

Revision nr. 11

Dated 10/10/2020

Printed on 20/01/2021

Page n. 1/15

Replaced revision:9 (Dated: 22/02/2019)

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

CHC020405 Code:

CHEMISOL TYRE SHINE 400 ml CHEMITOOL Product name

UFI: GM00-G0FM-300T-9ERY

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

Intended use Aerosol tire polisher and cleaner.

Identified Uses	Industrial	Professional	Consumer
Consumer	-	-	✓
Industrial Use	✓	-	-
Professional Use	-	4	-

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 **District and Country** 3800-533 Cacia

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 Skin irritation, category 2	H304 H315	May be fatal if swallowed and enters airways. Causes skin irritation.
Specific target organ toxicity - single exposure, category 3	H336	May cause drowsiness or dizziness.
Hazardous to the aquatic environment, chronic toxicity,	H411	Toxic to aquatic life with long lasting effects.
category 2		



Revision nr. 11

Dated 10/10/2020

Printed on 20/01/2021

Page n. 2/15

Replaced revision:9 (Dated: 22/02/2019)

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.H411 Toxic 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 no expose to temperatures exceeding 50°C / 122°F.

P211 Do not spray on an open flame or other ignition source.

P273 Avoid release to the environment.

P391 Collect spillage.

P102 Keep out of reach of children.

Contains: Hydrocarbons, C6, isoalkanes

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 ≥ than 0,1%.



Revision nr. 11

Dated 10/10/2020

Printed on 20/01/2021

Page n. 3/15

Replaced revision:9 (Dated: 22/02/2019)

SECTION 3. Composition/information on ingredients

3.2. Mixtures

Contains.

Identification x = Conc. % Classification 1272/2008 (CLP)

Hydrocarbons, C6, isoalkanes

CAS 64742-49-0 51 ≤ x < 55 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

Propane

CAS 74-98-6 23 ≤ x < 27 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

Butane

CAS 106-97-8 11 ≤ x < 15 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

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.

Percentage of propellants: 40,65 %

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 20Â ° C to 190Â ° C (-4Â ° F to 374Â ° 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.



Revision nr. 11

Dated 10/10/2020

Printed on 20/01/2021

Page n. 4/15

Replaced revision:9 (Dated: 22/02/2019)

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).

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.



Revision nr. 11

Dated 10/10/2020

Printed on 20/01/2021

Page n. 5/15

Replaced revision:9 (Dated: 22/02/2019)

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

Hydrocarbons, C6, isoal	lkanes							
Health - Derived no-effe	ct level - DNEL / D	MEL						
	Effects on				Effects on			
	consumers				workers			
Route of exposure	Acute local	Acute systemic	Chronic local	Chronic	Acute local	Acute	Chronic local	Chronic
				systemic		systemic		systemic
Oral				1301 mg/kg				
				bw/d				
Inhalation		·		1137 mg/m3			•	5306 mg/m3
Skin	•	•	•	1377 mg/kg	•	•	·	13964 mg/kg
				bw/d				bw/d

Propane							
Threshold Limit Val	ue						
Туре	Country	TWA/8h		STEL/15min		Remarks / Observations	
		mg/m3	ppm	mg/m3	ppm		
AGW	DEU	1800	1000	7200	4000		
MAK	DEU	1800	1000	7200	4000		
VLA	ESP	•	1000	•		,	
TLV	GRC	1800	1000	·	•		
NDS/NDSCh	POL	1800					



Revision nr. 11

Dated 10/10/2020

Printed on 20/01/2021

Page n. 6/15

Replaced revision:9 (Dated: 22/02/2019)

Threshold Limit Valu							
Туре	Country	TWA/8h		STEL/15min		Remarks / Observations	
		mg/m3	ppm	mg/m3	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		

Isobutane Threshold Limit Value							
Туре	Country	TWA/8h		STEL/15min		Remarks /	
						Observations	
		mg/m3	ppm	mg/m3	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.

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.



Revision nr. 11

Dated 10/10/2020

Printed on 20/01/2021

Page n. 7/15

Replaced revision:9 (Dated: 22/02/2019)

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 colourless

Odour characteristic of solvent

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 Not available Lower explosive limit Not available Upper explosive limit Vapour pressure Not available Vapour density Not available

Relative density $0.60 \div 0.64 \text{ g/ml a } 20^{\circ}\text{C}$ Solubility insoluble in water

Partition coefficient: n-octanol/water Not available
Auto-ignition temperature Not available
Decomposition temperature Not available
Viscosity Not available
Explosive properties not applicable
Oxidising properties not applicable

9.2. Other information

VOC (Directive 2010/75/EC): 99,49 % - 616,82 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.



Revision nr. 11

Dated 10/10/2020

Printed on 20/01/2021

Page n. 8/15

Replaced revision:9 (Dated: 22/02/2019)

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.

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 effects

Metabolism, toxicokinetics, mechanism of action and other information

Information not available

Information on likely routes of exposure

Information not available

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Information not available

Interactive effects

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)



Revision nr. 11

Dated 10/10/2020

Printed on 20/01/2021

Page n. 9/15

Replaced revision:9 (Dated: 22/02/2019)

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
Causes skill illitation
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
STOT - SINGLE EXPOSURE

May cause drowsiness or dizziness



Revision nr. 11

Dated 10/10/2020

Printed on 20/01/2021

Page n. 10/15

Replaced revision:9 (Dated: 22/02/2019)

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 is toxic for aquatic organisms. In the long term, it have negative effects on acquatic environment. **12.1. Toxicity**

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.

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



Revision nr. 11

Dated 10/10/2020

Printed on 20/01/2021

Page n. 11/15

Replaced revision:9 (Dated: 22/02/2019)

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 ≥ 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 50Â ° 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.

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:



Revision nr. 11

Dated 10/10/2020

Printed on 20/01/2021

Page n. 12/15

Replaced revision:9 (Dated: 22/02/2019)

Packaging instructions:

Packaging

instructions:

203

203

14.2. UN proper shipping name

ADR / RID: AEROSOLS

IMDG: AEROSOLS (Hydrocarbons, C6, isoalkanes)

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: Environmentally

Hazardous

IMDG: Marine Pollutant

IATA: NO

For Air transport, environmentally hazardous mark is only mandatory for UN 3077 and UN 3082.

14.6. Special precautions for user

 ADR / RID:
 HIN - Kemler: - Limited
 Tunnel

 Quantities: 1
 restriction

 L
 code: (D)

Special Provision: -

IMDG: EMS: F-D, S-U Limited

Quantities: 1

IATA: Cargo: L Maximum

quantity: 150 Kg Pass.: Maximum

Special Instructions: Kg A145, A167,

quantity: 75

ciai instructions: A145, A10 A802

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

Information not relevant



Revision nr. 11
Dated 10/10/2020

Printed on 20/01/2021 Page n. 13/15

Replaced revision:9 (Dated: 22/02/2019)

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-E2

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

Product

Point 40

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 (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. 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 (Liq.) Liquefied gas
Press. Gas Pressurised gas



Dated 10/10/2020 Printed on 20/01/2021

Page n. 14/15

Replaced revision:9 (Dated: 22/02/2019)

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

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.

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
- 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 (EÚ) 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)



Revision nr. 11

Dated 10/10/2020

Printed on 20/01/2021

Page n. 15/15

Replaced revision:9 (Dated: 22/02/2019)

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: