

Safety Data Sheet

According to Annex II to REACH - Regulation 2015/830

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

1.1. Product identifier

Code: 411 00 06500-2650-5 L
411 00 06700-2652-20 L

Product name: CAR WASH SHAMPOO

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

Intended use: Neutral shampoo for vehicle washing

1.3. Details of the supplier of the safety data sheet

Name: Meccanocar Italia S.r.l.
Full address: Via San Francesco, 22
District and Country: 56033 Capannoli (PI)
Italy
Tel. +39 0587 609433
Fax +39 0587 607145

e-mail address of the competent person
responsible for the Safety Data Sheet

moreno.meini@meccanocar.it

1.4. Emergency telephone number

For urgent inquiries refer to

National Poisons Information Service: +44 121 507 4123

SECTION 2. Hazards identification

2.1. Classification of the substance or mixture

The product is classified as hazardous pursuant to the provisions set forth in (EC) Regulation 1272/2008 (CLP) (and subsequent amendments and supplements). The product thus requires a safety datasheet that complies with the provisions of (EU) Regulation 2015/830. Any additional information concerning the risks for health and/or the environment are given in sections 11 and 12 of this sheet.

Hazard classification and indication:

Substance or mixture corrosive to metals, category 1	H290	May be corrosive to metals.
Serious eye damage, category 1	H318	Causes serious eye damage.
Skin irritation, category 2	H315	Causes skin irritation.

2.2. Label elements

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

Hazard pictograms:

CAR WASH SHAMPOO



Signal words: Danger

Hazard statements:

H318 Causes serious eye damage.
H315 Causes skin irritation.

Precautionary statements:

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P280 Wear protective gloves / eye protection / face protection.
P310 Immediately call a POISON CENTER / doctor.

Contains: SODIUM 2- (DODECYLOXY) ETHYL SULPHATE
 1-PROPANAMINIUM, 3-AMINO-N- (CARBOXYMETHYL) -N, N-DIMETHYL-, N- (C8-C18 AND C18-UNSATD. ACYL)
 DERIVS., INTERNAL SALTS
 ETHYLENE DIAMINE TETRA ACETIC ACID

2.3. Other hazards

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

SECTION 3. Composition/information on ingredients

3.2. Mixtures

Contains:

Identification	x = Conc. %	Classification 1272/2008 (CLP)
SODIUM 2- (DODECYLOXY) ETHYL SULPHATE		
CAS 15826-16-1	$8 \leq x < 9$	Eye Dam. 1 H318, Skin Irrit. 2 H315
EC 239-925-1		
INDEX -		
ETHYLENE DIAMINE TETRA ACETIC ACID		
CAS 60-00-4	$4,5 \leq x < 5$	Eye Irrit. 2 H319
EC 200-449-4		
INDEX 607-429-00-8		
Reg. no. 01-2119486399-18-XXXX		
1-PROPANAMINIUM, 3-AMINO-N- (CARBOXYMETHYL) -N, N- DIMETHYL-, N- (C8-C18 AND C18- UNSATD. ACYL) DERIVS., INTERNAL SALTS		

CAS 147170-44-3 4,5 ≤ x < 5 Eye Dam. 1 H318, Aquatic Chronic 3 H412

EC 604-575-4

INDEX -

SODIUM HYDROXIDE

CAS 1310-73-2 0,5 ≤ x < 0,6 Skin Corr. 1A H314, Eye Dam. 1 H318

EC 215-185-5

INDEX 011-002-00-6

Reg. no. 01-2119457892-27-XXXX

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 30-60 minutes, opening the eyelids fully. Get medical advice/attention.

SKIN: Remove contaminated clothing. Rinse skin with a shower immediately. Get medical advice/attention.

INGESTION: Have the subject drink as much water as possible. Get medical advice/attention. Do not induce vomiting unless explicitly authorised by a doctor.

INHALATION: Get medical advice/attention immediately. Remove victim to fresh air, away from the accident scene. If the subject stops breathing, administer artificial respiration. Take suitable precautions for rescue workers.

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.

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

Ensure that there is an adequate earthing system for the equipment and personnel. Avoid contact with eyes and skin. Do not breathe powders, vapours or mists. Do not eat, drink or smoke during use. Wash hands after use. Avoid leakage of the product into the environment.

