CHEMITOOL chemicals

CHC070102 - SPRAY ZINCO 98% CHEMISOL

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier: CHC070102 - SPRAY ZINCO 98% CHEMISOL

Other means of identification:

Non-applicable

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

Relevant uses: Surface treatment for road

Uses advised against: All uses not specified in this section or in section 7.3

1.3 Details of the supplier of the safety data sheet:

Lusavouga
Avenida Europa, 375
3800-533 Aveiro - Cacia - Portugal
Phone: +351 234 915 010 - Fax: +351 234 915 015
lusavouga@lusavouga.pt
www.chemitool.com

1.4 Emergency telephone number: CIAV 800 250 250

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture:

CLP Regulation (EC) No 1272/2008:

Classification of this product has been carried out in accordance with CLP Regulation (EC) No 1272/2008.

Aerosol 1: Pressurised container: May burst if heated., H229
Aerosol 1: Flammable aerosols, Category 1, H222
Aquatic Chronic 2: Hazardous to the aquatic environment, long-term hazard, Category 2, H411
Eye Irrit. 2: Eye irritation, Category 2, H319
Skin Irrit. 2: Skin irritation, Category 2, H315
STOT SE 3: Specific toxicity causing drowsiness and dizziness, single exposure, Category 3, H336

2.2 Label elements:

CLP Regulation (EC) No 1272/2008:

Danger

Hazard statements:

Aerosol 1: H229 - Pressurised container: May burst if heated.
Aerosol 1: H222 - Extremely flammable aerosol.
Aquatic Chronic 2: H411 - Toxic to aquatic life with long lasting effects.
Eye Irrit. 2: H319 - Causes serious eye irritation.
Skin Irrit. 2: H315 - Causes skin irritation.
STOT SE 3: H336 - May cause drowsiness or dizziness.

Precautionary statements:

P101: If medical advice is needed, have product container or label at hand.
P102: Keep out of reach of children.
P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P211: Do not spray on an open flame or other ignition source.
P251: Do not pierce or burn, even after use.
P280: Wear protective gloves/protective clothing/respiratory protection/eye protection/protective footwear.
P410+P412: Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122°F
P501: Dispose of contents/container according to the separated collection system used in your municipality.

Substances that contribute to the classification

Hydrocarbons, C6, isoalkanes, <5% n-hexane; Isobutyl Acetate

2.3 Other hazards:

Product fails to meet PBT/vPvB criteria
Endocrine-disrupting properties: The product fails to meet the criteria.

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SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substance:

Non-applicable

3.2 Mixture:

Chemical description: Mixture of substances

Components:

In accordance with Annex II of Regulation (EC) No 1907/2006 (point 3), the product contains:

Identification	Chemical name/Classification		Concentration
CAS: 74-98-6 EC: 200-827-9 Index: 601-003-00-5 REACH: 01-2119486944-21-XXXX	**Propane**[1]	ATP CLP00	**15 - <19 %**
	Regulation 1272/2008	Flam. Gas 1A: H220; Press. Gas: H280 - Danger	
CAS: 64742-49-0 EC: 931-254-9 Index: Non-applicable REACH: 01-2119484651-34-XXXX	**Hydrocarbons, C6, isoalkanes, <5% n-hexane**[1]	Self-classified	**15 - <19 %**
	Regulation 1272/2008	Aquatic Chronic 2: H411; Asp. Tox. 1: H304; Flam. Liq. 2: H225; Skin Irrit. 2: H315; STOT SE 3: H336 - Danger	
CAS: 1330-20-7 EC: 215-535-7 Index: 601-022-00-9 REACH: 01-2119488216-32-XXXX	**Xylene**[1]	Self-classified	**15 - <19 %**
	Regulation 1272/2008	Acute Tox. 4: H312+H332; Eye Irrit. 2: H319; Flam. Liq. 3: H226; Skin Irrit. 2: H315 - Warning	
CAS: 64742-16-1 EC: 265-116-8 Index: Non-applicable REACH: 01-2120785751-45-XXXX	**Petroleum resins**[1]	Not classified	**11 - <15 %**
	Regulation 1272/2008		
CAS: 616-38-6 EC: 210-478-4 Index: 607-013-00-6 REACH: 01-2119822377-36-XXXX	**dimethyl carbonate**[1]	ATP CLP00	**9 - <11 %**
	Regulation 1272/2008	Flam. Liq. 2: H225 - Danger	
CAS: 106-97-8 EC: 203-448-7 Index: 601-004-00-0 REACH: 01-2119474691-32-XXXX	**Butane**[1]	ATP CLP00	**7 - <9 %**
	Regulation 1272/2008	Flam. Gas 1A: H220; Press. Gas: H280 - Danger	
CAS: 7440-66-6 EC: 231-175-3 Index: 030-002-00-7 REACH: 01-2119467174-37-XXXX	**Zinc powder - zinc dust (stabilised)**[1]	ATP CLP00	**5 - <7 %**
	Regulation 1272/2008	Aquatic Acute 1: H400; Aquatic Chronic 1: H410 - Warning	
CAS: 110-19-0 EC: 203-745-1 Index: 607-026-00-7 REACH: 01-2119488971-22-XXXX	**Isobutyl Acetate**[1]	Self-classified	**1 - <3 %**
	Regulation 1272/2008	Flam. Liq. 2: H225; STOT SE 3: H336; EUH066 - Danger	
CAS: 7429-90-5 EC: 231-072-3 Index: 013-002-00-1 REACH: 01-2119529243-45-XXXX	**Aluminium powder (stabilised)**[1]	ATP ATP01	**1 - <3 %**
	Regulation 1272/2008	Flam. Sol. 1: H228; Water-react. 2: H261 - Danger	
CAS: 75-28-5 EC: 200-857-2 Index: 601-004-00-0 REACH: 01-2119485395-27-XXXX	**Isobutane**[1]	ATP CLP00	**1 - <3 %**
	Regulation 1272/2008	Flam. Gas 1A: H220; Press. Gas: H280 - Danger	
CAS: 1314-13-2 EC: 215-222-5 Index: 030-013-00-7 REACH: 01-2119463881-32-XXXX	**zinc oxide**[1]	ATP CLP00	**0,25 - <0,5 %**
	Regulation 1272/2008	Aquatic Acute 1: H400; Aquatic Chronic 1: H410 - Warning	
CAS: 14808-60-7 EC: 238-878-4 Index: Non-applicable REACH: Non-applicable	**Quartz (1 %< RCS < 10%)**[1]	Self-classified	**<0,5 %**
	Regulation 1272/2008	STOT RE 2: H373 - Warning	

[1] Voluntarily-listed substance failing to meet any of the criteria set out in Regulation (EU) No. 2020/878

To obtain more information on the hazards of the substances consult sections 11, 12 and 16.

Other information:

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SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS (continued)

Identification	Specific concentration limit
Aluminium powder (stabilised) CAS: 7429-90-5 EC: 231-072-3	% (w/w) >=50: Flam. Sol. 1 - H228 % (w/w) >=40: Water-react. 2 - H261

SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures:

The symptoms resulting from intoxication can appear after exposure, therefore, in case of doubt, seek medical attention for direct exposure to the chemical product or persistent discomfort, showing the SDS of this product.

By inhalation:

Remove the person affected from the area of exposure, provide with fresh air and keep at rest. In serious cases such as cardiorespiratory failure, artificial resuscitation techniques will be necessary (mouth to mouth resuscitation, cardiac massage, oxygen supply, etc.) requiring immediate medical assistance.

By skin contact:

Remove contaminated clothing and footwear, rinse skin or shower the person affected if appropriate with plenty of cold water and neutral soap. In serious cases see a doctor. If the product causes burns or freezing, clothing should not be removed as this could worsen the injury caused if it is stuck to the skin. If blisters form on the skin, these should never be burst as this will increase the risk of infection.

By eye contact:

Rinse eyes thoroughly with water for at least 15 minutes. If the injured person uses contact lenses, these should be removed unless they are stuck to the eyes, in which case removal could cause further damage. In all cases, after cleaning, a doctor should be consulted as quickly as possible with the SDS for the product.

By ingestion/aspiration:

Do not induce vomiting, but if it does happen keep the head down to avoid aspiration. Keep the person affected at rest. Rinse out the mouth and throat, as they may have been affected during ingestion.

4.2 Most important symptoms and effects, both acute and delayed:

Acute and delayed effects are indicated in sections 2 and 11.

4.3 Indication of any immediate medical attention and special treatment needed:

Non-applicable

SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing media:

Suitable extinguishing media:

If possible use polyvalent powder fire extinguishers (ABC powder), alternatively use foam or carbon dioxide extinguishers (CO_2).

Unsuitable extinguishing media:

IT IS RECOMMENDED NOT to use full jet water as an extinguishing agent.

5.2 Special hazards arising from the substance or mixture:

Contains substances that react with water producing extremely flammable gases.

5.3 Advice for firefighters:

Depending on the magnitude of the fire it may be necessary to use full protective clothing and self-contained breathing apparatus (SCBA). Minimum emergency facilities and equipment should be available (fire blankets, portable first aid kit,...) in accordance with Directive 89/654/EC.

Additional provisions:

Act in accordance with the Internal Emergency Plan and the Information Sheets on actions to take after an accident or other emergencies. Eliminate all sources of ignition. In case of fire, cool the storage containers and tanks for products susceptible to combustion, explosion or BLEVE as a result of high temperatures. Avoid spillage of the products used to extinguish the fire into an aqueous medium.

SECTION 6: ACCIDENTAL RELEASE MEASURES

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SECTION 6: ACCIDENTAL RELEASE MEASURES (continued)

6.1 Personal precautions, protective equipment and emergency procedures:

For non-emergency personnel:

AVOID CONTACT WITH WATER. Isolate leaks provided that there is no additional risk for the people performing this task. Evacuate the area and keep out those who do not have protection. Personal protection equipment must be used against potential contact with the spilt product (See section 8). Above all prevent the formation of any vapour-air flammable mixtures, through either ventilation or the use of an inert medium. Destroy any source of ignition. Eliminate electrostatic charges by interconnecting all the conductive surfaces on which static electricity could form, and also ensuring that all surfaces are connected to the ground.

For emergency responders:

See section 8.

6.2 Environmental precautions:

Avoid at all cost any type of spillage into an aqueous medium. Contain the product absorbed appropriately in hermetically sealed containers. Notify the relevant authority in case of exposure to the general public or the environment.

6.3 Methods and material for containment and cleaning up:

DO NOT USE WATER TO CLEAN.

Absorb the spillage using sand or inert absorbent and move it to a safe place. Do not absorb in sawdust or other combustible absorbents. For any concern related to disposal consult section 13.

6.4 Reference to other sections:

See sections 8 and 13.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling:

A.- General precautions for safe use

Comply with the current legislation concerning the prevention of industrial risks. Keep containers hermetically sealed. Control spills and residues, destroying them with safe methods (section 6). Avoid leakages from the container. Maintain order and cleanliness where dangerous products are used.

B.- Technical recommendations for the prevention of fires and explosions

Avoid contact with water and the evaporation of the product, as it could form flammable vapour/air mixtures in the presence of sources of ignition. Control sources of ignition (mobile phones, sparks,...) and transfer at slow speeds to avoid the creation of electrostatic charges. Avoid splashes and pulverizations. Consult section 10 for conditions and materials that should be avoided.

C.- Technical recommendations on general occupational hygiene

Do not eat or drink during the process, washing hands afterwards with suitable cleaning products.

D.- Technical recommendations to prevent environmental risks

Due to the danger of this product for the environment it is recommended to use it within an area containing contamination control barriers in case of spillage, as well as having absorbent material in close proximity.

7.2 Conditions for safe storage, including any incompatibilities:

A.- Technical measures for storage

Minimum Temp.:	5 ºC
Maximum Temp.:	30 ºC
Maximum time:	6 Months

B.- General conditions for storage

Avoid sources of heat, radiation, static electricity and contact with food. For additional information see subsection 10.5

7.3 Specific end use(s):

Except for the instructions already specified it is not necessary to provide any special recommendation regarding the uses of this product.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters:

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SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)

Substances whose occupational exposure limits have to be monitored in the workplace (European OEL, not country-specific legislation):

Directive (EU) 2000/39, Directive 2004/37/EC,Directive (EU) 2006/15, Directive (EU) 2009/161, Directive (EU) 2017/164, Directive (EU) 2019/1831:

Identification	Occupational exposure limits		
Isobutyl Acetate CAS: 110-19-0 EC: 203-745-1	IOELV (8h) IOELV (STEL)	50 ppm 150 ppm	241 mg/m³ 723 mg/m³
Quartz (1 %< RCS < 10%) CAS: 14808-60-7 EC: 238-878-4	IOELV (8h) IOELV (STEL)		0,1 mg/m³
Xylene CAS: 1330-20-7 EC: 215-535-7	IOELV (8h) IOELV (STEL)	50 ppm 100 ppm	221 mg/m³ 442 mg/m³

DNEL (Workers):

Identification		Short exposure		Long exposure	
		Systemic	Local	Systemic	Local
Hydrocarbons, C6, isoalkanes, <5% n-hexane	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
CAS: 64742-49-0	Dermal	Non-applicable	Non-applicable	13964 mg/kg	Non-applicable
EC: 931-254-9	Inhalation	Non-applicable	Non-applicable	5306 mg/m³	Non-applicable
Xylene	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
CAS: 1330-20-7	Dermal	Non-applicable	Non-applicable	212 mg/kg	Non-applicable
EC: 215-535-7	Inhalation	442 mg/m³	442 mg/m³	221 mg/m³	221 mg/m³
dimethyl carbonate	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
CAS: 616-38-6	Dermal	Non-applicable	Non-applicable	5 mg/kg	Non-applicable
EC: 210-478-4	Inhalation	Non-applicable	Non-applicable	34,9 mg/m³	Non-applicable
Zinc powder - zinc dust (stabilised)	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
CAS: 7440-66-6	Dermal	Non-applicable	Non-applicable	83 mg/kg	Non-applicable
EC: 231-175-3	Inhalation	Non-applicable	Non-applicable	5 mg/m³	Non-applicable
Isobutyl Acetate	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
CAS: 110-19-0	Dermal	10 mg/kg	Non-applicable	10 mg/kg	Non-applicable
EC: 203-745-1	Inhalation	600 mg/m³	600 mg/m³	300 mg/m³	300 mg/m³
Aluminium powder (stabilised)	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
CAS: 7429-90-5	Dermal	Non-applicable	Non-applicable	Non-applicable	Non-applicable
EC: 231-072-3	Inhalation	Non-applicable	Non-applicable	3,72 mg/m³	3,72 mg/m³
zinc oxide	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
CAS: 1314-13-2	Dermal	Non-applicable	Non-applicable	83 mg/kg	Non-applicable
EC: 215-222-5	Inhalation	Non-applicable	Non-applicable	5 mg/m³	0,5 mg/m³

DNEL (General population):

Identification		Short exposure		Long exposure	
		Systemic	Local	Systemic	Local
Hydrocarbons, C6, isoalkanes, <5% n-hexane	Oral	Non-applicable	Non-applicable	1301 mg/kg	Non-applicable
CAS: 64742-49-0	Dermal	Non-applicable	Non-applicable	1377 mg/kg	Non-applicable
EC: 931-254-9	Inhalation	Non-applicable	Non-applicable	1131 mg/m³	Non-applicable
Xylene	Oral	Non-applicable	Non-applicable	12,5 mg/kg	Non-applicable
CAS: 1330-20-7	Dermal	Non-applicable	Non-applicable	125 mg/kg	Non-applicable
EC: 215-535-7	Inhalation	260 mg/m³	260 mg/m³	65,3 mg/m³	65,3 mg/m³
dimethyl carbonate	Oral	Non-applicable	Non-applicable	2,5 mg/kg	Non-applicable
CAS: 616-38-6	Dermal	Non-applicable	Non-applicable	2,5 mg/kg	Non-applicable
EC: 210-478-4	Inhalation	Non-applicable	Non-applicable	8,7 mg/m³	Non-applicable
Zinc powder - zinc dust (stabilised)	Oral	Non-applicable	Non-applicable	0,83 mg/kg	Non-applicable
CAS: 7440-66-6	Dermal	Non-applicable	Non-applicable	83 mg/kg	Non-applicable
EC: 231-175-3	Inhalation	Non-applicable	Non-applicable	2,5 mg/m³	Non-applicable
Isobutyl Acetate	Oral	5 mg/kg	Non-applicable	5 mg/kg	Non-applicable
CAS: 110-19-0	Dermal	5 mg/kg	Non-applicable	5 mg/kg	Non-applicable
EC: 203-745-1	Inhalation	300 mg/m³	300 mg/m³	35,7 mg/m³	35,7 mg/m³

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SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)

Identification		Short exposure		Long exposure	
		Systemic	Local	Systemic	Local
Aluminium powder (stabilised)	Oral	Non-applicable	Non-applicable	7,9 mg/kg	Non-applicable
CAS: 7429-90-5	Dermal	Non-applicable	Non-applicable	Non-applicable	Non-applicable
EC: 231-072-3	Inhalation	Non-applicable	Non-applicable	Non-applicable	Non-applicable
zinc oxide	Oral	Non-applicable	Non-applicable	0,83 mg/kg	Non-applicable
CAS: 1314-13-2	Dermal	Non-applicable	Non-applicable	83 mg/kg	Non-applicable
EC: 215-222-5	Inhalation	Non-applicable	Non-applicable	2,5 mg/m³	Non-applicable

PNEC:

Identification				
Xylene	STP	6,58 mg/L	Fresh water	0,327 mg/L
CAS: 1330-20-7	Soil	2,31 mg/kg	Marine water	0,327 mg/L
EC: 215-535-7	Intermittent	0,327 mg/L	Sediment (Fresh water)	12,46 mg/kg
	Oral	Non-applicable	Sediment (Marine water)	12,46 mg/kg
dimethyl carbonate	STP	188 mg/L	Fresh water	0,5 mg/L
CAS: 616-38-6	Soil	Non-applicable	Marine water	0,05 mg/L
EC: 210-478-4	Intermittent	1 mg/L	Sediment (Fresh water)	Non-applicable
	Oral	Non-applicable	Sediment (Marine water)	Non-applicable
Zinc powder - zinc dust (stabilised)	STP	0,1 mg/L	Fresh water	0,0206 mg/L
CAS: 7440-66-6	Soil	106,8 mg/kg	Marine water	0,0061 mg/L
EC: 231-175-3	Intermittent	Non-applicable	Sediment (Fresh water)	235,6 mg/kg
	Oral	Non-applicable	Sediment (Marine water)	121 mg/kg
Isobutyl Acetate	STP	200 mg/L	Fresh water	0,17 mg/L
CAS: 110-19-0	Soil	0,075 mg/kg	Marine water	0,017 mg/L
EC: 203-745-1	Intermittent	0,34 mg/L	Sediment (Fresh water)	0,877 mg/kg
	Oral	Non-applicable	Sediment (Marine water)	0,088 mg/kg
zinc oxide	STP	0,1 mg/L	Fresh water	0,0206 mg/L
CAS: 1314-13-2	Soil	35,6 mg/kg	Marine water	0,0061 mg/L
EC: 215-222-5	Intermittent	Non-applicable	Sediment (Fresh water)	117,8 mg/kg
	Oral	Non-applicable	Sediment (Marine water)	56,5 mg/kg

8.2 Exposure controls:

A.- Individual protection measures, such as personal protective equipment

As a preventative measure it is recommended to use basic Personal Protective Equipment, with the corresponding <<CE marking>> in accordance with Regulation (EU) 2016/425. For more information on Personal Protective Equipment (storage, use, cleaning, maintenance, class of protection,...) consult the information leaflet provided by the manufacturer. For more information see subsection 7.1. All information contained herein is a recommendation which needs some specification from the labour risk prevention services as it is not known whether the company has additional measures at its disposal.

B.- Respiratory protection

Pictogram	PPE	Labelling	CEN Standard	Remarks
 Mandatory respiratory tract protection	Filter mask for gases, vapours and particles	CE CAT III	EN 149:2001+A1:2009 EN 405:2002+A1:2010 EN ISO 136:1998	Replace when an increase in resistence to breathing is observed and/or a smell or taste of the contaminant is detected.

C.- Specific protection for the hands

Pictogram	PPE	Labelling	CEN Standard	Remarks
 Mandatory hand protection	Protective gloves against minor risks	CE CAT I		Replace gloves in case of any sign of damage. For prolonged periods of exposure to the product for professional users/industrials, we recommend using CE III gloves in line with standards EN 420:2004+A1:2010 and EN ISO 374-1:2016+A1:2018

As the product is a mixture of several substances, the resistance of the glove material can not be calculated in advance with total reliability and has therefore to be checked prior to the application.

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SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)

D.- Eye and face protection

Pictogram	PPE	Labelling	CEN Standard	Remarks
 Mandatory face protection	Panoramic glasses against splash/projections.	CE CAT II	EN 166:2002 EN ISO 4007:2018	Clean daily and disinfect periodically according to the manufacturer´s instructions. Use if there is a risk of splashing.

E.- Body protection

Pictogram	PPE	Labelling	CEN Standard	Remarks
 Mandatory complete body protection	Antistatic and fireproof protective clothing	CE CAT III	EN 1149-1:2006 EN 1149-2:1997 EN 1149-3:2004 EN 168:2002 EN ISO 14116:2015 EN 1149-5:2018	Limited protection against flames.
 Mandatory foot protection	Safety footwear with antistatic and heat resistant properties	CE CAT III	EN ISO 13287:2013 EN ISO 20345:2011	Replace boots at any sign of deterioration.

F.- Additional emergency measures

Emergency measure	Standards	Emergency measure	Standards
 Emergency shower	ANSI Z358-1 ISO 3864-1:2011, ISO 3864-4:2011	 Eyewash stations	DIN 12 899 ISO 3864-1:2011, ISO 3864-4:2011

Environmental exposure controls:

In accordance with the community legislation for the protection of the environment it is recommended to avoid environmental spillage of both the product and its container. For additional information see subsection 7.1.D

Volatile organic compounds:

With regard to Directive 2010/75/EU, this product has the following characteristics:

V.O.C. (Supply):	66 % weight
V.O.C. density at 20 ºC:	Non-applicable
Average carbon number:	6,95
Average molecular weight:	97,25 g/mol

With regard to Directive 2004/42/EC, this product which is ready to use has the following characteristics:

V.O.C. density at 20 ºC:	562,69 kg/m³ (562,69 g/L)
EU limit for the product (Cat. B.E):	840 g/L (2010)
Components:	Non-applicable

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES **

9.1 Information on basic physical and chemical properties:

For complete information see the product datasheet.

Appearance:

Physical state at 20 ºC:	Aerosol
Appearance:	Characteristic
Colour:	Grey
Odour:	Characteristic

*Not relevant due to the nature of the product, not providing information property of its hazards.

