

## Safety Data Sheet

According to Annex II to REACH - Regulation (EU) 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: Flapper Juice Tobacco - Mirtil  
Product name: Aroma Concentrato - Mirtillo della Scandinavia

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

Intended use: not available

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

Name: L ERBORISTERIA SRL  
Full address: Via Frattamaggiore 22  
District and Country: 00132 Roma (Rm) Italia  
Tel.: +39 3934560139  
Fax: +39 0662209809

e-mail address of the competent person responsible for the Safety Data Sheet: info@latabaccheria.net

Supplier: Orlando D'Alessandro

#### 1.4. Emergency telephone number

For urgent inquiries refer to: For urgent information contact the Poison Center of Rome +39 06 3054343 (CAV Policlinico Gemelli - Rome)

Telephone numbers of the main Italian Poison Centers (active 24/24 hours)  
Poison Center of Pavia +39 0382 24444 (CAV IRCCS Fondazione Maugeri Pavia)  
Poison Center of Milan +39 02 66101029 (CAV Niguarda Ca' Granda Milano)  
Poison center of Bergamo +39 800 883300 (CAV Ospedali Riuniti - Bergamo)  
Poison center of Florence + 39 055 7947819 (CAV Hospital Careggi - Florence)  
Poison center of Rome +39 06 49978000 (CAV Policlinico Umberto I - Rome)

### 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.  
**EUH208** Contains: 4-Hydroxy-2,5-dimethyl-3(2H)-furanone  
May produce an allergic reaction.

Precautionary statements: --

## SECTION 2. Hazards identification ... / >>

### 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%.

## SECTION 3. Composition/information on ingredients

### 3.2. Mixtures

Contains:

Identification	x = Conc. %	Classification (EC) 1272/2008 (CLP)
<b>Propylene Glycol USP-EP-E1520</b>		
INDEX	$94 \leq x < 98$	
EC	200-338-0	
CAS	57-55-6	
REACH Reg.	01-2119456809-23	
<b>Tobacco Extract</b>		
INDEX	$1 \leq x < 1,5$	<b>Acute Tox. 4 H302, Acute Tox. 4 H312, Aquatic Chronic 3 H412</b>
EC	284-656-5	<b>LD50 Oral: 500 mg/kg, LD50 Dermal: 1100 mg/kg</b>
CAS	84961-66-0	
<b>ETHANOL</b>		
INDEX	$0,15 \leq x < 0,2$	<b>Flam. Liq. 2 H225</b>
EC	200-578-6	
CAS	64-17-5	
<b>ISOBUTYL ACETATE</b>		
INDEX	$0,15 \leq x < 0,2$	<b>Flam. Liq. 2 H225, EUH066, Classification note according to Annex VI to the CLP Regulation: C</b>
EC	203-745-1	
CAS	110-19-0	
<b>4-Hydroxy-2,5-dimethyl-3(2H)-furanone</b>		
INDEX	$0 \leq x < 0,05$	<b>Acute Tox. 4 H302, Skin Corr. 1B H314, Eye Dam. 1 H318, Skin Sens. 1A H317</b>
EC	222-908-8	<b>STA Oral: 500 mg/kg</b>
CAS	3658-77-3	

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. Wash immediately with plenty of water. If irritation persists, get medical advice/attention. Wash contaminated clothing before using it again.

INHALATION: Remove to open air. In the event of breathing difficulties, get medical advice/attention immediately.

INGESTION: Get medical advice/attention. Induce vomiting only if indicated by the doctor. Never give anything by mouth to an unconscious person, unless 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.

### 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.

## SECTION 5. Firefighting measures ... / >>

### 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).

## SECTION 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.

## 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. 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.

### 7.3. Specific end use(s)

Information not available

## SECTION 8. Exposure controls/personal protection

### 8.1. Control parameters

Regulatory References:

DEU	Deutschland	Technischen Regeln für Gefahrstoffe (TRGS 900) - Liste der Arbeitsplatzgrenzwerte und Kurzzeitwerte. MAK- und BAT-Werte-Liste 2020, Ständige Senatskommission zur Prüfung gesundheitsschädlicher Arbeitsstoffe, Mitteilung 56
ESP	España	Límites de exposición profesional para agentes químicos en España 2021
FRA	France	Valeurs limites d'exposition professionnelle aux agents chimiques en France. ED 984 - INRS
ITA	Italia	Decreto Legislativo 9 Aprile 2008, n.81
GBR	United Kingdom	EH40/2005 Workplace exposure limits (Fourth Edition 2020)
EU	OEL EU	Directive (EU) 2022/431; Directive (EU) 2019/1831; Directive (EU) 2019/130; Directive (EU)