7.2. Conditions for safe storage, including any incompatibilities

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

ESP	España	LÍMITES DE EXPOSICIÓN PROFESIONAL PARA AGENTES QUÍMICOS EN ESPAÑA 2019 (INSST)
FRA	France	Valeurs limites d'exposition professionnelle aux agents chimiques en France. ED 984 - INRS
GBR	United Kingdom	EH40/2005 Workplace exposure limits (Third edition,published 2018)
NOR	Norge	Fastsatt av Arbeids- og sosialdepartementet 21. august 2018 med hjemmel i lov 17. juni 2005 nr. 62 om arbeidsmiljø, arbeidstid, stillingsvern mv. (arbeidsmiljøloven) § 1-3, § 1-4 og § 4-5
	TLV-ACGIH	ACGIH 2019

CAR WASH SHAMPOO

ETHYLENE DIAMINE TETRA ACETIC ACID**Threshold Limit Value**

Type	Country	TWA/8h		STEL/15min		Remarks / Observations		
		mg/m3	ppm	mg/m3	ppm			
TLV-ACGIH		10				INHAL		
TLV-ACGIH		3				RESP		
Predicted no-effect concentration - PNEC								
Normal value in fresh water				2,2		mg/l		
Normal value in marine water				0,22		mg/l		
Normal value of STP microorganisms				43		mg/l		
Normal value for the terrestrial compartment				0,72		mg/kg		

Health - Derived no-effect level - DNEL / DMEL

Route of exposure	Effects on consumers				Effects on workers			
	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral				25 mg/kg bw/d				
Inhalation	1,2 mg/m3		0,6 mg/m3		3 mg/m3		1,5 mg/m3	

SODIUM HYDROXIDE**Threshold Limit Value**

Type	Country	TWA/8h		STEL/15min		Remarks / Observations		
		mg/m3	ppm	mg/m3	ppm			
VLA	ESP			2				
VLEP	FRA	2						
WEL	GBR			2				
TLV	NOR	2						
TLV-ACGIH				2 (C)				

Health - Derived no-effect level - DNEL / DMEL

Route of exposure	Effects on consumers				Effects on workers			
	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Inhalation				1 mg/m3				1 mg/m3

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.

8.2. Exposure controls

As the use of adequate technical equipment must always take priority over personal protective equipment, make sure that the workplace is well aired through effective local aspiration.

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

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

Provide an emergency shower with face and eye wash station.

HAND PROTECTION

Protect hands with category III work gloves (see standard EN 374).

The following should be considered when choosing work glove material: 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.

SKIN PROTECTION

Wear category II 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.

ETHYLENE DIAMINE TETRA ACETIC ACID

Respiratory protection: respiratory protection suitable for lower concentrations or short-term effect: particle filter with medium efficiency for solid and liquid particles (eg EN 143 or 149, type P2 or FFP2)

Hand protection: chemical resistant protective gloves (EN 374)

Suitable materials also with prolonged direct contact (Recommended: protection index 6, corresponding to > 480 minutes of breakthrough time according to EN 374): e.g. nitrile rubber (0.4 mm), chloroprene rubber (0.5 mm), polyvinyl chloride (0.7 mm) and others

Eye protection: safety glasses with side shields (protective glasses) (eg EN 166)

SECTION 9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	dense liquid
Colour	Not available
Odour	typical
Odour threshold	Not available
pH	7,5-9
Melting point / freezing point	0 °C
Initial boiling point	100 °C
Boiling range	100 °C
Flash point	> 100 °C
Evaporation rate	Not available
Flammability (solid, gas)	Not available
Lower inflammability limit	Not available
Upper inflammability limit	Not available

Lower explosive limit	Not available
Upper explosive limit	Not available
Vapour pressure	Not available
Vapour density	Not available
Relative density	1 ca.
Solubility	soluble in water
Partition coefficient: n-octanol/water	Not available
Auto-ignition temperature	> 100 °C
Decomposition temperature	Not available
Viscosity	>30 cSt
Explosive properties	not explosive
Oxidising properties	non oxidizing

9.2. Other information

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.

ETHYLENE DIAMINE TETRA ACETIC ACID

The acid is less stable than its salts and tends to decarboxylate at over 150°C/302°F. It is an antioxidant, aqueous suspensions react with acids to develop CO₂ from carbonates and hydrogen from metals.

10.2. Chemical stability

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

SODIUM HYDROXIDE

Stable under recommended storage conditions.

10.3. Possibility of hazardous reactions

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

SODIUM HYDROXIDE

- Emits hydrogen by reaction with metals.
- Exothermic reaction with strong acids.
- Risk of violent reaction.
- Risk of explosion.
- Reacts violently with water.

10.4. Conditions to avoid

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

ETHYLENE DIAMINE TETRA ACETIC ACID

Avoid humidity. Avoid the formation of dust.

SODIUM HYDROXIDE

Avoid exposure to: air,moisture,sources of heat.

- Far from direct sunlight.
- To avoid thermal decomposition, do not overheat.
- Exposure to humidity.
- Freezing

10.5. Incompatible materials

SODIUM HYDROXIDE

Incompatible with: strong acids,ammonia,zinc,lead,aluminium,water,flammable liquids.

Metals, oxidizing agents, water, acids, aluminum, other light metals and their alloys.

10.6. Hazardous decomposition products

ETHYLENE DIAMINE TETRA ACETIC ACID

May develop: nitric oxide.

SECTION 11. Toxicological information**11.1. Information on toxicological effects**

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

CAR WASH SHAMPOO

Information not available

ACUTE TOXICITY

LC50 (Inhalation) of the mixture:
Not classified (no significant component)
LD50 (Oral) of the mixture:
Not classified (no significant component)
LD50 (Dermal) of the mixture:
Not classified (no significant component)

SODIUM HYDROXIDE

LD50 (Oral) 1350 mg/kg Rat

LD50 (Dermal) 1350 mg/kg Rat

ETHYLENE DIAMINE TETRA ACETIC ACID

Method: Equivalent or similar to OECD 401

Reliability: 2

Species: Rat (male / female)

Route of exposure: Oral

Results: LD50 = 4500 mg / kg bw

Method: OECD 412

Reliability: 1

Species: Rat (Wistar; male)

Route of exposure: Inhalation (aerosol)

Results: Harmful

SKIN CORROSION / IRRITATION

Causes skin irritation

ETHYLENE DIAMINE TETRA ACETIC ACID

Method: Not indicated

Reliability: 2

Species: Rabbit (Vienna-White)

Route of exposure: Dermal

Results: Not irritating

SODIUM HYDROXIDE

Method: Not indicated

Reliability: 1

Human species

Route of exposure: Dermal

Results: Irritating

Bibliographic reference: York M, Griffiths E, Whittle E and Basketter DA, Evaluation of a human patch test for the identification and classification of skin irritation potential (1996)

SERIOUS EYE DAMAGE / IRRITATION

Causes serious eye damage

ETHYLENE DIAMINE TETRA ACETIC ACID

Method: Not indicated

Reliability: 2

Species: Rabbit (Vienna-White)

Route of exposure: Ocular

Results: Irritating

SODIUM HYDROXIDE

Method: OECD 405

Reliability: 1

Species: Rabbit (New Zealand White)

Route of exposure: Ocular

Results: Irritating

Bibliographic reference: Jacobs GA, OECD Eye Irritation Tests on Sodium Hydroxide (1992)

RESPIRATORY OR SKIN SENSITISATION

Does not meet the classification criteria for this hazard class

SODIUM HYDROXIDE

Method: According to the OECD SIDS document for sodium hydroxide

Reliability: 2

Species: Human (male)

Route of exposure: Dermal

Results: Not sensitizing

Bibliographic reference: Park et al., Journal of Dermatological Science, 10, 159-165 (1995).

Skin sensitization

ETHYLENE DIAMINE TETRA ACETIC ACID

Method: OECD 406-Read across

Reliability: 1

Species: guinea pig (Hartley; female)

Route of exposure: Dermal

Results: Not sensitizing

GERM CELL MUTAGENICITY

Does not meet the classification criteria for this hazard class

ETHYLENE DIAMINE TETRA ACETIC ACID

Method: Equivalent or similar to OECD 471-Read across-Test in vitro

Reliability: 2

Species: S. typhimurium, E.Coli

Results: Negative with and without metabolic activation

Method: OECD 474-Read across-Test in vivo

Reliability: 1

Species: Mouse (NMRI; male)

Route of exposure: Oral

Results: Negative

CARCINOGENICITY

Does not meet the classification criteria for this hazard class

ETHYLENE DIAMINE TETRA ACETIC ACID

Method: Not indicated-Read across

Reliability: 2

Species: Rat (Fischer 344; male / female)

Route of exposure: Oral

Results: NOAEL> = 500 mg / kg bw / day

REPRODUCTIVE TOXICITY

Does not meet the classification criteria for this hazard class

Adverse effects on sexual function and fertility

ETHYLENE DIAMINE TETRA ACETIC ACID

Method: Not indicated-Read across

Reliability: 2

Species: Rat (FDRL; male / female)

