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: **4110019395**
Product name **ANTI-ALGAE BIOCIDE FOR DIESEL**

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

Intended use **Bactericidal additive for diesel fuel**

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**
Supplier:

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 2020/878.
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.
Skin corrosion, category 1A	H314	Causes severe skin burns and eye damage.
Serious eye damage, category 1	H318	Causes serious eye damage.
Skin sensitization, category 1	H317	May cause an allergic skin reaction.
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:

Signal words: Danger

Hazard statements:

H225 Highly flammable liquid and vapour.

H314 Causes severe skin burns and eye damage.

H317 May cause an allergic skin reaction.

H336 May cause drowsiness or dizziness.

Precautionary statements:

P260 Do not breathe dust / fume / gas / mist / vapours / spray.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P264 Wash hands thoroughly after handling.

P370+P378 In case of fire: use CO2 fire extinguisher to extinguish.

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P233 Keep container tightly closed.

P261 Avoid breathing dust / fume / gas / mist / vapours / spray.

P310 Immediately call a POISON CENTER / doctor.

P312 Call a POISON CENTRE / doctor if you feel unwell.

P333+P313 If skin irritation or rash occurs: Get medical advice / attention.

P403+P235 Store in a well-ventilated place. Keep cool.

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

P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P362+P364 Take off contaminated clothing and wash it before reuse.

Contains: ISO-BUTANOL
REACTION MASS OF 2-METHYL-2H-ISOTHIAZOL-3-ONE AND 5-CHLORO-2-METHYL-2H-ISOTHIAZOL-3-ONE
PROPAN-2-OL

2.3. Other hazards

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

The product does not contain substances with endocrine disrupting properties in concentration ≥ 0.1%.

SECTION 3. Composition/information on ingredients

3.2. Mixtures

Contains:

Identification	x = Conc. %	Classification (EC) 1272/2008 (CLP)
PROPAN-2-OL		
INDEX 603-117-00-0 EC 200-661-7 CAS 67-63-0 REACH Reg. 01-2119457558-25-XXXX	74 ≤ x < 78	Flam. Liq. 2 H225, Eye Irrit. 2 H319, STOT SE 3 H336
Manca la traduzione (WZ00202) <======= (*)<<Error>>Manca la traduzione (WZ00202)		
INDEX - EC 298-736-2 CAS 93821-48-8	16,5 ≤ x < 18	Eye Irrit. 2 H319
ISO-BUTANOL		
INDEX 603-108-00-1 EC 201-148-0 CAS 78-83-1 REACH Reg. 01-2119484609-23-XXXX	4 ≤ x < 4,5	Flam. Liq. 3 H226, Eye Dam. 1 H318, Skin Irrit. 2 H315, STOT SE 3 H335, STOT SE 3 H336
REACTION MASS OF 2-METHYL-2H-ISOTHIAZOL-3-ONE AND 5-CHLORO-2-METHYL-2H-ISOTHIAZOL-3-ONE		
INDEX - EC 911-418-6 CAS 55965-84-9 REACH Reg. 01-2120764691-48-XXXX	4 ≤ x < 4,5	Acute Tox. 1 H310, Acute Tox. 1 H330, Acute Tox. 3 H301, Skin Corr. 1 H314, Eye Dam. 1 H318, Skin Sens. 1 H317, Aquatic Chronic 1 H410 M=1 STA Oral: 100 mg/kg, STA Dermal: 5 mg/kg, STA Inhalation mists/powders: 0,005 mg/l

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
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

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. 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 2021
FRA	France	Valeurs limites d'exposition professionnelle aux agents chimiques en France. ED 984 - INRS
LTU	Lietuva	Jsakymas dėl lietuvos higienos normos hn 23:2011 „cheminių medžiagų profesinio poveikio ribiniai dydžiai. Matavimo ir poveikio vertinimo bendrieji reikalavimai“ patvirtinimo
NOR	Norge	Forskrift om endring i forskrift om tiltaksverdier og grenseverdier for fysiske og kjemiske faktorer i arbeidsmiljøet samt smitterisikogrupper for biologiske faktorer (forskrift om tiltaks- og grenseverdier), 21. august 2018 nr. 1255
POL	Polska	Rozporządzenie ministra rozwoju, pracy i technologii z dnia 18 lutego 2021 r. Zmieniające rozporządzenie w sprawie najwyższych dopuszczalnych stężeń i natężeń czynników szkodliwych dla zdrowia w środowisku pracy
GBR	United Kingdom	EH40/2005 Workplace exposure limits (Fourth Edition 2020)
	TLV-ACGIH	ACGIH 2022

