

SECTION 1. Identification of the substance/mixture and of the company/undertaking**1.1. Product identifier**

Product code : Tintolav - Tintosoft

Trades code : A45-000

Product line: Tintolav

UFI: F203-M02X-S002-QG8U

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

Softener for laundry

Sectors of use:

Industrial Manufacturing[SU3], Public domain (administration, education, entertainment, services, craftsmen)[SU22]

Uses advised against

Do not use for purposes other than those listed

1.3. Details of the supplier of the safety data sheet

Tintolav s.r.l. - Via M. D' Antona 7 - 10028 Trofarello (TO) Tel. 011/649.68.27 Fax 011/649.67.42

Email: info@tintolav.com - Sito internet: www.tintolav.comEmail tecnico competente: a.conedera@tintolav.com

National contact: Malta: Emergency Ambulance 112

Accident & Emergency Department 2545 4030

1.4. Emergency telephone number

The UK National Poisons Emergency number +44 (0)870 600 6266

London: Emergency 24 hour telephone +44 (0) 207188 0100

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

2.1.1 Classification according to Regulation (EC) No 1272/2008:

Pictograms:

None

Hazard Class and Category Code(s):

Aquatic Chronic 3

Hazard statement Code(s):

H412 - Harmful to aquatic life with long lasting effects.

The product is dangerous to the environment as it is harmful to aquatic life with long lasting effects

2.1.2 Additional information:

For full text of Hazard- and EU Hazard-statements: see SECTION 16.

2.2. Label elements

Labelling according to Regulation (EC) No 1272/2008:

Pictogram, Signal Word Code(s):
None

Hazard statement Code(s):
H412 - Harmful to aquatic life with long lasting effects.

Supplemental Hazard statement Code(s):
not applicable

Precautionary statements:

Prevention

P273 - Avoid release to the environment.

Disposal

P501 - Dispose of contents / container in accordance with local and national regulations.

Contains (Reg.EC 648/2004):

>= 5% < 15% cationic surfactants, < 5% perfumes, hexamethylindanopyran, terpineol, citronellol, hexyl cinnamal.

For professional use only

UFI: F203-M02X-S002-QG8U

2.3. Other hazards

The product does not contain substances identified as endocrine disruptors for human health according to the criteria established by Regulation (EC) No. 1272/2008, as amended by Regulation (EU) 2023/707.

The product does not contain substances identified as endocrine disruptors for the environment according to the criteria established by Regulation (EC) No. 1272/2008, as amended by Regulation (EU) 2023/707.

The product does not contain substances identified as PBT according to the criteria established by Regulation (EC) No. 1272/2008, as amended by Regulation (EU) 2023/707.

The product does not contain substances identified as vPvB according to the criteria established by Regulation (EC) No. 1272/2008, as amended by Regulation (EU) 2023/707.

The product does not contain substances identified as PMT according to the criteria established by Regulation (EC) No. 1272/2008, as amended by Regulation (EU) 2023/707.

The product does not contain substances identified as vPvM according to the criteria established by Regulation (EC) No. 1272/2008, as amended by Regulation (EU) 2023/707.

No information on other hazards

SECTION 3. Composition/information on ingredients

3.1 Substances

Irrilevant

3.2 Mixtures

Substance	Concentration[w/w]	Classification	Index	CAS	EINECS	REACH
Fatty acids, C16-18 (even numbered) and C18 unsatd., reaction products with triethanolamine, di-Me sulfate-quaternized	$\geq 5 < 15\%$	ATE oral = 5.000,000 mg/kg ATE dermal = 2.000,000 mg/kg	ND	1335202-88-4	931-203-0	01-2119463 889-16-000 4
Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides - FEMA 0	$\geq 0,1 < 1\%$	Acute Tox. 4, H302; Acute Tox. 4, H312; Skin Corr. 1B, H314; Eye Dam. 1, H318; Aquatic Acute 1, H400; Aquatic Chronic 1, H410 1 10 ATE oral = 344,000 mg/kg ATE dermal = 3.340,000 mg/kg ATE inhal = 5,000 mg/l/4 h	ND	68424-85-1	270-325-2	ND
ethanol	$< 0,1\%$	Flam. Liq. 2, H225; Eye Irrit. 2, H319 Limits: Eye Irrit. 2, H319 %C ≥ 50 ; ATE oral = 7.060,000 mg/kg ATE dermal = 20.000,000 mg/kg ATE inhal = 116,900 mg/l/4 h	603-002-00-5	64-17-5	200-578-6	01-2119457 610-43

SECTION 4. First aid measures

4.1. Description of first aid measures

Inhalation:

Air the area. Move immediately the contaminated patient from the area and keep him at rest in a well ventilated area. If you feel unwell seek medical advice.

Direct contact with skin (of the pure product):

Wash thoroughly with soap and running water.

Direct contact with eyes (of the pure product):

Wash immediately and thoroughly with running water for at least 10 minutes.

Ingestion:

Not hazardous. It's possible to give activated charcoal in water or liquid paraffin medicine

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

No data available.

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

No data available.

SECTION 5. Firefighting measures

5.1. Extinguishing media

Advised extinguishing agents:

Water spray, CO₂, foam, dry chemical, depending on the materials involved in the fire.

Extinguishing means to avoid:

Water jets. Use water jets only to cool the surfaces of the containers exposed to fire.

5.2. Special hazards arising from the substance or mixture

No data available.

5.3. Advice for firefighters

Use protection for the breathing apparatus

Safety helmet and full protective suit.

The spray water can be used to protect the people involved in the extinction

You may also use selfrespirator, especially when working in confined and poorly ventilated area and if you use halogenated extinguishers (Halon 1211 fluobrene, Solkan 123, NAF, etc...)

Keep containers cool with water spray

SECTION 6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1 For non-emergency personnel:

Leave the area surrounding the spill or release. Do not smoke

Wear gloves and protective clothing

6.1.2 For emergency responders:

Wear gloves and protective clothing

Eliminate all unguarded flames and possible sources of ignition. No smoking.

Provision of sufficient ventilation.

Evacuate the danger area and, in case, consult an expert.

6.2. Environmental precautions

Contain spill with earth or sand.

If the product has entered a watercourse in sewers or has contaminated soil or vegetation, notify it to the authorities.

Discharge the remains in compliance with the regulations

6.3. Methods and material for containment and cleaning up

6.3.1 For containment:

Recover the product for reuse, if possible, or for removal. Possibly absorb it with inert material.

Prevent it from entering the sewer system.

6.3.2 For cleaning up:

After wiping up, wash with water the area and materials involved

6.3.3 Other information:

None in particular.

6.4. Reference to other sections

Refer to paragraphs 8 and 13 for more information

SECTION 7. Handling and storage

7.1. Precautions for safe handling

Avoid contact and inhalation of vapors

At work do not eat or drink.

See also paragraph 8 below.

7.2. Conditions for safe storage, including any incompatibilities

Keep in original container closed tightly. Do not store in open or unlabeled containers.

Keep containers upright and safe by avoiding the possibility of falls or collisions.

Store in a cool place, away from sources of heat and direct exposure of sunlight.

7.3. Specific end use(s)

Industrial Manufacturing:

Handle with extreme caution.

Store in a well ventilated place away from heat sources.

Public domain (administration, education, entertainment, services, craftsmen):

Handle with care. Store in a ventilated area and away from heat, keep the container tightly closed.

