td></tr> <tr> <td>INDEX</td><td>$3 \leq x < 3,5$</td><td></td></tr> <tr> <td>CE 220-036-2</td><td></td><td></td></tr> <tr> <td>CAS 2611-82-7</td><td></td><td></td></tr> <tr> <td colspan="3">FOOD BLUE 002</td></tr> <tr> <td>INDEX</td><td>$2 \leq x < 2,5$</td><td></td></tr> <tr> <td>CE 223-339-8</td><td></td><td></td></tr> <tr> <td>CAS 3844-45-9</td><td></td><td></td></tr> <tr> <td colspan="3">Acid Yellow 23</td></tr> <tr> <td>INDEX</td><td>$1 \leq x < 1,5$</td><td></td></tr> <tr> <td>CE 217-699-5</td><td></td><td></td></tr> <tr> <td>CAS 1934-21-0</td><td></td><td></td></tr> <tr> <td colspan="3">SODIUM BENZOATE</td></tr> <tr> <td>INDEX</td><td>$0,1 \leq x < 0,15$</td><td>Acute Tox. 4 H302</td></tr> <tr> <td>CE 208-534-8</td><td></td><td>LD50 Orale: 2000 mg/kg</td></tr> <tr> <td>CAS 532-32-1</td><td></td><td></td></tr> </tbody> </table> The full text of the hazard statements (H) is given in section 16 of the sheet.			Identification	x = Conc. %	Classification 1272/2008 (CLP)	GLYCEROL			INDEX	$9 \leq x < 10,5$		CE 200-289-5			CAS 56-81-5			Trisodium 1-(1-naphthylazo)-2hydroxynaphthalene-4',6,8-trisulphonate			INDEX	$3 \leq x < 3,5$		CE 220-036-2			CAS 2611-82-7			FOOD BLUE 002			INDEX	$2 \leq x < 2,5$		CE 223-339-8			CAS 3844-45-9			Acid Yellow 23			INDEX	$1 \leq x < 1,5$		CE 217-699-5			CAS 1934-21-0			SODIUM BENZOATE			INDEX	$0,1 \leq x < 0,15$	Acute Tox. 4 H302	CE 208-534-8		LD50 Orale: 2000 mg/kg	CAS 532-32-1		
Identification	x = Conc. %	Classification 1272/2008 (CLP)																																																															
GLYCEROL																																																																	
INDEX	$9 \leq x < 10,5$																																																																
CE 200-289-5																																																																	
CAS 56-81-5																																																																	
Trisodium 1-(1-naphthylazo)-2hydroxynaphthalene-4',6,8-trisulphonate																																																																	
INDEX	$3 \leq x < 3,5$																																																																
CE 220-036-2																																																																	
CAS 2611-82-7																																																																	
FOOD BLUE 002																																																																	
INDEX	$2 \leq x < 2,5$																																																																
CE 223-339-8																																																																	
CAS 3844-45-9																																																																	
Acid Yellow 23																																																																	
INDEX	$1 \leq x < 1,5$																																																																
CE 217-699-5																																																																	
CAS 1934-21-0																																																																	
SODIUM BENZOATE																																																																	
INDEX	$0,1 \leq x < 0,15$	Acute Tox. 4 H302																																																															
CE 208-534-8		LD50 Orale: 2000 mg/kg																																																															
CAS 532-32-1																																																																	
SECTION 4. First aid measures																																																																	
4.1. Description of first aid measures No effects are expected to require special first aid measures. The following information is a practical guide to correct behaviour in case of contact with a chemical, even a non-hazardous one. If in doubt or if symptoms occur, contact a doctor and show him/her this document. In case of more serious symptoms, call 118 for immediate medical help. <u>Protection of rescuers</u> It is good practice for the rescuer providing aid to a person who has been exposed to a chemical substance or mixture to wear personal protective equipment. The nature of such protection depends on the hazardous nature of the substance or mixture, the mode of exposure and the extent of contamination. In the absence of other more specific guidance, it is recommended to use disposable gloves in case of possible contact with biological liquids. Refer to section 8 for the type of PPE suitable for the characteristics of the substance or mixture. 4.2. Most important symptoms and effects, both acute and delayed No specific information is known about symptoms and effects caused by the product. 4.3. Indication of any need to immediately consult a doctor and special treatments In case of symptoms, whether acute or delayed, consult a doctor. <u>Means to be available at the workplace for specific and immediate treatment</u> Running water for skin and eye wash.																																																																	