Route of exposure: Oral

Results: NOAEL (fertility)> = 250 mg / kg bw / day

Bibliographic reference: Safety Evaluation Studies of Calcium EDTA, Oser, B.L. et al, (1963)

Adverse effects on development of the offspring

ETHYLENE DIAMINE TETRA ACETIC ACID

Method: Not indicated

Reliability: 2

Species: Rat (Albino)

Route of exposure: Oral

Results: NOAEL (development)> = 967 mg / kg bw / day

STOT - SINGLE EXPOSURE

Does not meet the classification criteria for this hazard class

SODIUM 2- (DODECYLOXY) ETHYL SULPHATE

Based on available data and through expert judgment, the substance is not classified in the target organ toxicity class for single exposure.

1-PROPANAMINIUM, 3-AMINO-N- (CARBOXYMETHYL) -N, N-DIMETHYL-, N- (C8-C18 AND C18-UNSATD. ACYL) DERIVS., INTERNAL SALTS

Based on available data and through expert judgment, the substance is not classified in the target organ toxicity class for single exposure.

ETHYLENE DIAMINE TETRA ACETIC ACID

Based on available data and through expert judgment, the substance is not classified in the target organ toxicity class for single exposure.

SODIUM HYDROXIDE

Based on available data and through expert judgment, the substance is not classified in the target organ toxicity class for single exposure.

STOT - REPEATED EXPOSURE

Does not meet the classification criteria for this hazard class

SODIUM 2- (DODECYLOXY) ETHYL SULPHATE

Based on available data and through expert judgment, the substance is not classified in the target organ toxicity class for prolonged or repeated exposure.

1-PROPANAMINIUM, 3-AMINO-N- (CARBOXYMETHYL) -N, N-DIMETHYL-, N- (C8-C18 AND C18-UNSATD. ACYL) DERIVS., INTERNAL SALTS

Based on available data and through expert judgment, the substance is not classified in the target organ toxicity class for prolonged or repeated exposure.

ETHYLENE DIAMINE TETRA ACETIC ACID

Method: Not indicated-Read across

Reliability: 2

Species: Rat (Holtzmann; male)

Route of exposure: Oral

Results: NOAEL> = 500 mg / kg bw / day

Bibliographic reference: The Toxicity and Pharmacodynamics of EGTA: Oral Administration to Rats and Comparisons with EDTA, Wynn, J.E. et al, (1970)

Method: OECD 413-Read across

Reliability: 1

Species: Rat (Wistar; male / female)

Route of exposure: Inhalation (dust)

Results: NOAEC = 3 mg / m3 air

SODIUM HYDROXIDE

Based on available data and through expert judgment, the substance is not classified in the target organ toxicity class for prolonged or repeated exposure.

ASPIRATION HAZARD

Does not meet the classification criteria for this hazard class

SECTION 12. Ecological information

12.1. Toxicity

ETHYLENE DIAMINE TETRA ACETIC ACID

LC50 - for Fish 1000 mg/l/96h

EC10 for Algae / Aquatic Plants 29,2 mg/l/72h

Chronic NOEC for Algae / Aquatic Plants 29,2 mg/l

12.2. Persistence and degradability

SODIUM HYDROXIDE

Solubility in water > 10000 mg/l

Degradability: information not available

ETHYLENE DIAMINE TETRA ACETIC ACID

Solubility in water 400 mg/l

Entirely degradable

12.3. Bioaccumulative potential

ETHYLENE DIAMINE TETRA ACETIC ACID

Partition coefficient: n-octanol/water -3,34

BCF 1,1

12.4. Mobility in soil

Information not available

12.5. Results of PBT and vPvB assessment

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

12.6. Other adverse effects

Information not available

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

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

Disposal must be performed through an authorised waste management firm, in compliance with national and local regulations.

CONTAMINATED PACKAGING

Contaminated packaging must be recovered or disposed of in compliance with national waste management regulations.

ETHYLENE DIAMINE TETRA ACETIC ACID

It must be discharged or incinerated in accordance with local regulations.

SODIUM HYDROXIDE

- Dilute with plenty of water.

- Solutions with a high pH value must be neutralized before discharging.

- Neutralize with acid.

- In accordance with local and national regulations.

SECTION 14. Transport information

The product is not dangerous under current provisions of the Code of International Carriage of Dangerous Goods by Road (ADR) and by Rail (RID), of the International Maritime Dangerous Goods Code (IMDG), and of the International Air Transport Association (IATA) regulations.