SECTION 8. Exposure controls/personal protection

8.1. Control parameters

Related to contained substances:

ethanol:

Component CAS-No. Value Control parameters

Basis

Ethanol-17-64 TWA 5 ppm 1.000

1.920 mg/m³

UK. EH40 WEL-Workplace Exposure Limits

Remarks Where no specific short-term exposure limit is listed, a figure three times the long-term exposure should be used

- Substance: Fatty acids, C16-18 (even numbered) and C18 unsatd., reaction products with triethanolamine, di-Me sulfate-quaternized

DNEL

Systemic effects Long term Workers inhalation = 44 (mg/m³)

Systemic effects Long term Workers dermal = 312,5 (mg/kg bw/day)

Systemic effects Long term Consumers inhalation = 13 (mg/m³)

Systemic effects Long term Consumers dermal = 187,5 (mg/kg bw/day)

Systemic effects Long term Consumers oral = 7,5 (mg/kg bw/day)

PNEC

Sweet water = 0,00191 (mg/l)

sediment Sweet water = 0,58 (mg/kg/sediment)

Sea water = 0,000191 (mg/l)

sediment Sea water = 0,058 (mg/kg/sediment)

STP = 2,96 (mg/l)

ground = 0,115 (mg/kg ground)

- Substance: Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides

DNEL

Systemic effects Long term Workers inhalation = 3,96 (mg/m³)

Systemic effects Long term Workers dermal = 5,7 (mg/kg bw/day)

Systemic effects Long term Consumers inhalation = 1,64 (mg/m³)

Systemic effects Long term Consumers dermal = 3,4 (mg/kg bw/day)

Systemic effects Long term Consumers oral = 3,4 (mg/kg bw/day)

PNEC

Sweet water = 0,0009 (mg/l)

sediment Sweet water = 12,27 (mg/kg/sediment)

Sea water = 0,00096 (mg/l)

sediment Sea water = 13,09 (mg/kg/sediment)

STP = 0,4 (mg/l)

ground = 7 (mg/kg ground)

- Substance: ethanol

DNEL

Systemic effects Long term Workers inhalation = 950 (mg/m³)

Systemic effects Long term Workers dermal = 343 (mg/kg bw/day)

Systemic effects Long term Consumers inhalation = 114 (mg/m³)

Systemic effects Long term Consumers dermal = 206 (mg/kg bw/day)

Systemic effects Long term Consumers oral = 87 (mg/kg bw/day)

PNEC

Sweet water = 0,96 (mg/l)

sediment Sweet water = 3,6 (mg/kg/sediment)

Sea water = 0,79 (mg/l)

sediment Sea water = 2,9 (mg/kg/sediment)

STP = 580 (mg/l)

ground = 0,63 (mg/kg ground)

8.2. Exposure controls

Appropriate engineering controls:

Industrial Manufacturing:

No specific monitoring foreseen

Public domain (administration, education, entertainment, services, craftsmen):

No specific monitoring foreseen

Individual protection measures:



(a) Eye / face protection

Not needed for normal use.

(b) Skin protection

(i) Hand protection

Handle with gloves. Gloves must be inspected before use. Use a proper glove removal technique (without touching the outer surface of the glove) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with

current regulations and good laboratory practices. Wash and dry hands.

The protective gloves selected must meet the requirements of EU Directive 89/686/EEC and the EN 374 standards derived from it.

Full contact

Material: Nitrile rubber

Minimum thickness: 0.11 mm

Breakthrough time: 480 min

The selection of an appropriate glove depends not only on the material but also on other quality characteristics, which vary from one manufacturer to another.

Consult the glove supplier/manufacturer for the selection of the right type of gloves.

Observe the instructions regarding permeability and breakthrough time provided by the glove supplier.

(ii) Other

Wear normal work clothing.

(c) Respiratory protection

Not needed for normal use.

(d) Thermal hazards

No hazard to report

Environmental exposure controls:

Use according to good working practices to avoid pollution into the environment.