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

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.  
ACGIH 2022

TLV-ACGIH

### Propylene Glycol USP-EP-E1520

#### Predicted no-effect concentration - PNEC

Normal value in fresh water	260	mg/l
Normal value in marine water	26	mg/l
Normal value for fresh water sediment	572	mg/kg
Normal value for marine water sediment	57,2	mg/kg
Normal value for water, intermittent release	183	mg/l
Normal value of STP microorganisms	20000	mg/l
Normal value for the terrestrial compartment	50	mg/kg

#### Health - Derived no-effect level - DNEL / DMEL

Route of exposure	Effects on consumers		Effects on workers				
	Acute	Acute	Chronic	Chronic	Acute local	Acute	Chronic
	local	systemic	local	systemic		systemic	local
Inhalation			10	50			10
			mg/m3	mg/m3			mg/m3

### (R)-P-MENTHA-1,8-DIENE

#### Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
AGW	DEU	28	5	112	20	SKIN
MAK	DEU	28	5	112	20	SKIN
VLA	ESP	168	30			SKIN

### ETHANOL

#### Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
AGW	DEU	380	200	1520	800	
MAK	DEU	380	200	1520	800	
VLA	ESP			1910	1000	
VLEP	FRA	1900	1000	9500	5000	
WEL	GBR	1920	1000			
TLV-ACGIH				1884	1000	

### ISOBUTYL ACETATE

#### Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
AGW	DEU	300	62	600 (C)	124 (C)	
VLA	ESP	724	150			
VLEP	FRA	710	150	940	200	
VLEP	ITA	241	50	723	150	
WEL	GBR	724	150	903	187	
OEL	EU	241	50	723	150	
TLV-ACGIH			50		150	

Legend:

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

VND = hazard identified but no DNEL/PNEC available ; NEA = no exposure expected ; NPI = no hazard identified ; LOW = low hazard ; MED = medium hazard ; HIGH = high hazard.

## 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.

### HAND PROTECTION

Protect hands with category III work gloves.

The following should be considered when choosing work glove material (see standard EN 374): compatibility, degradation, failure time and permeability.

The work gloves' resistance to chemical agents should be checked before use, as it can be unpredictable. The gloves' wear time depends on the duration and type of use.

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

### 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).

### 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.

## SECTION 9. Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Properties	Value	Information
Appearance	not available	
Colour	not available	
Odour	not available	
Melting point / freezing point	not available	
Initial boiling point	not available	
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	not available	
Partition coefficient: n-octanol/water	not available	
Vapour pressure	not available	
Density and/or relative density	not available	
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

Information not available

## SECTION 10. Stability and reactivity

### 10.1. Reactivity

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

#### Propylene Glycol USP-EP-E1520

Hygroscopic. Stable in normal conditions of use and storage.

At high temperatures it tends to oxidate to form propionaldehyde and lactic and acetic acid.

#### ISOBUTYL ACETATE

Decomposes under the effect of heat. Attacks various types of plastic materials.

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

### 10.2. Chemical stability

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

Propylene Glycol USP-EP-E1520

Maintaining a temperature of less than 40 °C.

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.

Propylene Glycol USP-EP-E1520

May react dangerously with: acid chlorides, acid anhydrides, oxidising agents.

ETHANOL

Risk of explosion on contact with: alkaline metals, alkaline oxides, calcium hypochlorite, sulphur monofluoride, acetic anhydride, acids, concentrated hydrogen peroxide, perchlorates, perchloric acid, perchloronitrile, mercury nitrate, nitric acid, silver, silver nitrate, ammonia, silver oxide, ammonia, strong oxidising agents, nitrogen dioxide. May react dangerously with: bromoacetylene, chlorine acetylene, bromine trifluoride, chromium trioxide, chromyl chloride, fluorine, potassium tert-butoxide, lithium hydride, phosphorus trioxide, black platinum, zirconium (IV) chloride, zirconium (IV) iodide. Forms explosive mixtures with: air.

ISOBUTYL ACETATE

Risk of explosion on contact with: strong oxidising agents. May react violently with: alkaline hydroxides, potassium tert-butoxide. Forms explosive mixtures with: air.

### 10.4. Conditions to avoid

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

ETHANOL

Avoid exposure to: sources of heat, naked flames.

ISOBUTYL ACETATE

Avoid exposure to: sources of heat, naked flames.

### 10.5. Incompatible materials

ISOBUTYL ACETATE

Incompatible with: strong oxidants, nitrates, strong acids, strong bases.

### 10.6. Hazardous decomposition products

Propylene Glycol USP-EP-E1520

May develop: carbon oxides.