14.1. UN number

Not applicable

14.2. UN proper shipping name

Not applicable

14.3. Transport hazard class(es)

Not applicable

14.4. Packing group

Not applicable

14.5. Environmental hazards

Not applicable

14.6. Special precautions for user

Not applicable

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

Information not relevant

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

Point 3

Substances in Candidate List (Art. 59 REACH)

On the basis of available data, the product does not contain any SVHC in percentage greater than 0,1%.

Substances subject to authorisation (Annex XIV REACH)

None

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

None

Substances subject to the Rotterdam Convention:

None

Substances subject to the Stockholm Convention:

None

Healthcare controls

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

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:

Met. Corr. 1	Substance or mixture corrosive to metals, category 1
Skin Corr. 1A	Skin corrosion, category 1A
Eye Dam. 1	Serious eye damage, category 1
Eye Irrit. 2	Eye irritation, category 2
Skin Irrit. 2	Skin irritation, category 2
Aquatic Chronic 3	Hazardous to the aquatic environment, chronic toxicity, category 3
H290	May be corrosive to metals.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H315	Causes skin irritation.
H412	Harmful to aquatic life with long lasting effects.

LEGEND:

- ADR: European Agreement concerning the carriage of Dangerous goods by Road
- CAS NUMBER: Chemical Abstract Service Number
- CE50: Effective concentration (required to induce a 50% effect)
- CE NUMBER: Identifier in ESIS (European archive of existing substances)
- CLP: EC Regulation 1272/2008
- DNEL: Derived No Effect Level
- EmS: Emergency Schedule
- GHS: Globally Harmonized System of classification and labeling of chemicals
- IATA DGR: International Air Transport Association Dangerous Goods Regulation
- IC50: Immobilization Concentration 50%

- IMDG: International Maritime Code for dangerous goods
- IMO: International Maritime Organization
- INDEX NUMBER: Identifier in Annex VI of CLP
- LC50: Lethal Concentration 50%
- LD50: Lethal dose 50%
- OEL: Occupational Exposure Level
- PBT: Persistent bioaccumulative and toxic as REACH Regulation
- PEC: Predicted environmental Concentration
- PEL: Predicted exposure level
- PNEC: Predicted no effect concentration
- REACH: EC Regulation 1907/2006
- RID: Regulation concerning the international transport of dangerous goods by train
- TLV: Threshold Limit Value
- TLV CEILING: Concentration that should not be exceeded during any time of occupational exposure.
- TWA STEL: Short-term exposure limit
- TWA: Time-weighted average exposure limit
- VOC: Volatile organic Compounds
- vPvB: Very Persistent and very Bioaccumulative as for REACH Regulation
- WGK: Water hazard classes (German).

GENERAL BIBLIOGRAPHY

1. Regulation (EC) 1907/2006 (REACH) of the European Parliament
 2. Regulation (EC) 1272/2008 (CLP) of the European Parliament
 3. Regulation (EU) 790/2009 (I Atp. CLP) of the European Parliament
 4. Regulation (EU) 2015/830 of the European Parliament
 5. Regulation (EU) 286/2011 (II Atp. CLP) of the European Parliament
 6. Regulation (EU) 618/2012 (III Atp. CLP) of the European Parliament
 7. Regulation (EU) 487/2013 (IV Atp. CLP) of the European Parliament
 8. Regulation (EU) 944/2013 (V Atp. CLP) of the European Parliament
 9. Regulation (EU) 605/2014 (VI Atp. CLP) of the European Parliament
 10. Regulation (EU) 2015/1221 (VII Atp. CLP) of the European Parliament
 11. Regulation (EU) 2016/918 (VIII Atp. CLP) of the European Parliament
 12. Regulation (EU) 2016/1179 (IX Atp. CLP)
 13. Regulation (EU) 2017/776 (X Atp. CLP)
 14. Regulation (EU) 2018/669 (XI Atp. CLP)
 15. Regulation (EU) 2018/1480 (XIII Atp. CLP)
 16. Regulation (EU) 2019/521 (XII Atp. CLP)
- 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.

Product's classification is based on the calculation methods set out in Annex I of the CLP Regulation, unless otherwise indicated in sections 11 and 12.

The data for evaluation of chemical-physical properties are reported in section 9.

Changes to previous review:

The following sections were modified:

02 / 03 / 08 / 09 / 10 / 11 / 12 / 13.