SECTION 9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical and chemical properties	Value	Determination method
Physical state	Liquid	
Colour	white	
Odour	Characteristic	
Odour threshold	not determined	
Melting point/freezing point	not determined	
Boiling point or initial boiling point and boiling range	not determined	
Flammability	irrelevant	
Lower and upper explosion limit	not determined	
Flash point	> 65°C	
Auto-ignition temperature	not determined	
Decomposition temperature	not determined	
pH	3.5 - 4	
Kinematic viscosity	not determined	
Solubility	Completely soluble in water	
Water solubility	not determined	
Partition coefficient n-octanol/water (log value)	not determined	
Vapour pressure	not determined	
Density and/or relative density	0,9- 0,99 gr/cm3	
Relative vapour density	not determined	
Particle characteristics	irrelevant	

9.2. Other information

Content of VOC ready to use condition: 0,61 %

9.2.1 Information with regard to physical hazard classes

a) Explosives

i) sensitivity to shock

Irrilevant

ii) effect of heating under confinement

Irrilevant

iii) effect of ignition under confinement

Irrilevant

iv) sensitivity to impact

Irrilevant

v) sensitivity to friction

Irrilevant

vi) thermal stability

Irrilevant

vii) package

Irrilevant

b) Flammable gases

i) Tci / explosion limits

Irrilevant

ii) fundamental burning velocity

Irrilevant

c) Aerosols

Irrilevant

d) Oxidising gases

Irrilevant

e) Gases under pressure

Irrilevant

f) Flammable liquids

Irrilevant

g) Flammable solids

i) burning rate, or burning time as regards metal powders

Irrilevant

ii) statement on whether the wetted zone has been passed

Irrilevant

h) Self-reactive substances and mixtures

i) decomposition temperature

Irrilevant

ii) detonation properties

Irrilevant

iii) deflagration properties

Irrilevant

iv) effect of heating under confinement

Irrilevant

v) explosive power, if applicable

Irrilevant

i) Pyrophoric liquids

Irrilevant

j) Pyrophoric solids

i) statement on whether spontaneous ignition occurs when poured or within five minutes thereafter, as regards solids in powder form

Irrilevant

ii) statement on whether pyrophoric properties could change over time

Irrilevant

k) Self-heating substances and mixtures

i) statement on whether spontaneous ignition occurs and the maximum temperature rise obtained

Irrilevant

ii) results of screening tests referred to in section 2.11.4.2 of Annex I to Regulation (EC) No 1272/2008, if relevant and available

Irrilevant

l) Substances and mixtures, which emit flammable gases in contact with water. The following information may be provided

i) identity of the emitted gas, if known

Irrilevant

ii) statement on whether the emitted gas ignites spontaneously

Irrilevant

iii) gas evolution rate

Irrilevant

m) Oxidising liquids

Irrilevant

n) Oxidizing solids

Irrilevant

o) Organic peroxides

i) decomposition temperature

Irrilevant

ii) detonation properties

Irrilevant

iii) deflagration properties

Irrilevant

iv) effect of heating under confinement

Irrilevant

v) explosive power

Irrilevant

p) Corrosive to metals

i) metals that are corroded by the substance or mixture

Irrilevant

ii) corrosion rate and statement on whether it refers to steel or aluminium

Irrilevant

iii) reference to other sections of the safety data sheet with regard to compatible or incompatible materials

Irrilevant

q) Desensitised explosives

i) desensitising agent used

Irrilevant

ii) exothermic decomposition energy

Irrilevant

iii) corrected burning rate (Ac)

Irrilevant

iv) explosive properties of the desensitised explosive in that state

Irrilevant

9.2.2 Other safety characteristics

a) mechanical sensitivity

Irrilevant

b) self-accelerating polymerisation temperature

Irrilevant

c) formation of explosible dust/air mixtures

Irrilevant

d) acid/alkaline reserve

Irrilevant

e) evaporation rate

Irrilevant

f) miscibility

Irrilevant

g) conductivity

Irrilevant

h) corrosiveness

Irrilevant

i) gas group

Irrilevant

j) redox potential

Irrilevant

k) radical formation potential

Irrilevant

l) photocatalytic properties

Irrilevant

SECTION 10. Stability and reactivity

10.1. Reactivity

No reactivity hazards

10.2. Chemical stability

No hazardous reaction when handled and stored according to provisions.

