

CHEMISOL RUST ICE 40 400 ml CHEMITOOL

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: **CHC080101**
 Product name: **CHEMISOL RUST ICE 40 400 ml CHEMITOOL**
 UFI: **AKC0-80TE-A005-Y4C7**

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

Intended use: **Cold blossoming in aerosol.**

Identified Uses	Industrial	Professional	Consumer
Consumer	-	-	✓
Industrial Use	✓	-	-
Professional Use	-	✓	-

1.3. Details of the supplier of the safety data sheet

Name: **LUSAVOUGA – Máquinas e Acessórios Industriais, S.A.**
 Full address: **Edifício Lusavouga
 Avenida Europa, 375
 3800-533 Cacia
 Portugal**
 District and Country: **Portugal**
 tel. **+351 234 915 010**
 fax **+351 234 915 015**
 e-mail address of the competent person responsible for the Safety Data Sheet: **qualidade@lusavouga.pt**

1.4. Emergency telephone number

For urgent inquiries refer to:
GB - National Poisons Information Service (NPIS) Tel. 0344 892 0111 (United Kingdom)
Members of the Public: NHS 111 (England), NHS 24 (Scotland) or NHS Direct (Wales)
USA - American Association of Poison Control Centers: Tel. 1 800 222 1222 (U.S.A.)

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:

Aerosol, category 1	H222 H229	Extremely flammable aerosol. Pressurised container: may burst if heated.
Aspiration hazard, category 1	H304	May be fatal if swallowed and enters airways.
Skin irritation, category 2	H315	Causes skin irritation.
Specific target organ toxicity - single exposure, category 3	H336	May cause drowsiness or dizziness.
Hazardous to the aquatic environment, chronic toxicity, category 3	H412	Harmful to aquatic life with long lasting effects.

CHEMISOL RUST ICE 40 400 ml CHEMITOOL**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:

H222	Extremely flammable aerosol.
H229	Pressurised container: may burst if heated.
H315	Causes skin irritation.
H336	May cause drowsiness or dizziness.
H412	Harmful to aquatic life with long lasting effects.

Precautionary statements:

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P251	Do not pierce or burn, even after use.
P410+P412	Protect from sunlight. Do not expose to temperatures exceeding 50°C / 122°F.
P211	Do not spray on an open flame or other ignition source.
P102	Keep out of reach of children.
P261	Avoid breathing dust / fume / gas / mist / vapours / spray.

Contains: Hydrocarbons, C6, isoalkanes
Distillates (petroleum), hydrotreated light naphthenic

Statements on the aspiration toxicity classification were not included in the label elements, based on section 1.3.3. of Annex I to CLP.

2.3. Other hazards

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

CHEMISOL RUST ICE 40 400 ml CHEMITOOL

SECTION 3. Composition/information on ingredients

3.2. Mixtures

Contains:

Identification	x = Conc. %	Classification 1272/2008 (CLP)
Propane		
CAS 74-98-6	35 ≤ x < 39	Flam. Gas 1A H220, Press. Gas (Liq.) H280, Classification note/notes according to Annex VI to the CLP Regulation: U
EC 200-827-9		
INDEX 601-003-00-5		
Reg. no. 01-2119486944-21-0046		
Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, <2% aromatics		
CAS -	23 ≤ x < 27	Asp. Tox. 1 H304, EUH066
EC 918-481-9		
INDEX -		
Reg. no. 01-2119457273-39-XXXX		
Butane		
CAS 106-97-8	15 ≤ x < 19	Flam. Gas 1A H220, Press. Gas (Liq.) H280, Classification note/notes according to Annex VI to the CLP Regulation: C U
EC 203-448-7		
INDEX 601-004-00-0		
Reg. no. 01-2119474691-32-XXXX		
Hydrocarbons, C6, isoalkanes		
CAS 64742-49-0	11 ≤ x < 15	Flam. Liq. 2 H225, Asp. Tox. 1 H304, Skin Irrit. 2 H315, STOT SE 3 H336, Aquatic Chronic 2 H411, Classification note/notes according to Annex VI to the CLP Regulation: P
EC 265-151-9		
INDEX 649-328-00-1		
Reg. no. 012119484651-34-XXXX		
Distillates (petroleum), hydrotreated light naphthenic		
CAS 64742-53-6	3 ≤ x < 5	Asp. Tox. 1 H304, Classification note/notes according to Annex VI to the CLP Regulation: L
EC 265-156-6		
INDEX 649-466-00-2		
Reg. no. 01-2119480375-34-XXXX		
Isobutane		
CAS 75-28-5	1 ≤ x < 3	Flam. Gas 1A H220, Press. Gas H280
EC 200-857-2		
INDEX 601-004-00-0		
Reg. no. 01-2119485395-27-XXXX		

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

The product is an aerosol containing propellants. For the purposes of calculation of the health hazards, propellants are not considered (unless they have health hazards). The percentages indicated are inclusive of the propellants.