*** Changes with regards to the previous version*

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SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES ** (continued)

Odour threshold:	Non-applicable *
Volatility:	
Boiling point at atmospheric pressure:	-42 ºC (Propellant)
Vapour pressure at 20 ºC:	Non-applicable *
Vapour pressure at 50 ºC:	<300000 Pa (300 kPa)
Evaporation rate at 20 ºC:	Non-applicable *
Product description:	
Density at 20 ºC:	Non-applicable *
Relative density at 20 ºC:	0,7 - 0,8
Dynamic viscosity at 20 ºC:	Non-applicable *
Kinematic viscosity at 20 ºC:	Non-applicable *
Kinematic viscosity at 40 ºC:	Non-applicable *
Concentration:	Non-applicable *
pH:	Non-applicable *
Vapour density at 20 ºC:	Non-applicable *
Partition coefficient n-octanol/water 20 ºC:	Non-applicable *
Solubility in water at 20 ºC:	Non-applicable *
Solubility properties:	Non-applicable *
Decomposition temperature:	Non-applicable *
Melting point/freezing point:	Non-applicable *
Recipient pressure:	Non-applicable *
Flammability:	
Flash Point:	Non-applicable
Flammability (solid, gas):	Non-applicable *
Autoignition temperature:	410 ºC (Propellant)
Lower flammability limit:	Non-applicable *
Upper flammability limit:	Non-applicable *
Particle characteristics:	
Median equivalent diameter:	Non-applicable

9.2 Other information:

Information with regard to physical hazard classes:	
Explosive properties:	Non-applicable *
Oxidising properties:	Non-applicable *
Corrosive to metals:	Non-applicable *
Heat of combustion:	Non-applicable *
Aerosols-total percentage (by mass) of flammable components:	Non-applicable *
Other safety characteristics:	
Surface tension at 20 ºC:	Non-applicable *
Refraction index:	Non-applicable *

*Not relevant due to the nature of the product, not providing information property of its hazards.

*** Changes with regards to the previous version*

SECTION 10: STABILITY AND REACTIVITY

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SECTION 10: STABILITY AND REACTIVITY (continued)

10.1 Reactivity:

No hazardous reactions are expected because the product is stable under recommended storage conditions. See section 7.

10.2 Chemical stability:

Chemically stable under the indicated conditions of storage, handling and use.

10.3 Possibility of hazardous reactions:

Under the specified conditions, hazardous reactions that lead to excessive temperatures or pressure are not expected.

10.4 Conditions to avoid:

Applicable for handling and storage at room temperature:

Shock and friction	Contact with air	Increase in temperature	Sunlight	Humidity
Precaution	Not applicable	Risk of combustion	Avoid direct impact	Precaution

10.5 Incompatible materials:

Acids	Water	Oxidising materials	Combustible materials	Others
Avoid strong acids	Precaution	Avoid direct impact	Not applicable	Avoid alkalis or strong bases. Can react violently

10.6 Hazardous decomposition products:

See subsection 10.3, 10.4 and 10.5 to find out the specific decomposition products. Depending on the decomposition conditions, complex mixtures of chemical substances can be released: carbon dioxide (CO2), carbon monoxide and other organic compounds.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008:

The experimental information related to the toxicological properties of the product itself is not available

Dangerous health implications:

In case of exposure that is repetitive, prolonged or at concentrations higher than the recommended occupational exposure limits, adverse effects on health may result, depending on the means of exposure:

A- Ingestion (acute effect):

- Acute toxicity : Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for consumption. For more information see section 3
- Corrosivity/Irritability: The consumption of a considerable dose can cause irritation in the throat, abdominal pain, nausea and vomiting.

B- Inhalation (acute effect):

- Acute toxicity : Based on available data, the classification criteria are not met. However, it contains substances classified as hazardous for inhalation. For more information see section 3.
- Corrosivity/Irritability: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.

C- Contact with the skin and the eyes (acute effect):

- Contact with the skin: Produces skin inflammation.
- Contact with the eyes: Produces eye damage after contact.

D- CMR effects (carcinogenicity, mutagenicity and toxicity to reproduction):

- Carcinogenicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for the effects mentioned. For more information see section 3.
  IARC: Hydrocarbons, C6, isoalkanes, <5% n-hexane (3); Quartz (1 %< RCS < 10%) (1); Xylene (3)
- Mutagenicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.
- Reproductive toxicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.

E- Sensitizing effects:

- Respiratory: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous with sensitising effects. For more information see section 3.
- Skin: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.

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SECTION 11: TOXICOLOGICAL INFORMATION (continued)

F- Specific target organ toxicity (STOT) - single exposure:

Exposure in high concentration can interfere with the central nervous system causing headache, dizziness, vertigo, nausea, vomiting, confusion, and in serious cases, loss of consciousness.

G- Specific target organ toxicity (STOT)-repeated exposure:

- Specific target organ toxicity (STOT)-repeated exposure: Based on available data, the classification criteria are not met. However, it contains substances classified as hazardous for inhalation. For more information see section 3.
- Skin: Based on available data, the classification criteria are not met. However, it does contain substances which are classified as dangerous due to repetitive exposure. For more information see section 3.

H- Aspiration hazard:

Based on available data, the classification criteria are not met. However, it does contain substances classified as hazardous for this effect. For more information see section 3.