10.3. Possibility of hazardous reactions

There are no hazardous reactions

10.4. Conditions to avoid

Nothing to report

10.5. Incompatible materials

It can generate inflammable gases to contact with elementary metals, nitrides, inorganic sulfide, strong reducing agents.

It can generate toxic gases to contact with inorganic sulfide, strong reducing agents.

10.6. Hazardous decomposition products

Does not decompose when used for intended uses.

SECTION 11. Toxicological information

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

ATE(mix) oral = 224.836,6 mg/kg

ATE(mix) dermal = ∞

ATE(mix) inhal = ∞

(a) acute toxicity: ethanol: LD50 Oral-rat-7.060 mg/kg

Remarks: Lungs, Thorax, or Respiration: Other changes.

LC50 Inhalation-rat-10:0-20000 ppm

(b) skin corrosion/irritation: Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides: rabbit Result:

Method: DOT Corrosive Exposure time: 12:0 am

ethanol: Skin-rabbit

Result: Irritating to skin. -12:0 am

(c) serious eye damage/irritation: ethanol: Eyes-rabbit

Result: Mild eye irritation-12:0 am

(Draize Test)

Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides: rabbit Result: Caustic Method: DOT

(d) respiratory or skin sensitisation: Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides: Buehler guinea pig Test Classification: Did not cause sensitization on laboratory animals.

Result: not sensitizing Method: OECD Test Guideline 406

(e) germ cell mutagenicity: based on available data, the classification criteria are not met.

(f) carcinogenicity: based on available data, the classification criteria are not met.

(g) reproductive toxicity: ethanol: Reproductive toxicity-Human-female-Oral

Effects on Newborn: Apgar score (human only). Effects on Newborn: Other measures or neonatal effects.

Effects on Newborn: Drug dependence.

(h) specific target organ toxicity (STOT) single exposure: based on available data, the classification criteria are not met.

(i) specific target organ toxicity (STOT) repeated exposure based on available data, the classification criteria are not met.

(j) aspiration hazard: based on available data, the classification criteria are not met.

Related to contained substances:

Fatty acids, C16-18 (even numbered) and C18 unsatd., reaction products with triethanolamine, di-Me sulfate-quaternized:

Oral, LD50: 5000 mg / kg (rat)

Dermal, LD50: > 2000 mg / kg (rat)

LD50 (rat) Oral (mg/kg body weight) = 5000

LD50 Dermal (rat or rabbit) (mg/kg body weight) = 2000

Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides:

LD50 (rat) Oral (mg/kg body weight) = 344

LD50 Dermal (rat or rabbit) (mg/kg body weight) = 3340

CL50 Inhalation (rat) vapour/dust/mist/fume (mg/l/4h) or gas (ppmV/4h) = 5

ethanol:

ROUTES of EXPOSURE: the substance can be absorbed into the body by inhalation of its fumes and ingestion.

INHALATION RISK: A harmful contamination of the air will be reached quite slowly due to evaporation of the substance at 20 C.

Effects of short-term exposure: the substance is irritating to the eyes. Inhalation of high vapour can cause irritation of the eyes and respiratory tract. The substance may cause effects on the central nervous system effects of

REPEATED EXPOSURE or long term: the liquid degreasing the skin features. The substance may have an effect on the high central nervous system respiratory tract, causing irritation, headaches, fatigue and lack of concentration. See Notes.

ACUTE HAZARDS/Symptoms INHALATION Cough. Headaches. Fatigue. Drowsiness.

CUTE CUTE.

EYE Redness. Pain. Burning.

SWALLOWED burning sensation. Headaches. Confusion. Vertigo. State of unconsciousness.

