

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 20870-6396
Product name: HAND SANITIZING GEL

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

Intended use: Mixture of substances for hand sanitizing treatment

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:

Flammable liquid, category 2	H225	Highly flammable liquid and vapour.
Eye irritation, category 2	H319	Causes serious eye irritation.
Specific target organ toxicity - single exposure, category 3	H336	May cause drowsiness or dizziness.

2.2. Label elements

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

Hazard pictograms:

HAND SANITIZING GEL



Signal words:

Danger

Hazard statements:

H225 Highly flammable liquid and vapour.
H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.

Precautionary statements:

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P261 Avoid breathing dust / fume / gas / mist / vapours / spray.
P241 Use explosion-proof [electrical / ventilating / lighting] equipment.
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P501 Dispose of contents / container in accordance with local regulations.

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)
PROPAN-2-OL		
CAS 67-63-0	$66 \leq x < 70$	Flam. Liq. 2 H225, Eye Irrit. 2 H319, STOT SE 3 H336
EC 200-661-7		
INDEX 603-117-00-0		
Reg. no. 01-2119457558-25-XXXX		
CLOREXIDINA DICLUCONATO		
CAS 18472-51-0	$1,5 \leq x < 2$	Eye Dam. 1 H318, Aquatic Acute 1 H400 M=10, Aquatic Chronic 1 H410 M=1
EC 242-354-0		
INDEX -		

The full wording of hazard (H) phrases is given in section 16 of the sheet.

INCI Ingredients

Isopropyl Alcohol, Aqua, Glycerin, Sodium Acrylates/C10-30 Alkyl Acrylate Crosspolymer, Aminomethyl Propanol, Chlorhexidine Digluconate

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. Rinse skin with a shower immediately. Wash contaminated clothing before using it again.

INHALATION: Remove to open air. If the subject stops breathing, administer artificial respiration. Get medical advice/attention immediately.

INGESTION: Get medical advice/attention immediately. Do not induce vomiting. Do not administer anything not explicitly 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**

Extinguishing substances are: carbon dioxide, foam, chemical powder. For product loss or leakage that has not caught fire, water spray can be used to disperse flammable vapours and protect those trying to stem the leak.

UNSUITABLE EXTINGUISHING EQUIPMENT

Do not use jets of water. Water is not effective for putting out fires but can be used to cool containers exposed to flames to prevent explosions.

5.2. Special hazards arising from the substance or mixture**HAZARDS CAUSED BY EXPOSURE IN THE EVENT OF FIRE**

Excess pressure may form in containers exposed to fire at a risk of explosion. 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.

Send away individuals who are not suitably equipped. Use explosion-proof equipment. Eliminate all sources of ignition (cigarettes, flames, sparks, etc.) from the leakage site.

6.2. Environmental precautions

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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

Keep away from heat, sparks and naked flames; do not smoke or use matches or lighters. Vapours may catch fire and an explosion may occur; vapour accumulation is therefore to be avoided by leaving windows and doors open and ensuring good cross ventilation. Without adequate ventilation, vapours may accumulate at ground level and, if ignited, catch fire even at a distance, with the danger of backfire. Avoid bunching of electrostatic charges. When performing transfer operations involving large containers, connect to an earthing system and wear antistatic footwear. Vigorous stirring and flow through the tubes and equipment may cause the formation and accumulation of electrostatic charges. In order to avoid the risk of fires and explosions, never use compressed air when handling. Open containers with caution as they may be pressurised. Do not eat, drink or smoke during 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 the containers sealed, in a well ventilated place, away from direct sunlight. Store in a cool and well ventilated place, keep far away from sources of heat, naked flames and sparks and other sources of ignition. 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

PROPAN-2-OL

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
VLA	ESP	500	200	1000	400	
VLEP	FRA			980	400	

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WEL	GBR	999	400	1250	500				
TLV	NOR	245	100						
TLV-ACGIH		492	200	983	400				
Predicted no-effect concentration - PNEC									
Normal value in fresh water				140,9		mg/l			
Normal value in marine water				140,9		mg/l			
Normal value for fresh water sediment				552		mg/kg			
Normal value for marine water sediment				552		mg/kg			
Normal value of STP microorganisms				2251		mg/l			
Normal value for the food chain (secondary poisoning)				160		mg/kg			
Normal value for the terrestrial compartment				28		mg/kg			
Health - Derived no-effect level - DNEL / DMEL									
		Effects on consumers			Effects on workers				
Route of exposure	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic	
Oral				26 mg/kg bw/d					
Inhalation				89 mg/m3				500 mg/m3	
Skin				319 mg/kg bw/d				888 mg/kg bw/d	
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Predicted no-effect concentration - PNEC									
Normal value in fresh water				140,9		mg/l			
Normal value in marine water				140,9		mg/l			
Normal value for marine water sediment				552		mg/kg			
Normal value for water, intermittent release				552		mg/l			

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 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.