Other information:

Non-applicable

Specific toxicology information on the substances:

Identification	Acute toxicity		Genus
Propane	LD50 oral	>2000 mg/kg	
CAS: 74-98-6	LD50 dermal	>2000 mg/kg	
EC: 200-827-9	LC50 inhalation	>5 mg/L	
Hydrocarbons, C6, isoalkanes, <5% n-hexane	LD50 oral	>2000 mg/kg	
CAS: 64742-49-0	LD50 dermal	>2000 mg/kg	
EC: 931-254-9	LC50 inhalation	>20 mg/L	
Petroleum resins	LD50 oral	>2000 mg/kg	
CAS: 64742-16-1	LD50 dermal	>2000 mg/kg	
EC: 265-116-8	LC50 inhalation	Non-applicable	
dimethyl carbonate	LD50 oral	6000 mg/kg	Rat
CAS: 616-38-6	LD50 dermal	>2000 mg/kg	
EC: 210-478-4	LC50 inhalation	>20 mg/L	
Butane	LD50 oral	>2000 mg/kg	
CAS: 106-97-8	LD50 dermal	>2000 mg/kg	
EC: 203-448-7	LC50 inhalation	658 mg/L (4 h)	Rat
Zinc powder - zinc dust (stabilised)	LD50 oral	>2000 mg/kg	
CAS: 7440-66-6	LD50 dermal	>2000 mg/kg	
EC: 231-175-3	LC50 inhalation	>5 mg/L	
Isobutyl Acetate	LD50 oral	13413 mg/kg	Rat
CAS: 110-19-0	LD50 dermal	17400 mg/kg	Rabbit
EC: 203-745-1	LC50 inhalation	>20 mg/L	
Aluminium powder (stabilised)	LD50 oral	>2000 mg/kg	
CAS: 7429-90-5	LD50 dermal	>2000 mg/kg	
EC: 231-072-3	LC50 inhalation	>5 mg/L	
Isobutane	LD50 oral	>2000 mg/kg	
CAS: 75-28-5	LD50 dermal	>2000 mg/kg	
EC: 200-857-2	LC50 inhalation	>5 mg/L	
Xylene	LD50 oral	2100 mg/kg	Rat
CAS: 1330-20-7	LD50 dermal	1100 mg/kg	Rat
EC: 215-535-7	LC50 inhalation	11 mg/L (ATEi)	
zinc oxide	LD50 oral	7950 mg/kg	Mouse
CAS: 1314-13-2	LD50 dermal	>2000 mg/kg	
EC: 215-222-5	LC50 inhalation	>5 mg/L	
Quartz (1 %< RCS < 10%)	LD50 oral	>2000 mg/kg	
CAS: 14808-60-7	LD50 dermal	>2000 mg/kg	
EC: 238-878-4	LC50 inhalation	>5 mg/L	

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SECTION 11: TOXICOLOGICAL INFORMATION (continued)

Acute Toxicity Estimate (ATE mix):

	ATE mix	Ingredient(s) of unknown toxicity
Oral	>2000 mg/kg (Calculation method)	Non-applicable
Dermal	6111,11 mg/kg (Calculation method)	0 %
Inhalation	61,11 mg/L (4 h) (Calculation method)	0 %

11.2 Information on other hazards:

Endocrine disrupting properties

Endocrine-disrupting properties: The product fails to meet the criteria.

Other information

Non-applicable

SECTION 12: ECOLOGICAL INFORMATION

The experimental information related to the eco-toxicological properties of the product itself is not available

12.1 Toxicity:

Acute toxicity:

Identification		Concentration	Species	Genus
Hydrocarbons, C6, isoalkanes, <5% n-hexane	LC50	Non-applicable		
CAS: 64742-49-0	EC50	3,87 mg/L (48 h)	Daphnia magna	Crustacean
EC: 931-254-9	EC50	55 mg/L (72 h)	Scenedesmus subspicatus	Algae
Zinc powder - zinc dust (stabilised)	LC50	0,31 mg/L (96 h)	N/A	Fish
CAS: 7440-66-6	EC50	1,22 mg/L (48 h)	Daphnia magna	Crustacean
EC: 231-175-3	EC50	Non-applicable		
Isobutyl Acetate	LC50	120 mg/L (48 h)	Leuciscus idus	Fish
CAS: 110-19-0	EC50	168 mg/L (24 h)	Daphnia magna	Crustacean
EC: 203-745-1	EC50	80 mg/L (8 h)	Scenedesmus quadricauda	Algae
zinc oxide	LC50	0,82 mg/L (96 h)	Oncorhynchus kisutch	Fish
CAS: 1314-13-2	EC50	3,4 mg/L (48 h)	Daphnia magna	Crustacean
EC: 215-222-5	EC50	Non-applicable		

Chronic toxicity:

Identification		Concentration	Species	Genus
Xylene	NOEC	1,3 mg/L	Oncorhynchus mykiss	Fish
CAS: 1330-20-7 EC: 215-535-7	NOEC	1,17 mg/L	Ceriodaphnia dubia	Crustacean

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SECTION 12: ECOLOGICAL INFORMATION (continued)

Identification		Concentration	Species	Genus
Zinc powder - zinc dust (stabilised)	NOEC	0,44 mg/L	Oncorhynchus mykiss	Fish
CAS: 7440-66-6 EC: 231-175-3	NOEC	0,031 mg/L	Daphnia magna	Crustacean
Isobutyl Acetate	NOEC	Non-applicable		
CAS: 110-19-0 EC: 203-745-1	NOEC	23,2 mg/L	Daphnia magna	Crustacean
zinc oxide	NOEC	0,44 mg/L	Oncorhynchus mykiss	Fish
CAS: 1314-13-2 EC: 215-222-5	NOEC	0,031 mg/L	Daphnia magna	Crustacean

12.2 Persistence and degradability:

Identification	Degradability		Biodegradability	
Hydrocarbons, C6, isoalkanes, <5% n-hexane	BOD5	Non-applicable	Concentration	100 mg/L
CAS: 64742-49-0	COD	Non-applicable	Period	28 days
EC: 931-254-9	BOD5/COD	Non-applicable	% Biodegradable	98 %
Xylene	BOD5	Non-applicable	Concentration	Non-applicable
CAS: 1330-20-7	COD	Non-applicable	Period	28 days
EC: 215-535-7	BOD5/COD	Non-applicable	% Biodegradable	88 %
Isobutyl Acetate	BOD5	Non-applicable	Concentration	Non-applicable
CAS: 110-19-0	COD	Non-applicable	Period	20 days
EC: 203-745-1	BOD5/COD	Non-applicable	% Biodegradable	81 %