N O T and consumption of ethanol during pregnancy can have adverse effects on the unborn child. Chronic ethanol ingestion can cause cirrhosis of the liver.

LD50 (rat) Oral (mg/kg body weight) = 7060

LD50 Dermal (rat or rabbit) (mg/kg body weight) = 20000

CL50 Inhalation (rat) vapour/dust/mist/fume (mg/l/4h) or gas (ppmV/4h) = 116,9

11.2. Information on other hazards

No data available.

11.2.1. Endocrine disrupting properties

The product does not contain substances identified as endocrine disruptors for human health according to the criteria established by Regulation (EC) No. 1272/2008, as amended by Regulation (EU) 2023/707.

The product does not contain substances identified as endocrine disruptors for the environment according to the criteria established by Regulation (EC) No. 1272/2008, as amended by Regulation (EU) 2023/707.

SECTION 12. Ecological information

12.1. Toxicity

Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides:

Related to contained substances:

Fatty acids, C16-18 (even numbered) and C18 unsatd., reaction products with triethanolamine, di-Me sulfate-quaternized:

fish, CL50 : 1,91 mg/l (OECD 203 (96h))

daphnia, CE50 : 2,23 mg/l (EU Method C.2 (48h))

alga, CL50 : 2,14 mg/l (OECD 201 (72h))

C(E)L50 (mg/l) = 1,91

1

Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides:

C(E)L50 (mg/l) = 0,01

10

ethanol:

C(E)L50 (mg/l) = 11200

The product is dangerous for the environment as it is toxic for aquatic organisms following acute exposure.

Use according to good working practices to avoid pollution into the environment.

12.2. Persistence and degradability

Related to contained substances:

Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides:

Biodegradability:

OECD Confirmatory > 90% Test Method: OECD 303 A Modified SCAS Test Exposure time: 99% 7 d > Method: OECD Test 302 Evolution CO2 Concentration: 5 mg/litre Exposure time: 28 d Result: Readily biodegradable.

95.5% Method: OECD 301 B

12.3. Bioaccumulative potential

No data available.

12.4. Mobility in soil

No data available.

12.5. Results of PBT and vPvB assessment

The product does not contain substances identified as PBT according to the criteria established by Regulation (EC) No. 1272/2008, as amended by Regulation (EU) 2023/707.

The product does not contain substances identified as vPvB according to the criteria established by Regulation (EC) No. 1272/2008, as amended by Regulation (EU) 2023/707.

12.6. Endocrine disrupting properties

The product does not contain substances identified as endocrine disruptors for human health according to the criteria established by Regulation (EC) No. 1272/2008, as amended by Regulation (EU) 2023/707.

The product does not contain substances identified as endocrine disruptors for the environment according to the criteria established by Regulation (EC) No. 1272/2008, as amended by Regulation (EU) 2023/707.

12.7. Other adverse effects

No adverse effects

Regulation (EC) No 2006/907 - 2004/648

The surfactant(s) contained in this preparation complies(comply) with the biodegradability criteria as laid down in Regulation (EC) No 648/2004 on detergents. Data to support this assertion are held at the disposal of the competent authorities of the Member States and will be made available to them, at their direct request or at the request of a detergent manufacturer.

SECTION 13. Disposal considerations**13.1. Waste treatment methods**

Do not reuse empty containers. Dispose of them in accordance with the regulations in force. Any remaining product should be disposed of according to applicable regulations by addressing to authorized companies.

Recover if possible. Send to authorized discharge plants or for incineration under controlled conditions. Operate according to local and National rules in force

SECTION 14. Transport information**14.1. UN number or ID number**

Not included in the scope of application regulations concerning the transport of dangerous goods: by road (ADR); by rail (RID); by air (ICAO / IATA); by sea (IMDG).

14.2. UN proper shipping name

None

14.3. Transport hazard class(es)

None

14.4. Packing group

None

14.5. Environmental hazards

None

14.6. Special precautions for user

No data available.