CHEMISOL RUST ICE 40 400 ml CHEMITOOL

Percentage of propellants: 56,50 %

Hydrocarbons, C6, isoalkanes

Hydrocarbons, C6, isoalkanes, <5% n-hexane: a complex combination of hydrocarbons obtained by treating a petroleum fraction with hydrogen in the presence of a catalyst. It consists of hydrocarbons having carbon numbers predominantly in the range of C4 through C11 and boiling in the range of approximately minus 20Å ° C to 190Å ° C (-4Å ° F to 374Å ° F).

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. Get medical advice/attention 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

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

If overheated, aerosol cans can deform, explode and be propelled considerable distances. Put a protective helmet on before approaching the 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.

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).

CHEMISOL RUST ICE 40 400 ml CHEMITOOL**SECTION 6. Accidental release measures****6.1. Personal precautions, protective equipment and emergency procedures**

Eliminate all sources of ignition (cigarettes, flames, sparks, etc.) from the leakage site. Send away individuals who are not suitably equipped. Wear protective gloves / protective clothing / eye protection / face protection.

6.2. Environmental precautions

Do not disperse in the environment.

6.3. Methods and material for containment and cleaning up

Use inert absorbent material to soak up leaked product. 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**

Avoid bunching of electrostatic charges. Do not spray on flames or incandescent bodies. 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. Do not eat, drink or smoke during use. Do not breathe spray.

7.2. Conditions for safe storage, including any incompatibilities

Store in a place where adequate ventilation is ensured, away from direct sunlight at a temperature below 50°C / 122°F, away from any combustion sources.

7.3. Specific end use(s)

Information not available

SECTION 8. Exposure controls/personal protection**8.1. Control parameters**

Regulatory References:

DEU	Deutschland	TRGS 900 - Seite 1 von 69 (Fassung 29.03.2019)- Liste der Arbeitsplatzgrenzwerte und Kurzzeitwerte
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
GRC	Ελλάδα	ΕΦΗΜΕΡΙΔΑ ΤΗΣ ΚΥΒΕΡΝΗΣΕΩΣ - ΤΕΥΧΟΣ ΠΡΩΤΟ Αρ. Φύλλου 152 - 21 Αυγούστου 2018
POL	Polska	ROZPORZĄDZENIE MINISTRA RODZINY, PRACY I POLITYKI SPOŁECZNEJ z dnia 12 czerwca 2018 r
GBR	United Kingdom	EH40/2005 Workplace exposure limits (Third edition, published 2018)
	TLV-ACGIH	ACGIH 2020

CHEMISOL RUST ICE 40 400 ml CHEMITOOL

Propane

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m ³	ppm	mg/m ³	ppm	
AGW	DEU	1800	1000	7200	4000	
MAK	DEU	1800	1000	7200	4000	
VLA	ESP		1000			
TLV	GRC	1800	1000			
NDS/NDSch	POL	1800				

Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, <2% aromatics

Predicted no-effect concentration - PNEC

Normal value for the atmosphere

NPI

Butane

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m ³	ppm	mg/m ³	ppm	
AGW	DEU	2400	1000	9600	4000	
MAK	DEU	2400	1000	9600	4000	
VLA	ESP		1000			Gases
VLEP	FRA	1900	800			
TLV	GRC	2350	1000			
NDS/NDSch	POL	1900		3000		
WEL	GBR	1450	600	1810	750	
WEL	GBR		4			RESP
TLV-ACGIH					1000	

Hydrocarbons, C6, isoalkanes

Health - Derived no-effect level - DNEL / DMEL

Route of exposure	Effects on consumers			Chronic systemic	Effects on workers			
	Acute local	Acute systemic	Chronic local		Acute local	Acute systemic	Chronic local	Chronic systemic
Oral				1301 mg/kg bw/d				
Inhalation				1137 mg/m ³				5306 mg/m ³
Skin				1377 mg/kg bw/d				13964 mg/kg bw/d

Distillates (petroleum), hydrotreated light naphthenic

Predicted no-effect concentration - PNEC

Normal value for the food chain (secondary poisoning)

9,33

mg/kg

Health - Derived no-effect level - DNEL / DMEL

Route of exposure	Effects on consumers			Chronic systemic	Effects on workers			
	Acute local	Acute systemic	Chronic local		Acute local	Acute systemic	Chronic local	Chronic systemic
Inhalation								5.4 mg/m ³ 8h

CHEMISOL RUST ICE 40 400 ml CHEMITOOL**Isobutane****Threshold Limit Value**

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m ³	ppm	mg/m ³	ppm	
TLV-ACGIH			800			

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.