Consider the appropriateness of providing antistatic clothing in the case of working environments in which there is a risk of explosion.

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.

Product residues must not be indiscriminately disposed of with waste water or by dumping in waterways.

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Respiratory protection: personal respiratory protection devices are normally not required. In inadequately ventilated areas, where workplace limits are exceeded, where there are unpleasant odors or where aerosols are present or smoke and fog occur, use a self-contained breathing apparatus or self-contained breathing apparatus with a type A filter or an appropriate combined filter, in compliance with EN 141.

Hand protection: the choice of an appropriate glove depends not only on its material but also on other quality characteristics and is different from one manufacturer to another. Observe the permeability and breakthrough time instructions provided by the glove supplier. Also take into consideration the specific local conditions in which the product is used, such as the danger of cuts, abrasions and contact times. Keep in mind that in daily use the durability of a chemical resistant protective glove can be considerably less than breakthrough time measured according to EN 374.

SECTION 9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	gelatinous liquid
Colour	colourless
Odour	alcohol
Odour threshold	Not determined
pH	5-7
Melting point / freezing point	Not determined
Initial boiling point	82 °C
Boiling range	Not determined
Flash point	13 °C
Evaporation rate	Not determined
Flammability (solid, gas)	not applicable
Lower inflammability limit	Not available
Upper inflammability limit	Not available
Lower explosive limit	Not available

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Upper explosive limit	Not available
Vapour pressure	43 hPa @ 20°C
Vapour density	Not determined
Relative density	0,8 - 0,9
Solubility	soluble in water
Partition coefficient: n-octanol/water	Not determined
Auto-ignition temperature	Not determined
Decomposition temperature	Not determined
Viscosity	Not determined
Explosive properties	not explosive
Oxidising properties	not applicable

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.

10.2. Chemical stability

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

10.3. Possibility of hazardous reactions

The vapours may also form explosive mixtures with the air.

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Vapors can form an explosive mixture with air.

10.4. Conditions to avoid

Avoid overheating. Avoid bunching of electrostatic charges. Avoid all sources of ignition.

10.5. Incompatible materials

Information not available

10.6. Hazardous decomposition products

In the event of thermal decomposition or fire, gases and vapours that are potentially dangerous to health may be released.

SECTION 11. Toxicological information

11.1. Information on toxicological effectsMetabolism, 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

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)

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LD50 (Oral) 2,27 mg/kg Ratto (OECD TG 401)

LD50 (Dermal) > 5000 mg/kg Coniglio

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LD50 (Oral) 4710 mg/kg Rat

LD50 (Dermal) 12800 mg/kg Rat

LC50 (Inhalation) 72,6 mg/l/4h Rat

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Method: Equivalent or similar to OECD 401

Reliability: 2

Species: Rat (Sherman)

Route of exposure: Oral

Results: LD50: 5.84 other: g / kg body weight

Bibliographic reference: Smyth HF & Carpenter CP, FURTHER EXPERIENCE WITH THE RANGE FINDING TEST IN THE INDUSTRIAL TOXICOLOGY LABORATORY (1948)

Method: Equivalent or similar to OECD 403

Reliability: 1

Species: Rat (Fischer 344; male / female)

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Route of exposure: Inhalation (vapor)

Results: LC50: ca. 5,000 ppm

Method: Equivalent or similar to OECD 402

Reliability: 2

Species: Rabbit

Route of exposure: Dermal

Results: LD50: 16.4 mL / kg bw

Bibliographic reference: Smyth HF & Carpenter CP, FURTHER EXPERIENCE WITH THE RANGE FINDING TEST IN THE INDUSTRIAL TOXICOLOGY LABORATORY (1948)

SKIN CORROSION / IRRITATION

Does not meet the classification criteria for this hazard class

PROPAN-2-OL

Method: Not indicated

Reliability: 2

Species: Rabbit

Route of exposure: Dermal

Results: Not classified

Bibliographic reference: Nixon G, Tyson C & Wertz W, Interspecies Comparisons of Skin Irritancy (1975)

SERIOUS EYE DAMAGE / IRRITATION

Causes serious eye irritation

PROPAN-2-OL

Method: Equivalent or similar to OECD 405

Reliability: 1

Species: Rabbit (New Zealand White)