14.7. Maritime transport in bulk according to IMO instruments

It is not intended to carry bulk

SECTION 15. Regulatory information**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**

DELEGATED REGULATION (EU) 2024/2564 (ATP XXII)
DELEGATED REGULATION (EU) 2023/707
Substances in the Candidate List (REACH Article 59)
Based on available data, no SVHC substances are present

15.2. Chemical safety assessment

The supplier has made an assessment of chemical safety

SECTION 16. Other information**16.1. Other information**

Points modified compared to previous release: 3.2 Mixtures

Description of the hazard statements exposed to point 3

H302 = Harmful if swallowed.
H312 = Harmful in contact with skin.
H314 = Causes severe skin burns and eye damage.
H318 = Causes serious eye damage.
H400 = Very toxic to aquatic life.
H410 = Very toxic to aquatic life with long lasting effects.
H225 = Highly flammable liquid and vapour.
H319 = Causes serious eye irritation.

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:

Classification according to Regulation (EC) Nr. 1272/2008

H412 - Harmful to aquatic life with long lasting effects. Classification procedure: Calculation method

Main normative references:

Directive 1999/45/EC
Directive 2001/60/EC
Regulation (EC) No 1272/2008
Regulation (EU) No 453/2010

Regulation (EC) No 790/2009 (1st ATP CLP)
Regulation (EU) No 286/2011 (2nd ATP CLP)
Regulation (EU) No 618/2012 (3rd ATP CLP)
Regulation (EU) No 487/2013 (4th ATP CLP)
Regulation (EU) No 944/2013 (5th ATP CLP)
Regulation (EU) No 605/2014 (6th ATP CLP)
Regulation (EU) 2015/1221 (7th ATP CLP)
Regulation (EU) 2016/918 (8th ATP CLP)
Regulation (EU) 2016/1179 (9th ATP CLP)
Regulation (EU) 2017/776 (10th ATP CLP)
Regulation (EU) 2018/669 (11th ATP CLP)
Regulation (EU) 2019/521 (12th ATP CLP)
Delegated Regulation (EU) 2018/1480 (13th ATP CLP)
Delegated Regulation (EU) 2020/217 (14th ATP CLP)
Delegated Regulation (EU) 2020/1182 (15th ATP CLP)
Delegated Regulation (EU) 2021/643 (16th ATP CLP)
Delegated Regulation (EU) 2021/849 (17th ATP CLP)
Delegated Regulation (EU) 2022/692 (18th ATP CLP)
Delegated Regulation (EU) 2023/707 (Introduction of new hazard and endocrine classes)
Delegated Regulation (EU) 2023/1434 (19th ATP CLP)
Delegated Regulation (EU) 2023/1435 (20th ATP CLP)
Delegated Regulation (EU) 2024/197 (21st ATP CLP)
Delegated Regulation (EU) 2024/2564 (22nd ATP CLP)
Delegated Regulation (EU) 2025/1222 (23rd ATP CLP)
Databases consulted: ECHA (European Chemicals Agency), internal databases of raw materials provided by the respective manufacturers.

Legend of abbreviations and acronyms

(Q)SAR: (Quantitative) Structure-Activity Relationships

ACGIH / TWA: 8-hour time-weighted average

ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road

AIIC: Australian Inventory of Industrial Chemicals

ASTM: ASTM International (American Society for Testing and Materials)

ATE: Acute Toxicity Estimates

BCF: BioConcentration Factor

BEI: Biological Exposure Index

BOD: Biochemical Oxygen Demand

CAO: Cargo Aircraft Only

CAS: Chemical Abstracts Service number

CAV: Poison Control Center

CE: EC number (European inventory of Existing Commercial chemical Substances)