SECTION 5. Firefighting measures

5.1. Extinguishing media

SUITABLE EXTINGUISHING MEDIA

The extinguishing media are the traditional ones: carbon dioxide, foam, powder and water fog.

UNSUITABLE EXTINGUISHING MEDIA

None in particular.

5.2. Special hazards arising from the substance or mixture

EXPOSURE HAZARDS IN CASE OF FIRE

Avoid breathing in combustion products.

5.3. Advice for firefighters

GENERAL INFORMATION

Cool containers with water jets to prevent decomposition of the product and the development of substances potentially hazardous to health.

Always wear full fire protection equipment. Collect extinguishing water which must not be discharged into the sewers. Dispose of contaminated extinguishing water and fire residue in accordance with current regulations.

EQUIPMENT

Normal fire-fighting clothing, such as an open-circuit self-contained breathing apparatus (EN 137), flame-proof suit (EN469), flame-proof gloves (EN 659) and firefighter's boots (HO A29 or A30).

SECTION 6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

In the case of vapours or airborne dusts, use respiratory protection. These instructions apply to both workers and emergency workers.

6.2. Environmental precautions

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

6.3. Methods and materials for containment and cleaning up

Embank with soil or inert material. Collect most of the material and remove the residue with water jets. Disposal of contaminated material should be carried out in accordance with the provisions of Section 13.

6.4. Reference to other sections

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

SECTION 7. Handling and storage

7.1. Precautions for safe handling

Handle the product after consulting all other sections of this information sheet. Avoid dispersing the product in the environment.

Do not eat, drink or smoke during use. Remove contaminated clothing and protective equipment before entering eating areas.

7.2. Conditions for safe storage, including any incompatibilities

Keep product in clearly labelled containers. Keep containers away from any incompatible materials, check section 10.

7.3. Specific end use(s)

Ink for use in play activities. When handling and storing the product, observe the precautions in sections 7.1 and 7.2 of this document.

SECTION 8. Exposure controls/personal protection

8.1. Control parameters

Normative references:

TLV-ACGIH

ACGIH 2023

GLYCEROL

Predicted No Effect Concentration on the Environment - PNEC

Reference value in fresh water	NPI
Reference value in seawater	NPI
Freshwater sediment reference value	NPI
Reference value for sediments in seawater	NPI
Reference value for seawater, intermittent release	NPI
Freshwater reference value, intermittent release	NPI
Reference value for STP microorganisms	NPI
Reference value for the terrestrial compartment	NPI
Reference value for the atmosphere	NPI

Health - Derived no-effect level - DNEL / DMEL

Route of Exposure	Effects on consumers		Effects on workers					
	Local acute	Systemic acute	Local chronic	Systemic chronic	Local acute	Systemic acute	Local chronic	Systemic chronic
Oral		NPI		NPI				
Inhalation	NPI	NPI	NPI	NPI	NPI	NPI	NPI	NPI
Dermal	NPI	NPI	NPI	NPI	NPI	NPI	NPI	NPI

Trisodium 1-(1-naphthylazo)-2-hydroxynaphthalene-4',6,8-trisulphonate

Predicted No Effect Concentration on the Environment - PNEC

Reference value in fresh water	0,1	mg/l
Reference value in seawater	0,01	mg/l
Freshwater sediment reference value	0,392	mg/kg/d
Reference value for sediments in seawater	0,0392	mg/kg/d
Reference value for seawater, intermittent release	1	mg/l
Reference value for STP microorganisms	10	mg/l
Reference value for the terrestrial compartment	0,0197	mg/kg/d
Reference value for the atmosphere	NPI	