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	
RD	LTU	350	150	600	250	

TLV	NOR	245	100				
NDS/NDSCh	POL	900		1200		SKIN	
WEL	GBR	999	400	1250	500		
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

REACTION MASS OF 2-METHYL-2H-ISOTHIAZOL-3-ONE AND 5-CHLORO-2-METHYL-2H-ISOTHIAZOL-3-ONE

Predicted no-effect concentration - PNEC		
Normal value in fresh water	0,00339	mg/l
Normal value in marine water	0,00339	mg/l
Normal value for fresh water sediment	0,027	mg/kg
Normal value for marine water sediment	0,027	mg/kg
Normal value of STP microorganisms	0,23	mg/l
Normal value for the terrestrial compartment	0,01	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		0,11 mg/kg bw/d		0,09 mg/kg/d				
Inhalation	0,04 mg/m3		0,02 mg/m3		0,04 mg/m3		0,02 mg/m3	

ISO-BUTANOL

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
VLA	ESP	154	50			
VLEP	FRA	150	50			
RD	LTU	10				SKIN
TLV	NOR	75	25			SKIN
NDS/NDSCh	POL	100		200		SKIN
WEL	GBR	154	50	231	75	

TLV-ACGIH	152	50

Predicted no-effect concentration - PNEC		
Normal value in fresh water	0,4	mg/l
Normal value in marine water	0,04	mg/l
Normal value for fresh water sediment	1,56	mg/kg
Normal value for marine water sediment	0,156	mg/kg
Normal value of STP microorganisms	10	mg/l
Normal value for the terrestrial compartment	0,076	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
Inhalation			55 mg/m3				310 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 ; 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.
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.
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.

SKIN PROTECTION
Wear category III 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 a hood visor or protective visor combined with airtight 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.

PROPAN-2-OL

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.

REACTION MASS OF 2-METHYL-2H-ISOTHIAZOL-3-ONE AND 5-CHLORO-2-METHYL-2H-ISOTHIAZOL-3-ONE

Eye / face protection: Eye protection: use chemical splash goggles and face shield (EN166). The eye protection worn must be compatible with the respiratory protection system used.
Skin protection
Hand protection: wear chemical resistant gloves (EN374) whenever handling this material. The gloves listed below can provide protection against permeation. (Gloves of other chemically resistant materials may not provide adequate protection): butyl rubber PVC nitrile gloves PVC> 1 mm thick The gloves must be removed and replaced immediately if there are indications of degradation or chemical innovation. Rinse and remove gloves immediately after use. Wash your hands with soap and water.

ISO-BUTANOL

Suitable safety gloves resistant to chemicals (EN 374) also with prolonged direct contact (Recommended: protection index 6, corresponding to> 480 minutes of breakthrough time according to EN 374): Eg nitrile rubber (0.4 mm), chloroprene rubber (0.5mm), butyl rubber (0.7mm) etc.
The manufacturer's instructions for use must be observed due to the wide variety of types.
Additional note: specifications are based on tests, literature data and information from glove manufacturers or derive from similar substances by analogy. Due to many conditions (eg temperature), it should be considered that the practical use of a chemical protective glove in practice can be much shorter than the breakthrough time determined through testing.

SECTION 9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Properties	Value	Information
Appearance	clear liquid	
Colour	yellow	
Odour	characteristic	
Melting point / freezing point	> -5 °C	
Initial boiling point	81 °C	
Boiling range	81 °C	
Flammability	not available	
Lower explosive limit	not available	
Upper explosive limit	not available	
Flash point	15 °C	
Auto-ignition temperature	not available	
Decomposition temperature	not available	

pH	7-9	
Kinematic viscosity	not available	
Dynamic viscosity	2 cTs a 20°C	
Solubility	soluble in water	
Partition coefficient: n-octanol/water	not available	
Vapour pressure	<0,1 hPa	Temperature: 20 °C
Density and/or relative density	0,8 g/cm3	
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

VOC (Directive 2010/75/EU)	82,00 %	-	656,00	g/litre

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.

PROPAN-2-OL

Vapors can form an explosive mixture with air.

ISO-BUTANOL

Reacts with strong oxidizing agents

10.4. Conditions to avoid

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

10.5. Incompatible materials

REACTION MASS OF 2-METHYL-2H-ISOTHIAZOL-3-ONE AND 5-CHLORO-2-METHYL-2H-ISOTHIAZOL-3-ONE

Avoid contact with the following: Oxidizing agents Amines Reducing agents Mercaptans.

ISO-BUTANOL

Strong oxidizing agents

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.

REACTION MASS OF 2-METHYL-2H-ISOTHIAZOL-3-ONE AND 5-CHLORO-2-METHYL-2H-ISOTHIAZOL-3-ONE

Nitrogen oxides (NOx) Sulfur oxides hydrochloric acid

SECTION 11. Toxicological information

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 - mists / powders) of the mixture:	0,12 mg/l
ATE (Oral) of the mixture:	>2000 mg/kg
ATE (Dermal) of the mixture:	125,00 mg/kg

PROPAN-2-OL

LD50 (Dermal):	12800 mg/kg Rat
LD50 (Oral):	4710 mg/kg Rat
LC50 (Inhalation vapours):	72,6 mg/l/4h Rat

REACTION MASS OF 2-METHYL-2H-ISOTHIAZOL-3-ONE AND 5-CHLORO-2-METHYL-2H-ISOTHIAZOL-3-ONE

STA (Oral):	100 mg/kg estimate from table 3.1.2 of Annex I of the CLP (figure used for calculation of the acute toxicity estimate of the mixture)
STA (Dermal):	5 mg/kg estimate from table 3.1.2 of Annex I of the CLP (figure used for calculation of the acute toxicity estimate of the mixture)
STA (Inhalation mists/powders):	0,005 mg/l estimate from table 3.1.2 of Annex I of the CLP (figure used for calculation of the acute toxicity estimate of the mixture)

PROPAN-2-OL
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)
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)

REACTION MASS OF 2-METHYL-2H-ISOTHIAZOL-3-ONE AND 5-CHLORO-2-METHYL-2H-ISOTHIAZOL-3-ONE
Method: OECD 423
Reliability: 1
Species: Rat (Wistar; female)
Route of exposure: Oral
Results: LD50 = 200 mg / kg bw
Method: OECD 403
Reliability: 1
Species: Rat (Crl: CD BR; male / female)
Route of exposure: Inhalation (aerosol)
Results: LC50 = 0.33 mg / L air
Method: OECD 402
Reliability: 1
Species: Rat (Sprague-Dawley; male / female)
Route of exposure: Dermal
Results: LD50> 1008 mg / kg bw

ISO-BUTANOL
Method: OECD 401

Reliability: 1
Species: Rat (Sprague-Dawley; male / female)
Route of exposure: Oral
Results: LD50> 2830 mg / kg bw
Method: OECD 402
Reliability: 1
Species: Rabbit (New Zealand White; male / female)
Route of exposure: Inhalation
Results: LD50> 2000 mg / kg bw
Method: OECD 402
Reliability: 1
Species: Rabbit (New Zealand White; male / female)
Route of exposure: Dermal
Results: LD50> 2000 mg / kg bw

SKIN CORROSION / IRRITATION

Corrosive for the skin

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)

REACTION MASS OF 2-METHYL-2H-ISOTHIAZOL-3-ONE AND 5-CHLORO-2-METHYL-2H-ISOTHIAZOL-3-ONE
Method: OECD 404
Reliability: 1
Species: Rabbit (New Zealand White)
Route of exposure: Dermal
Results: Corrosive

SERIOUS EYE DAMAGE / IRRITATION

Causes serious eye damage

PROPAN-2-OL
Method: Equivalent or similar to OECD 405
Reliability: 1
Species: Rabbit (New Zealand White)
Route of exposure: Ocular
Results: Category 2

REACTION MASS OF 2-METHYL-2H-ISOTHIAZOL-3-ONE AND 5-CHLORO-2-METHYL-2H-ISOTHIAZOL-3-ONE
Method: Not indicated
Reliability: 2
Species: Rabbit (New Zealand White)
Route of exposure: Ocular
Results: Category 1 (irreversible effects on the eye)

ISO-BUTANOL
Method: OECD 405
Reliability: 1
Species: Rabbit (New Zealand White)
Route of exposure: Ocular
Results: Corrosive

RESPIRATORY OR SKIN SENSITISATION

Sensitising for the skin

PROPAN-2-OL
Method: OECD 406
Reliability: 1
Species: guinea pig (Hartley; male / female)
Route of exposure: Dermal
Results: Not sensitizing