CLP: Regulation (EC) No 1272/2008

CMR: Carcinogenic, mutagenic or toxic for reproduction

COD: Chemical Oxygen Demand

CSA: Chemical Safety Assessment

CSR: Chemical Safety Report

DIN: German Institute for Standardization standard

DMEL: Derived Minimal Effect Level

DNEL: Derived No-Effect Level

DPD: Dangerous Preparations Directive

DSD: Dangerous Substances Directive

EC50: Effective Concentration to 50% of test population

ECHA: European Chemicals Agency

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

ELx: Loading rate associated with x% response

EmS: Emergency Schedule

ErCx: Concentration associated with x% growth rate response

GefStoffVO: Ordinance on Hazardous Substances, Germany

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

GLP: Good Laboratory Practice

IARC: International Agency for Research on Cancer

IATA: International Air Transport Association

IATA DGR: Dangerous Goods Regulations of the International Air Transport Association

IBC: International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk

IC50: Inhibitory Concentration to 50% of test population

ICAO: International Civil Aviation Organization

ICAO-TI: Technical Instructions by the International Civil Aviation Organization

IMDG: International Maritime Dangerous Goods Code

IMO: International Maritime Organization

INCI: International Nomenclature of Cosmetic Ingredients

INDEX: Identification number in Annex VI of CLP

ISO: International Organization for Standardization

IT OEL CMR / Valori limite 8 ore: 8-hour limit values

IT OEL CMR / Valori limite breve durata: Short-term limit values

IT VLEP / STEL: Limit Values - Short Term

IT VLEP / TWA: Limit Values - 8 Hours

KSt: Explosion coefficient

LC50: Lethal Concentration 50%

LCLo: Lowest Lethal Concentration

LD50: Lethal Dose 50%

LOAEC: Lowest Observed Adverse Effect Concentration

LOAEL: Lowest Observed Adverse Effect Level

LOEC: Lowest Observed Effect Concentration

LOEL: Lowest Observed Effect Level

LTE: Long-term exposure

MAK: Maximum Allowable Concentration

MARPOL: International Convention for the Prevention of Pollution from Ships

NEN: Dutch standard

NOAEL: No Observed Adverse Effect Level

NOEC: No Observed Effect Concentration

NOEL: No Observed Effect Level

NOELR: No Observed Effect Loading Rate

OCSE (OECD): Organisation for Economic Co-operation and Development

OEL: Occupational Exposure Limit

OPPTS: Office of Pollution Prevention and Toxics

PBT: Persistent, Bioaccumulative and Toxic

PEC: Predicted Effect Concentration

PEL: Permissible Exposure Limit

PMT: Persistent, Mobile and Toxic

PNEC: Predicted No-Effect Concentration

PNOS: Particulates Not Otherwise Specified

REACH: Regulation (EC) No 1907/2006

RID: Regulations Concerning the International Carriage of Dangerous Goods by Rail

SADT: Self-Accelerating Decomposition Temperature

SPM: Synthetic Polymer Microparticles

STA (ATE): Acute Toxicity Estimate

STE: Short-term exposure

STOT: Specific Target Organ Toxicity

SVHC: Substance of Very High Concern

ThOD: Theoretical Oxygen Demand

TLV: Threshold Limit Value

TLV CEILING: Concentration that should not be exceeded during any part of the working exposure

TWA STEL: Short-term exposure limit

TWATLV: Threshold Limit Value - Time Weighted Average (8-hour day)

UVCB: Substances of Unknown or Variable composition, Complex reaction products or Biological materials

VOC: Volatile Organic Compound

vPvB: Very Persistent and Very Bioaccumulative

vPvM: Very Persistent and Very Mobile

VwVwS: Administrative Regulation on Substances Hazardous to Waters

WGK: Water Hazard Class (Germany)

** The information contained herein is based on our knowledge at the date above.

Related solely to the product and do not constitute a guarantee of a particular quality.

It is the duty of the user to ensure that these are appropriate and complete information regarding the specific use intended.

This data sheet cancels and replaces any previous edition.