12.3 Bioaccumulative potential:

Identification	Bioaccumulation potential	
Propane	BCF	13
CAS: 74-98-6	Pow Log	2.86
EC: 200-827-9	Potential	Low
Hydrocarbons, C6, isoalkanes, <5% n-hexane	BCF	501
CAS: 64742-49-0	Pow Log	3.6
EC: 931-254-9	Potential	High
Xylene	BCF	9
CAS: 1330-20-7	Pow Log	2.77
EC: 215-535-7	Potential	Low
Butane	BCF	33
CAS: 106-97-8	Pow Log	2.89
EC: 203-448-7	Potential	Moderate
Isobutyl Acetate	BCF	10
CAS: 110-19-0	Pow Log	1.78
EC: 203-745-1	Potential	Low

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SECTION 12: ECOLOGICAL INFORMATION (continued)

Identification	Bioaccumulation potential	
Isobutane	BCF	27
CAS: 75-28-5	Pow Log	2.76
EC: 200-857-2	Potential	Low

12.4 Mobility in soil:

Identification	Absorption/desorption		Volatility	
Propane	Koc	460	Henry	71636,78 Pa·m³/mol
CAS: 74-98-6	Conclusion	Moderate	Dry soil	Yes
EC: 200-827-9	Surface tension	7,02E-3 N/m (25 °C)	Moist soil	Yes
Xylene	Koc	202	Henry	524,86 Pa·m³/mol
CAS: 1330-20-7	Conclusion	Moderate	Dry soil	Yes
EC: 215-535-7	Surface tension	Non-applicable	Moist soil	Yes
Butane	Koc	900	Henry	96258,75 Pa·m³/mol
CAS: 106-97-8	Conclusion	Low	Dry soil	Yes
EC: 203-448-7	Surface tension	1,187E-2 N/m (25 °C)	Moist soil	Yes
Isobutyl Acetate	Koc	Non-applicable	Henry	Non-applicable
CAS: 110-19-0	Conclusion	Non-applicable	Dry soil	Non-applicable
EC: 203-745-1	Surface tension	2,297E-2 N/m (25 °C)	Moist soil	Non-applicable
Isobutane	Koc	35	Henry	120576,75 Pa·m³/mol
CAS: 75-28-5	Conclusion	Very High	Dry soil	Yes
EC: 200-857-2	Surface tension	9,84E-3 N/m (25 °C)	Moist soil	Yes

12.5 Results of PBT and vPvB assessment:

Product fails to meet PBT/vPvB criteria

12.6 Endocrine disrupting properties:

Endocrine-disrupting properties: The product fails to meet the criteria.

12.7 Other adverse effects:

Not described

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods:

Code	Description	Waste class (Regulation (EU) No 1357/2014)
16 05 04*	gases in pressure containers (including halons) containing hazardous substances	Dangerous

Type of waste (Regulation (EU) No 1357/2014):

HP14 Ecotoxic, HP3 Flammable, HP6 Acute Toxicity, HP4 Irritant — skin irritation and eye damage

Waste management (disposal and evaluation):

Consult the authorized waste service manager on the assessment and disposal operations in accordance with Annex 1 and Annex 2 (Directive 2008/98/EC). As under 15 01 (2014/955/EC) of the code and in case the container has been in direct contact with the product, it will be processed the same way as the actual product. Otherwise, it will be processed as non-dangerous residue. Waste should not be disposed of to drains. See paragraph 6.2.

Regulations related to waste management:

In accordance with Annex II of Regulation (EC) No 1907/2006 (REACH) the community or state provisions related to waste management are stated

Community legislation: Directive 2008/98/EC, 2014/955/EU, Regulation (EU) No 1357/2014

SECTION 14: TRANSPORT INFORMATION

Transport of dangerous goods by land:

With regard to ADR 2021 and RID 2021:

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SECTION 14: TRANSPORT INFORMATION (continued)

14.1	**UN number or ID number:**	UN1950
14.2	**UN proper shipping name:**	AEROSOLS
14.3	**Transport hazard class(es):**	2
	Labels:	2.1
14.4	**Packing group:**	N/A
14.5	**Environmental hazards:**	Yes
14.6	**Special precautions for user**	
	Special regulations:	190, 327, 344, 625
	Tunnel restriction code:	D
	Physico-Chemical properties:	see section 9
	Limited quantities:	1 L
14.7	**Maritime transport in bulk according to IMO instruments:**	Non-applicable

Transport of dangerous goods by sea:

With regard to IMDG 39-18:

14.1	**UN number or ID number:**	UN1950
14.2	**UN proper shipping name:**	AEROSOLS
14.3	**Transport hazard class(es):**	2
	Labels:	2.1
14.4	**Packing group:**	N/A
14.5	**Marine pollutant:**	Yes
14.6	**Special precautions for user**	
	Special regulations:	63, 959, 190, 277, 327, 344
	EmS Codes:	F-D, S-U
	Physico-Chemical properties:	see section 9
	Limited quantities:	1 L
	Segregation group:	Non-applicable
14.7	**Maritime transport in bulk according to IMO instruments:**	Non-applicable

Transport of dangerous goods by air:

With regard to IATA/ICAO 2022:

14.1	**UN number or ID number:**	UN1950
14.2	**UN proper shipping name:**	AEROSOLS
14.3	**Transport hazard class(es):**	2
	Labels:	2.1
14.4	**Packing group:**	N/A
14.5	**Environmental hazards:**	Yes
14.6	**Special precautions for user**	
	Physico-Chemical properties:	see section 9
14.7	**Maritime transport in bulk according to IMO instruments:**	Non-applicable

SECTION 15: REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture:

Candidate substances for authorisation under the Regulation (EC) No 1907/2006 (REACH): Non-applicable

Substances included in Annex XIV of REACH ("Authorisation List") and sunset date: Non-applicable