ISO-BUTANOL
Method: QSAR
Reliability: 1
Species: Not indicated
Route of exposure: Dermal
Results: Not classified

Skin sensitization

REACTION MASS OF 2-METHYL-2H-ISOTHIAZOL-3-ONE AND 5-CHLORO-2-METHYL-2H-ISOTHIAZOL-3-ONE
Method: Not indicated
Reliability: 1
Species: Mouse (CBA / J; female)
Route of exposure: Dermal
Results: Category 1A (indication of significant skin sensitization potential)

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
Reliability: 2

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

REACTION MASS OF 2-METHYL-2H-ISOTHIAZOL-3-ONE AND 5-CHLORO-2-METHYL-2H-ISOTHIAZOL-3-ONE
Method: EPA OPP 84-2-In vitro test
Reliability: 1
Species: S. typhimurium
Results: Positive
Method: OECD 475-in vivo test
Reliability: 1
Species: Mouse (CD-1; male / female)
Route of exposure: Oral
Results: Negative

ISO-BUTANOL
Method: Not indicated - in vitro test
Reliability: 2
Species: Chinese hamster
Results: Negative with and without metabolic activation
Bibliographic reference: Evaluation of the genotoxic potential of some microbial volatile organic compounds (MVOC) with the comet assay, the micronucleus assay and the HPRT gene mutation assay, Kreja L, Seidel H-J (2002)
Method: OECD 474-test in vivo
Reliability: 1
Species: Mouse (NMRI; male / female)
Route of exposure: Oral
Results: Negative

CARCINOGENICITY

Does not meet the classification criteria for this hazard class

REACTION MASS OF 2-METHYL-2H-ISOTHIAZOL-3-ONE AND 5-CHLORO-2-METHYL-2H-ISOTHIAZOL-3-ONE
Method: OECD 453
Reliability: 1
Species: Rat (Sprague-Dawley; male / female)
Route of exposure: Oral
Results: NOEL = 30 ppm

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

Adverse effects on sexual function and fertility

REACTION MASS OF 2-METHYL-2H-ISOTHIAZOL-3-ONE AND 5-CHLORO-2-METHYL-2H-ISOTHIAZOL-3-ONE
Method: OECD 416
Reliability: 1
Species: Rat (Crl: CD BR; male / female)
Route of exposure: Oral
Results: NOAEL (fertility) = 30 ppm

ISO-BUTANOL
Method: EPA OPPTS 870.3800
Reliability: 1
Species: Rat (Sprague-Dawley; male / female)
Route of exposure: Inhalation (vapors)
Results: Negative, NOAEL (fertility)> = 7.5 mg / L air

Adverse effects on development of the offspring

REACTION MASS OF 2-METHYL-2H-ISOTHIAZOL-3-ONE AND 5-CHLORO-2-METHYL-2H-ISOTHIAZOL-3-ONE
Method: EPA OPP 83-3
Reliability: 1
Species: Rat (Sprague-Dawley)
Route of exposure: Oral
Results: LOAEL (development) = 28 mg / kg bw / day

ISO-BUTANOL
Method: OECD 414
Reliability: 1
Species: Rat (Wistar)
Route of exposure: Inhalation (vapors)
Results: Negative, NOAEL (development) = 10 mg / L air

STOT - SINGLE EXPOSURE

May cause drowsiness or dizziness

PROPAN-2-OL
Based on available data and through expert judgment, the substance is classified in the target organ toxicity class for single exposure.

Manca la traduzione (WZ00202) <=======(*)
Based on available data and through expert judgment, the substance is not classified in the target exposure prgani toxicity class for single exposure.

REACTION MASS OF 2-METHYL-2H-ISOTHIAZOL-3-ONE AND 5-CHLORO-2-METHYL-2H-ISOTHIAZOL-3-ONE
Based on available data and through expert judgment, the substance is not classified in the target organ toxicity class for single exposure.

ISO-BUTANOL
Based on available data and through expert judgment, the substance is classified in the target organ toxicity class for single exposure.

Target organs

ISO-BUTANOL
Respiratory tract

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

Manca la traduzione (WZ00202) <=======(*)
Based on available data and through expert judgment, the substance is not classified in the target prgani toxicity class for repeated or prolonged exposure.