TLV of solvent mixture: 1639 mg/m³

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

None required.

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, a mask with a type AX filter combined with a type P filter should be worn (see standard EN 14387).

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.

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.

SECTION 9. Physical and chemical properties**9.1. Information on basic physical and chemical properties**

Appearance	aerosol
Colour	light brown
Odour	characteristic of solvent

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Odour threshold	Not available
pH	Not available
Melting point / freezing point	Not available
Initial boiling point	Not available
Boiling range	Not available
Flash point	< 0 °C
Evaporation Rate	Not available
Flammability of solids and gases	flammable gas
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	0,60 ÷ 0,64 g/ml a 20°C
Solubility	insoluble in water
Partition coefficient: n-octanol/water	Not available
Auto-ignition temperature	Not available
Decomposition temperature	Not available
Viscosity	< 1 cSt - 9 cSt 40°C (base oleosa)
Explosive properties	not applicable
Oxidising properties	not applicable

9.2. Other information

VOC (Directive 2010/75/EC) : 99,86 % - 619,11 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

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

10.4. Conditions to avoid

Avoid overheating.

10.5. Incompatible materials

Strong reducing or oxidising agents, strong acids or alkalis, hot material.

CHEMISOL RUST ICE 40 400 ml CHEMITOOL**10.6. Hazardous decomposition products**

Information not available

SECTION 11. Toxicological information

In the absence of experimental data for the product itself, health hazards are evaluated according to the properties of the substances it contains, using the criteria specified in the applicable regulation for classification.

It is therefore necessary to take into account the concentration of the individual hazardous substances indicated in section 3, to evaluate the toxicological effects of exposure to the product.

11.1. Information on 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

ATE (Inhalation) of the mixture:

Not classified (no significant component)

ATE (Oral) of the mixture:

Not classified (no significant component)

ATE (Dermal) of the mixture:

Not classified (no significant component)

Distillates (petroleum), hydrotreated light naphthenic

LD50 (Oral) 5000 mg/kg bw rat

LD50 (Dermal) 3500 mg/kg bw rabbit

LC50 (Inhalation) 3,85 mg/l/4h rat

Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, <2% aromatics

LD50 (Oral) > 5000 mg/kg bw rat

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LD50 (Dermal) 2000 mg/kg bw rat

LC50 (Inhalation) > 4 mg/l/4h rat

Butane

LC50 (Inhalation) > 1442,738 mg/l/15min rat

Propane

LC50 (Inhalation) 800000 ppm 15 min

Hydrocarbons, C6, isoalkanes

LD50 (Oral) > 2000 mg/kg bw rat

LD50 (Dermal) > 2000 mg/kg bw rabbit

LC50 (Inhalation) > 25 mg/l/4h air (rat)

Isobutane

LC50 (Inhalation) > 1442,738 mg/l/15min rat

SKIN CORROSION / IRRITATION

Causes skin irritation

SERIOUS EYE DAMAGE / IRRITATION

Does not meet the classification criteria for this hazard class

RESPIRATORY OR SKIN SENSITISATION

Does not meet the classification criteria for this hazard class

GERM CELL MUTAGENICITY

Does not meet the classification criteria for this hazard class

CARCINOGENICITY

Does not meet the classification criteria for this hazard class

REPRODUCTIVE TOXICITY

Does not meet the classification criteria for this hazard class

CHEMISOL RUST ICE 40 400 ml CHEMITOOLSTOT - SINGLE EXPOSURE

May cause drowsiness or dizziness

STOT - REPEATED EXPOSURE

Does not meet the classification criteria for this hazard class

ASPIRATION HAZARD

Toxic for aspiration

SECTION 12. Ecological information

This product is dangerous for the environment and the aquatic organisms. In the long term, it have negative effects on aquatic environment.