Health - Derived no-effect level - DNEL / DMEL

Route of Exposure	Effects on consumers		Effects on workers					
	Local acute	Systemic acute	Local chronic	Systemic chronic	Local acute	Systemic acute	Local chronic	Systemic chronic
Oral		NEA		2,5 mg/kg bw/d				
Inhalation	NPI	NPI	NPI	3,7 mg/m3	NPI	NPI	NPI	24,7 mg/m3
Dermal	NPI	NPI	NPI	2,5 mg/kg bw/d	NPI	NPI	NPI	7 mg/kg bw/d

SECTION 8. Exposure controls/personal protection ... / >>

FOOD BLUE 002

Predicted No Effect Concentration on the Environment - PNEC

Reference value in fresh water	0,1	mg/l
Reference value in seawater	0,01	mg/l
Freshwater sediment reference value	NPI	
Reference value for sediments in seawater	NPI	
Reference value for seawater, intermittent release	1	mg/l
Freshwater reference value, intermittent release	0,1	mg/l
Reference value for STP microorganisms	100	mg/l
Reference value for the terrestrial compartment	NPI	
Reference value for the atmosphere	NPI	

Health - Derived no-effect level - DNEL / DMEL

Route of Exposure	Effects on consumers		Local chronic	Systemic chronic	Effects on workers			
	Local acute	Systemic acute			Local acute	Systemic acute	Local chronic	Systemic chronic
Oral		NPI		6 mg/kg bw/d				
Inhalation			LOW	18,7 mg/m3			LOW	106 mg/m3
Dermal	NPI	NPI	LOW	10,7 mg/kg bw/d	NPI	NPI	LOW	30 mg/kg bw/d

Acid Yellow 23

Predicted No Effect Concentration on the Environment - PNEC

Reference value in fresh water	0,12	mg/l
Reference value in seawater	0,012	mg/l
Freshwater sediment reference value	0,47	mg/kg/d
Reference value for sediments in seawater	0,047	mg/kg/d
Reference value for water, intermittent release	1,2	mg/l
Reference value for STP microorganisms	10	mg/l
Reference value for the terrestrial compartment	0,024	mg/kg/d
Reference value for the atmosphere	NPI	

Health - Derived no-effect level - DNEL / DMEL

Route of Exposure	Effects on consumers		Local chronic	Systemic chronic	Effects on workers			
	Local acute	Systemic acute			Local acute	Systemic acute	Local chronic	Systemic chronic
Oral		NPI		26,41 mg/kg bw/d				
Inhalation	NPI	NPI	NPI	91,86 mg/m3	NPI	NPI	NPI	372,52 mg/m3
Dermal	NPI	NPI	NPI	26,41 mg/kg bw/d	NPI	NPI	NPI	52,82 mg/kg bw/d

Clementoni

SECTION 9. Physical and chemical properties ... / >>

Auto-ignition temperature	not determined
Decomposition temperature	not determined
pH	4-9
Kinematic viscosity	not determined
Solubility	miscible in water and miscible in organic solvents
Partition coefficient: n-octanol/water	not determined
Vapour pressure	not determined
Density and/or Relative density	not determined
Relative vapour density	> 1
Particle characteristics	not applicable

9.2. Other information**9.2.1. Information regarding physical hazard classes**

Information not available

9.2.2. Additional safety features

Total solids (250°C / 482°F)	6,70 %
VOC (Directive 2010/75/EU)	10,00 %
VOC (volatile carbon)	3,91 %
Explosive properties	the product does not present an explosion hazard

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

There are no particular dangers of reaction with other substances under normal conditions of use.