Route of exposure: Ocular

Results: Category 2

RESPIRATORY OR SKIN SENSITISATION

Does not meet the classification criteria for this hazard class

PROPAN-2-OL

Method: OECD 406

Reliability: 1

Species: guinea pig (Hartley; male / female)

Route of exposure: Dermal

Results: Not sensitizing

GERM CELL MUTAGENICITY

Does not meet the classification criteria for this hazard class

PROPAN-2-OL

Method: Equivalent or similar to OECD 476 in vitro test

Reliability: 1

Species: Chinese hamster

Results: Negative with or without metabolic activation

Bibliographic reference:

Method: Equivalent or similar to OECD 474 in vivo test

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Reliability: 2
Species: Mouse (ICR; male / female)
Route of exposure: Oral
Results: Negative

CARCINOGENICITY

Does not meet the classification criteria for this hazard class

REPRODUCTIVE TOXICITY

Does not meet the classification criteria for this hazard class

PROPAN-2-OL

Method: Equivalent or similar to OECD 416
Reliability: 1
Species: Rat (Sprague-Dawley; male / female)
Route of exposure: Oral
Results: NOAEL 500

STOT - SINGLE EXPOSURE

May cause drowsiness or dizziness

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Sulla base dei dati disponibili e a mezzo del giudizio di esperti, la sostanza è classificata nella classe di tossicità per organi bersaglio per esposizione singola.

Route of exposure
PROPAN-2-OL

inhalation

STOT - REPEATED EXPOSURE

Does not meet the classification criteria for this hazard class

PROPAN-2-OL

Method: OECD 451
Reliability: 1
Species: Rat (Fischer 344; male / female)
Route of exposure: Inhalation (vapors)
Results: NOAEC = 5000 ppm

ASPIRATION HAZARD

Does not meet the classification criteria for this hazard class

SECTION 12. Ecological information**12.1. Toxicity**

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LC50 - for Fish > 1000 mg/l/96h Eisenia foetida (OECD 207)

EC50 - for Crustacea 0,087 mg/l/48h Daphnia (OECD TG 202)

EC50 - for Algae / Aquatic Plants > 1000 mg/l/72h Avena sativa (OCSE 208)

Chronic NOEC for Algae / Aquatic Plants 0,0206 mg/l Daphnia (OECD 211)

12.2. Persistence and degradability

PROPAN-2-OL

Quickly degradable in water.

PROPAN-2-OL

Rapidly degradable

12.3. Bioaccumulative potential

PROPAN-2-OL

Partition coefficient: n-octanol/water 0,05

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.

Waste transportation may be subject to ADR restrictions.

CONTAMINATED PACKAGING

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

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After pre-treatment and compliance with the regulations for hazardous waste, they must be taken to a permitted hazardous waste landfill or a hazardous waste incinerator.

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

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ADR / RID, IMDG, 1219
IATA:

14.2. UN proper shipping name

ADR / RID: ISOPROPANOL (ISOPROPYL ALCOHOL)
IMDG: ISOPROPANOL (ISOPROPYL ALCOHOL)
IATA: ISOPROPANOL (ISOPROPYL ALCOHOL)

14.3. Transport hazard class(es)

ADR / RID: Class: 3 Label: 3
IMDG: Class: 3 Label: 3
IATA: Class: 3 Label: 3

**14.4. Packing group**

ADR / RID, IMDG, II
IATA:

14.5. Environmental hazards

ADR / RID: NO
IMDG: NO
IATA: NO

14.6. Special precautions for user

ADR / RID:	HIN - Kemler: 33	Limited Quantities: 1 L	Tunnel restriction code: (D/E)
	Special Provision: -		
IMDG:	EMS: F-E, S-D	Limited Quantities: 1 L	
		Maximum quantity: 60 L	Packaging instructions: 364
IATA:	Cargo:	Maximum quantity: 5 L	Packaging instructions: 353
	Pass.:		
	Special Instructions:	A180	

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: P5c

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

Product

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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:

Flam. Liq. 2	Flammable liquid, category 2
Eye Dam. 1	Serious eye damage, category 1
Eye Irrit. 2	Eye irritation, category 2
STOT SE 3	Specific target organ toxicity - single exposure, category 3
Aquatic Acute 1	Hazardous to the aquatic environment, acute toxicity, category 1
Aquatic Chronic 1	Hazardous to the aquatic environment, chronic toxicity, category 1

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H225	Highly flammable liquid and vapour.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.
H400	Very toxic to aquatic life.
H410	Very toxic 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

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- 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.