Regulation (EC) No 1005/2009, about substances that deplete the ozone layer: Non-applicable

Article 95, REGULATION (EU) No 528/2012: Non-applicable

REGULATION (EU) No 649/2012, in relation to the import and export of hazardous chemical products: Non-applicable

Seveso III:

Section	Description	Lower-tier requirements	Upper-tier requirements
P3a	FLAMMABLE AEROSOLS	150	500

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SECTION 15: REGULATORY INFORMATION (continued)

Section	Description	Lower-tier requirements	Upper-tier requirements
E2	ENVIRONMENTAL HAZARDS	200	500

Limitations to commercialisation and the use of certain dangerous substances and mixtures (Annex XVII REACH, etc ....):

Shall not be used in:
—ornamental articles intended to produce light or colour effects by means of different phases, for example in ornamental lamps and ashtrays,
—tricks and jokes,
—games for one or more participants, or any article intended to be used as such, even with ornamental aspects.
Occupational exposure to respirable crystalline silica must be controlled pursuant to Directive (EU) 2019/130.

Specific provisions in terms of protecting people or the environment:

It is recommended to use the information included in this safety data sheet as a basis for conducting workplace-specific risk assessments in order to establish the necessary risk prevention measures for the handling, use, storage and disposal of this product.

Other legislation:

The product could be affected by sectorial legislation

Council Directive 75/324/EEC of 20 May 1975 on the approximation of the laws of the Member States relating to aerosol dispensers
Commission Directive 94/1/EC of 6 January 1994 adapting some technicalities of Council Directive 75/324/EEC on the approximation of the laws of the relating Member States to aerosol dispensers
Commission Directive 2008/47/EC of 8 April 2008 amending, for the purposes of adapting to technical progress, Council Directive 75/324/EEC on the approximation of the laws of the Member States relating to aerosol dispensers
Commission Directive 2013/10/EU of 19 March 2013 amending Council Directive 75/324/EEC on the approximation of the laws of the Member States relating to aerosol dispensers in order to adapt its labelling provisions to Regulation (EC) No 1272/2008 of the European Parliament and of the Council on classification, labelling and packaging of substances and mixtures
COMMISSION DIRECTIVE (EU) 2016/2037 of 21 November 2016 amending Council Directive 75/324/EEC as regards the maximum allowable pressure of aerosol dispensers and to adapt its labelling provisions to Regulation (EC) No 1272/2008 of the European Parliament and of the Council on classification, labelling and packaging of substances and mixtures

15.2 Chemical safety assessment:

The supplier has not carried out evaluation of chemical safety.

SECTION 16: OTHER INFORMATION

Legislation related to safety data sheets:
The SDS shall be supplied in an official language of the country where the product is placed on the market. This safety data sheet has been designed in accordance with ANNEX II-Guide to the compilation of safety data sheets of Regulation (EC) No 1907/2006 (COMMISSION REGULATION (EU) 2020/878).

Modifications related to the previous Safety Data Sheet which concerns the ways of managing risks.:
Information on basic physical and chemical properties (SECTION 9):
· Flash Point

Texts of the legislative phrases mentioned in section 2:
H315: Causes skin irritation.
H336: May cause drowsiness or dizziness.
H411: Toxic to aquatic life with long lasting effects.
H229: Pressurised container: May burst if heated.
H222: Extremely flammable aerosol.
H319: Causes serious eye irritation.

Texts of the legislative phrases mentioned in section 3:
The phrases indicated do not refer to the product itself; they are present merely for informative purposes and refer to the individual components which appear in section 3

CLP Regulation (EC) No 1272/2008:

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SECTION 16: OTHER INFORMATION (continued)

Acute Tox. 4: H312+H332 - Harmful in contact with skin or if inhaled.
Aquatic Acute 1: H400 - Very toxic to aquatic life.
Aquatic Chronic 1: H410 - Very toxic to aquatic life with long lasting effects.
Aquatic Chronic 2: H411 - Toxic to aquatic life with long lasting effects.
Asp. Tox. 1: H304 - May be fatal if swallowed and enters airways.
Eye Irrit. 2: H319 - Causes serious eye irritation.
Flam. Gas 1A: H220 - Extremely flammable gas.
Flam. Liq. 2: H225 - Highly flammable liquid and vapour.
Flam. Liq. 3: H226 - Flammable liquid and vapour.
Flam. Sol. 1: H228 - Flammable solid.
Press. Gas: H280 - Contains gas under pressure, may explode if heated.
Skin Irrit. 2: H315 - Causes skin irritation.
STOT RE 2: H373 - May cause damage to organs through prolonged or repeated exposure (Inhalation).
STOT SE 3: H336 - May cause drowsiness or dizziness.
Water-react. 2: H261 - In contact with water releases flammable gases.

Classification procedure:

Skin Irrit. 2: Calculation method
STOT SE 3: Calculation method
Aquatic Chronic 2: Calculation method
Aerosol 1: Calculation method
Aerosol 1: Calculation method
Eye Irrit. 2: Calculation method

Advice related to training:

Training is recommended in order to prevent industrial risks for staff using this product and to facilitate their comprehension and interpretation of this safety data sheet, as well as the label on the product.

Principal bibliographical sources:

http://echa.europa.eu
http://eur-lex.europa.eu

Abbreviations and acronyms:

ADR: European agreement concerning the international carriage of dangerous goods by road
IMDG: International maritime dangerous goods code
IATA: International Air Transport Association
ICAO: International Civil Aviation Organisation
COD: Chemical Oxygen Demand
BOD5: 5day biochemical oxygen demand
BCF: Bioconcentration factor
LD50: Lethal Dose 50
LC50: Lethal Concentration 50
EC50: Effective concentration 50
LogPOW: Octanolwater partition coefficient
Koc: Partition coefficient of organic carbon
UFI: unique formula identifier
IARC: International Agency for Research on Cancer

- END OF SAFETY DATA SHEET -