10.2. Chemical stability

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

10.3. Possibility of dangerous reactions

Under normal use and storage conditions, no hazardous reactions are to be expected.

10.4. Conditions to avoid

None in particular. However, observe the usual precautions with chemicals.

10.5. Incompatible materials

No incompatible materials are known.

10.6. Hazardous decomposition products

No hazardous decomposition products are known.

SECTION 11. Toxicological information**11.1. Information on the hazard classes defined in Regulation (CE) No. 1272/2008**Metabolism, kinetics, mechanism of action and other information

Non sono note ulteriori informazioni.

Information on likely routes of exposure

There are no notes other than those given in section 4.

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

SECTION 11. Toxicological information ... / >>

There are no notes other than those given in section 4.

Interactive effects

No information is known about interactive effects of the product.

ACUTE TOXICITY

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

GLYCEROL	
LD50 (Dermal):	45 ml/kg guinea pigs
LD50 (Oral):	> 11500 mg/kg
LC50 (Vapour Inhalation):	> 5,85 mg/l/4h rat

Trisodium 1-(1-naphthylazo)-2-hydroxynaphthalene-4',6,8-trisulphonate	
LD50 (Oral):	> 8000 mg/kg ratto

FOOD BLUE 002	
LD50 (Oral):	2000 mg/kg rat

Acid Yellow 23	
LD50 (Oral):	> 1000 mg/kg topo

SODIUM BENZOATE	
LD50 (Dermal):	2000 mg/kg rabbit
LD50 (Oral):	2000 mg/kg Rat
LC50 (Inhalation mists/dusts):	12,2 mg/l/4h rat

SKIN CORROSION / SKIN IRRITATION

Does not meet the classification criteria for this hazard class

SEVERE EYE DAMAGE / EYE IRRITATION

Does not meet the classification criteria for this hazard class

RESPIRATORY OR SKIN SENSITIZATION

Does not meet the classification criteria for this hazard class

MUTAGENICITY ON GERMINAL CELLS

Does not meet the classification criteria for this hazard class

CARCINOGENICITY

Does not meet the classification criteria for this hazard class

REPRODUCTION TOXICITY

Does not meet the classification criteria for this hazard class

SPECIFIC TARGET ORGAN TOXICITY (STOT) – SINGLE EXPOSURE

Does not meet the classification criteria for this hazard class

SPECIFIC TARGET ORGAN TOXICITY (STOT) – REPEATED EXPOSURE

Does not meet the classification criteria for this hazard class

DANGER IN CASE OF SUCTION

Does not meet the classification criteria for this hazard class

11.2. Information on other hazards

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

SECTION 12. Ecological information

Use according to good working practices, avoiding dispersion of the product in the environment. Notify the competent authorities if the product has reached waterways or contaminated soil or vegetation.

12.1. Toxicity**SODIUM BENZOATE**

LC50 - Fish	484 mg/l/96h
EC50 - Algae / Aquatic Plants	30,5 mg/l/72h
NOEC Chronic Crustaceans	5,81 mg/l

GLYCEROL

LC50 - Fish	54 g/l/96h
EC50 - Crustaceans	10 mg/l/48h

Acid Yellow 23

LC50 - Fish	> 120 mg/l/96h
EC50 - Crustaceans	> 125 mg/l/48h daphnia magna
EC50 - Algae / Aquatic Plants	> 125 mg/l/72h

FOOD BLUE 002

LC50 - Fish	132 mg/l/96h
EC50 - Crustaceans	100 mg/l/48h
EC50 - Algae / Aquatic Plants	200 mg/l/72h

Trisodium 1-(1-naphthylazo)-2-hydroxynaphthalene-4',6,8-trisulphonate

LC50 - Fish	> 1000 mg/l/96h danio rerio
EC50 - Crustaceans	> 100 mg/l/48h daphnia magna
NOEC Chronic Algae / Aquatic Plants	100 mg/l lemna