REACTION MASS OF 2-METHYL-2H-ISOTHIAZOL-3-ONE AND 5-CHLORO-2-METHYL-2H-ISOTHIAZOL-3-ONE
Method: OECD 409
Reliability: 1
Species: Dog (Beagle; male / female)
Route of exposure: Oral
Results: NOAEL = 22 mg / kg bw / day
Method: OECD 413
Reliability: 1
Species: Rat (Crl: CD (SD) BR; male / female)
Route of exposure: Inhalation (aerosol)
Results: NOAEL = 0.34 mg / m3 air
Method: EPA OPP 82-3
Reliability: 1
Species: Rat (Sprague-Dawley; male / female)
Route of exposure: Dermal
Results: NOAEL = 0.105 mg / kg bw / day

ISO-BUTANOL

Method: OECD 408
Reliability: 1
Species: Rat (Wistar; male / female)
Route of exposure: Oral
Results: Negative, NOAEL> 1450 mg / kg bw / day
Method: EPA OPPTS 870.3800
Reliability: 1
Species: Rat (Sprague-Dawley; male / female)
Route of exposure: Inhalation (vapors)
Results: Negative, NOAEL = 7.5 mg / L air

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

12.1. Toxicity

Information not available

12.2. Persistence and degradability

PROPAN-2-OL
Quickly degradable in water.
ISO-BUTANOL
Easily degradable in water, 70-80% in 28 days.

PROPAN-2-OL	
Rapidly degradable	
ISO-BUTANOL	
Solubility in water	1000 - 10000 mg/l
Rapidly degradable	

12.3. Bioaccumulative potential

PROPAN-2-OL	
Partition coefficient: n-octanol/water	0,05
ISO-BUTANOL	
Partition coefficient: n-octanol/water	1

12.4. Mobility in soil

ISO-BUTANOL	
Partition coefficient: soil/water	0,31

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 ≥ 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. 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.

PROPAN-2-OL
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.

REACTION MASS OF 2-METHYL-2H-ISOTHIAZOL-3-ONE AND 5-CHLORO-2-METHYL-2H-ISOTHIAZOL-3-ONE
Incinerate contaminated liquids and solids in accordance with local, state and federal regulations.

ISO-BUTANOL
They must be disposed of or incinerated in accordance with local regulations.

SECTION 14. Transport information

14.1. UN number or ID number

ADR / RID, IMDG, IATA: 1993

14.2. UN proper shipping name

ADR / RID:	FLAMMABLE LIQUID, N.O.S.
IMDG:	FLAMMABLE LIQUID, N.O.S.
IATA:	FLAMMABLE LIQUID, N.O.S.

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, IATA: III

14.5. Environmental hazards

ADR / RID:	NO
IMDG:	NO
IATA:	NO

14.6. Special precautions for user

ADR / RID:	HIN - Kemler: 30	Limited Quantities: 5 L	Tunnel restriction code: (D/E)
	Special provision: 274, 601		
IMDG:	EMS: F-E, S-E	Limited Quantities: 5 L	
IATA:	Cargo:	Maximum quantity: 220 L	Packaging instructions: 366
	Passengers:	Maximum quantity: 60 L	Packaging instructions: 355
	Special provision:	A3	

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: P5c

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

Product

Point	3 - 40

Contained substance

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 ≥ 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

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
Flam. Liq. 3	Flammable liquid, category 3
Acute Tox. 1	Acute toxicity, category 1
Acute Tox. 3	Acute toxicity, category 3
Skin Corr. 1A	Skin corrosion, category 1A
Skin Corr. 1	Skin corrosion, category 1
Eye Dam. 1	Serious eye damage, category 1
Eye Irrit. 2	Eye irritation, category 2
Skin Irrit. 2	Skin irritation, category 2
STOT SE 3	Specific target organ toxicity - single exposure, category 3
Skin Sens. 1	Skin sensitization, category 1
Aquatic Chronic 1	Hazardous to the aquatic environment, chronic toxicity, category 1
H225	Highly flammable liquid and vapour.

H226	Flammable liquid and vapour.
H310	Fatal in contact with skin.
H330	Fatal if inhaled.
H301	Toxic if swallowed.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H315	Causes skin irritation.
H335	May cause respiratory irritation.
H317	May cause an allergic skin reaction.
H336	May cause drowsiness or dizziness.
H410	Very toxic to aquatic life with long lasting effects.

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
- 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.

Changes to previous review:
The following sections were modified:
02 / 03 / 08 / 09 / 11 / 12 / 15 / 16.