12.1. Toxicity

Hydrocarbons, C10-C13, n-alkanes,
isoalkanes, cyclics, <2% aromatics
Chronic NOEC for Algae / Aquatic Plants 1000 mg/l 72 hours

Butane
LC50 - for Fish > 24,11 mg/l/96h

Propane
LC50 - for Fish 85,82 mg/l/96h
EC50 - for Crustacea 41,82 mg/l/48h

Hydrocarbons, C6, isoalkanes
LC50 - for Fish 8,41 mg/l/96h
EC50 - for Crustacea 4,7 mg/l/48h
EC50 - for Algae / Aquatic Plants > 12 mg/l/72h
Chronic NOEC for Algae / Aquatic Plants 6,47 mg/l

Isobutane
LC50 - for Fish > 24,11 mg/l/96h

12.2. Persistence and degradability

Propane
Global Warming Potential (GWP): 3. Ozone Depletion Potential (ODP): 0.

Distillates (petroleum), hydrotreated light
naphthenic
Degradability: information not available

Echa sources

Hydrocarbons, C10-C13, n-alkanes,

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isoalkanes, cyclics, <2% aromatics
Rapidly degradable
But failing the 10-day window (100%).

Butane

Solubility in water 0,1 - 100 mg/l

Rapidly degradable

Propane

Solubility in water 0,1 - 100 mg/l

Rapidly degradable

Hydrocarbons, C6, isoalkanes

Rapidly degradable

Isobutane

Rapidly degradable

12.3. Bioaccumulative potential**Butane**

Partition coefficient: n-octanol/water 1,09

Propane

Partition coefficient: n-octanol/water 1,09

12.4. Mobility in soil**Hydrocarbons, C6, isoalkanes**

Partition coefficient: soil/water 1,78

12.5. Results of PBT and vPvB assessment

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

12.6. Other adverse effects

Information not available

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

Product residues are to be considered special hazardous waste.

Empty cans, even if completely emptied, must not be dispersed in the environment.

The aerosol container overheated to a temperature above 50Å ° C can burst even if it contains a small residue of gas.

Disposal must take place in an authorized place and in compliance with the laws in force.

Waste transportation can be subject to ADR.

European waste catalog number (contaminated containers):

The aerosol as domestic waste is excluded from the application of the aforementioned standard.

The exhausted aerosol for professional / industrial use can be classified:

15.01.10 *: packaging containing residues of dangerous substances or contaminated by these substances.

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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.

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

ADR / RID, IMDG, 1950
IATA:

14.2. UN proper shipping name

ADR / RID: AEROSOLS
IMDG: AEROSOLS
IATA: AEROSOLS, FLAMMABLE

14.3. Transport hazard class(es)

ADR / RID:	Class: 2	Label: 2.1
IMDG:	Class: 2	Label: 2.1
IATA:	Class: 2	Label: 2.1

**14.4. Packing group**

ADR / RID, IMDG, -
IATA:

14.5. Environmental hazards

ADR / RID: NO
IMDG: NO
IATA: NO

CHEMISOL RUST ICE 40 400 ml CHEMITOOL**14.6. Special precautions for user**

ADR / RID:	HIN - Kemler: --	Limited Quantities: 1 L	Tunnel restriction code: (D)
IMDG:	Special Provision: - EMS: F-D, S-U	Limited Quantities: 1 L	
IATA:	Cargo: Pass.: Special Instructions:	Maximum quantity: 150 Kg Maximum quantity: 75 Kg A145, A167, A802	Packaging instructions: 203 Packaging instructions: 203

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: P3a

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

Point 40

Substances in Candidate List (Art. 59 REACH)On the basis of available data, the product does not contain any SVHC in percentage \geq than 0,1%.Substances subject to authorisation (Annex XIV REACH)

None

Substances subject to exportation reporting pursuant to (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.

CHEMISOL RUST ICE 40 400 ml CHEMITOOL**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. Gas 1A	Flammable gas, category 1A
Aerosol 1	Aerosol, category 1
Aerosol 3	Aerosol, category 3
Flam. Liq. 2	Flammable liquid, category 2
Press. Gas	Pressurised gas
Press. Gas (Liq.)	Liquefied gas
Asp. Tox. 1	Aspiration hazard, category 1
Skin Irrit. 2	Skin irritation, category 2
STOT SE 3	Specific target organ toxicity - single exposure, category 3
Aquatic Chronic 2	Hazardous to the aquatic environment, chronic toxicity, category 2
Aquatic Chronic 3	Hazardous to the aquatic environment, chronic toxicity, category 3
H220	Extremely flammable gas.
H222	Extremely flammable aerosol.
H229	Pressurised container: may burst if heated.
H225	Highly flammable liquid and vapour.
H280	Contains gas under pressure; may burst if heated.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H336	May cause drowsiness or dizziness.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.
EUH066	Repeated exposure may cause skin dryness or cracking.

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

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- 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.

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:

08 / 13.