12.2. Persistence and degradability**SODIUM BENZOATE**

Solubility in water	> 10000 mg/l
Rapidly degradable	

GLYCEROL

Solubility in water	1000 g/l @25°C
Rapidly degradable	

Acid Yellow 23

Solubility in water	167,05 g/l
---------------------	------------

FOOD BLUE 002

Solubility in water	50 g/l
Not Rapidly degradable	

Trisodium 1-(1-naphthylazo)-2-hydroxynaphthalene-4',6,8-trisulphonate

Solubility in water	305,21 g/l
Not Rapidly degradable	

12.3. Bioaccumulation potential**SODIUM BENZOATE**

Partition coefficient: n-octanol/water	1,88
--	------

GLYCEROL

Partition coefficient: n-octanol/water	-1,75 Log Kow @25°C and pH 7,4
--	--------------------------------

Acid Yellow 23

Partition coefficient: n-octanol/water	-1,572 Log Kow
--	----------------

FOOD BLUE 002

Partition coefficient: n-octanol/water	2,02 Log Kow
--	--------------

	CLEMENTONI SPA S.C. ink Black 433C	Revision No. 1 Revision date 11/03/2025 New issue Printed on 11/03/2025 Page no. 10 / 12 EN
SECTION 12. Ecological information ... / >>		
Trisodium 1-(1-naphthylazo)-2hydroxynaphthalene-4',6,8-trisulphonate Partition coefficient: n-octanol/water -2,267 Log Kow		
12.4. Mobility in soil SODIUM BENZOATE Partition coefficient: soil/water 7,033 l/kg		
12.5. Results of PBT and vPvB assessment According to the available data, the product does not contain PBT or vPvB substances in a proportion ≥ 0.1 %.		
12.6. Properties of interference with the endocrine system According to the available data, the product does not contain any substances listed in the main European lists of potential or suspected endocrine disruptors with environmental effects under evaluation.		
12.7. Other adverse effects No information is known about other adverse effects of the chemical product.		
SECTION 13. Disposal considerations		
13.1. Waste treatment methods Reuse if possible. Product residues as such are to be considered special non-hazardous waste. Disposal must be entrusted to an authorised waste management company, in compliance with national and, if applicable, 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 the possible need for PPE. CONTAMINATED PACKAGING Contaminated packaging must be sent for recovery or disposal in accordance with national waste management regulations.		
SECTION 14. Transport information		
The product is not to be regarded as dangerous in the sense of the regulations in force for the transport of dangerous goods by road (A.D.R.), by rail (RID), by sea (IMDG Code) and by air (IATA).		
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. Packaging group not applicable		
14.5. Environmental hazards not applicable		
14.6. Special precautions for user not applicable		
14.7. Bulk shipping in accordance with IMO acts 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/EC: None

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

Substances contained

Point	75	Acid Yellow 23
Point	75	FOOD BLUE 002
Point	75	Trisodium 1-(1-naphthylazo)-2-hydroxynaphthalene-4',6,8-trisulphonate

Regulation (EU) 2019/1148 - on the marketing and use of explosives precursors
not applicable

Substances in Candidate List (Art. 59 REACH)

Based on available data, the product does not contain SVHC substances in percentage $\geq 0.1\%$.

Substances subject to authorization (Annex XIV REACH)

None

Substances subject to export notification obligation Reg. (EC) 649/2012:

None

Substances subject to the Rotterdam Convention:

None

Substances subject to the Stockholm Convention:

None

Sanitary checks

The product is not classified as hazardous under the provisions of Regulation (EC) 1272/2008 (CLP), but it is recommended that the subject be subjected to health checks in the event of the occurrence of adverse reactions due to exposure to the product.

Legislative Decree 152/2006 and subsequent amendments

Emissions according to Part V Annex I:

WATER 83,30 %

15.2. Chemical safety assessment

A chemical safety assessment has not been carried out for the mixture / for the substances listed in section 3.