## 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 hazard classes as defined in Regulation (EC) No 1272/2008

#### 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:

Not classified (no significant component)

ATE (Oral) of the mixture:

>2000 mg/kg

ATE (Dermal) of the mixture:

>2000 mg/kg

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

Tobacco Extract  
LD50 (Dermal): 1100 mg/kg ratto  
LD50 (Oral): 500 mg/kg ratto

Propylene Glycol USP-EP-E1520  
LD50 (Dermal): > 2000 mg/kg ratto  
LD50 (Oral): 22000 mg/kg ratto

ETHANOL  
LD50 (Oral): > 5000 mg/kg Rat  
LC50 (Inhalation vapours): 117 mg/l/4h Rat

Propylene Glycol USP-EP-E1520  
Tossicità dopo assunzione ripetuta (subacuta, subcronica, cronica)  
Tossicità orale subacuta  
Parametro : NOAEL(C) ( PROPANE-1,2-DIOL ; No. CAS : 57-55-6 )  
Via di esposizione : Per via orale  
Specie : Ratto (maschio)  
Dose efficace : 1700 mg/kg  
Tossicità inalativa subacuta  
Parametro : NOAEC ( PROPANE-1,2-DIOL ; No. CAS : 57-55-6 )  
Via di esposizione : Inalazione  
Specie : Ratto (maschio)  
Dose efficace : 2200 mg/m3.

### SKIN CORROSION / IRRITATION

Does not meet the classification criteria for this hazard class

Propylene Glycol USP-EP-E1520  
Potere irritante: non irritante.

### SERIOUS EYE DAMAGE / IRRITATION

Does not meet the classification criteria for this hazard class

Propylene Glycol USP-EP-E1520  
Potere irritante: non irritante.

### RESPIRATORY OR SKIN SENSITISATION

May produce an allergic reaction.  
Contains:  
4-Hydroxy-2,5-dimethyl-3(2H)-furanone

#### Respiratory sensitization

Propylene Glycol USP-EP-E1520  
Non si conoscono effetti sensibilizzanti.

#### Skin sensitization

Propylene Glycol USP-EP-E1520  
Non si conoscono effetti sensibilizzanti.

### GERM CELL MUTAGENICITY

Does not meet the classification criteria for this hazard class

### CARCINOGENICITY

Does not meet the classification criteria for this hazard class

Propylene Glycol USP-EP-E1520  
Cancerogenicità  
Parametro : NOAEL(C) ( PROPANE-1,2-DIOL ; No. CAS : 57-55-6 )  
Via di esposizione : Ratto (maschio)  
Dose efficace : 1700 mg/kg.

### REPRODUCTIVE TOXICITY

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

Does not meet the classification criteria for this hazard class

### Adverse effects on development of the offspring

Propylene Glycol USP-EP-E1520  
Possibili effetti nocivi sulla tossicità dello sviluppo  
Parametro : NOAEL (Sviluppo fetale) ( PROPANE-1,2-DIOL ; No. CAS : 57-55-6 )  
Via di esposizione : Topo  
Dose efficace : 10400 mg/kg bw/day.

### 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

## 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

Propylene Glycol USP-EP-E1520	
LC50 - for Fish	40613 mg/l/96h Oncorhynchus mykiss
EC50 - for Crustacea	18340 mg/l/48h Ceriodaphnia dubia
EC50 - for Algae / Aquatic Plants	19000 mg/l/48h Skeletonema costatum

### 12.2. Persistence and degradability

Propylene Glycol USP-EP-E1520	
Solubility in water	1000 - 10000 mg/l
Rapidly degradable	

ETHANOL	
Solubility in water	1000 - 10000 mg/l
Rapidly degradable	

ISOBUTYL ACETATE	
Solubility in water	1000 - 10000 mg/l
Rapidly degradable	

### 12.3. Bioaccumulative potential

Propylene Glycol USP-EP-E1520	
Partition coefficient: n-octanol/water	-1,07
BCF	0,09

ETHANOL	
Partition coefficient: n-octanol/water	-0,35

ISOBUTYL ACETATE	
Partition coefficient: n-octanol/water	2,3
BCF	15,3

### 12.4. Mobility in soil



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

Propylene Glycol USP-EP-E1520  
Partition coefficient: soil/water 0,46

### 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

Product  
Point 40  
Contained substance

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

Point 75

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

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>Flam. Liq. 2</b>	Flammable liquid, category 2
<b>Acute Tox. 4</b>	Acute toxicity, category 4
<b>Skin Corr. 1B</b>	Skin corrosion, category 1B
<b>Skin Sens. 1A</b>	Skin sensitization, category 1A
<b>Aquatic Chronic 3</b>	Hazardous to the aquatic environment, chronic toxicity, category 3
<b>H225</b>	Highly flammable liquid and vapour.
<b>H302</b>	Harmful if swallowed.
<b>H312</b>	Harmful in contact with skin.
<b>H314</b>	Causes severe skin burns and eye damage.
<b>H317</b>	May cause an allergic skin reaction.
<b>H412</b>	Harmful to aquatic life with long lasting effects.
<b>EUH066</b>	Repeated exposure may cause skin dryness or cracking.
<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

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

- 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 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.