SECTION 16. Other information

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

Acute Tox. 4 Acute toxicity, category 4
H302 Harmful if swallowed.

LEGEND:

- ADR: European Agreement concerning the Transport of Dangerous Goods by Road
- ATE / STA: Acute Toxicity Estimate
- CAS: Chemical Abstract Service number
- EC: Identification number in ESIS (European Database of Existing Substances)
- CLP: Regulation (EC) 1272/2008
- DNEL: Derived no-effect level
- EC50: Concentration giving effect to 50% of the test population
- EmS: Emergency Schedule
- GHS: Globally Harmonised System for the Classification and Labelling of Chemicals
- IATA DGR: International Air Transport Association Dangerous Goods Regulations
- IC50: Concentration giving effect to 50% of the test population
- IMDG: International Maritime Dangerous Goods Code
- IMO: International Maritime Organization
- INDEX: Identification number in Annex VI of CLP
- LC50: 50% Lethal concentration
- LD50: 50% Lethal dose

SECTION 16. Other information ... / >>

- 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 for the International Carriage of Dangerous Goods by Rail
- TLV: Threshold limit value
- TLV CEILING: Concentration not to be exceeded at any time during occupational exposure.
- TWA: Weighted Average Exposure Limit
- TWA STEL: Short-term exposure limit
- VOC: Volatile organic compound
- vPvB: Very persistent and very bioaccumulative
- vPvM: Very persistent and very mobile
- WGK: Aquatic hazard class (Germany).

GENERAL BIBLIOGRAPHY:

1. Regulation (EC) 1907/2006 of the European Parliament (REACH)
2. Regulation (EC) 1272/2008 of the European Parliament (CLP)
3. Regulation (EU) 2020/878 (Annex II REACH Regulation)
4. Regulation (EC) 790/2009 of the European Parliament (Atp. I CLP)
5. Regulation (EU) 286/2011 of the European Parliament (Atp. II CLP)
6. Regulation (EU) 618/2012 of the European Parliament (Atp. III CLP)
7. Regulation (EU) 487/2013 of the European Parliament (IV Atp. CLP)
8. Regulation (EU) 944/2013 of the European Parliament (V Atp. CLP)
9. Regulation (EU) 605/2014 of the European Parliament (VI Atp. CLP)
10. Regulation (EU) 2015/1221 of the European Parliament (VII Atp. CLP)
11. Regulation (EU) 2016/918 of the European Parliament (VIII Atp. CLP)
12. Regulation (EU) 2016/1179 (IX Atp. CLP)
13. Regulation (EU) 2017/776 (X Atp. CLP)
14. Regulation (EU) 2018/669 (XI Atp. CLP)
15. Regulation (EU) 2019/521 (XII Atp. CLP)
16. Delegated Regulation (EU) 2018/1480 (XIII Atp. CLP)
17. Regulation (EU) 2019/1148
18. Delegated Regulation (EU) 2020/217 (XIV Atp. CLP)
19. Delegated Regulation (EU) 2020/1182 (XV Atp. CLP)
20. Delegated Regulation (EU) 2021/643 (XVI ATP. CLP)
21. Delegated Regulation (EU) 2021/849 (XVII Atp. CLP)
22. Delegated Regulation (EU) 2022/692 (XVIII Atp. CLP)
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)

- 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 Agency Website
- Database of model SDS of chemical substances - Ministry of Health and Istituto Superiore di Sanità

Note to the user:

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

This document should not be construed as a guarantee of any specific product properties.

Since the use of the product is not under our direct control, it is the user's responsibility to observe the applicable laws and regulations regarding hygiene and safety. We accept no liability for improper use.

Appropriate training must be provided for personnel handling chemicals.

CLASSIFICATION CALCULATION METHODS

Chemical Physical Hazards: The classification of the product was derived from the criteria set out in the CLP Regulation Annex I Part 2. The assessment methods for the chemical-physical properties are given in section 9.

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

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