

600-010 LIQ UID DEVELOPER CONCENTRATE (1 LT)

Revision nr.1 Dated 28/10/2019 First compilation Printed on 28/10/2019 Page n. 1 / 11 ΕN

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	Cofoty Data Ch	
	Safety Data She	et
	According to Annex II to REACH - Regulat	ion 2015/830
SECTION 1. Identif	fication of the substance/mixture and of the	company/undertaking
1.1. Product identifier		
Code:	600-010	
Product name	LIQUID DEVELOPER CONCENTRA	TE (1 LT)
1.2. Relevant identified us	ses of the substance or mixture and uses advised against	
Intended use	Cleaning. Restricted to profession	al users.
1.3. Details of the supplie	er of the safety data sheet	
Name	Electron Electronics	
Full address	11 Kiln Lane, Brockham, Betchwor	rth, Surrey
District and Country	RH3 7LX	
	United Kingdom	
	Tel. +44 (0) 1737 841568	
e-mail address of the co	mpetent person	
responsible for the Safet	ty Data Sheet sales@electronelec.co.uk.uk	
1.4. Emergency telephone	e number	
For urgent inquiries refe	r to +44 (0) 1737 841568 - 09:00 - 16: hospital showing the SDS	00 Monday to Friday - or you can call the nearest

# **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:		
Skin corrosion, category 1B	H314	Causes severe skin burns and eye damage.
Serious eye damage, category 1	H318	Causes serious eye damage.

#### 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: H314	Causes severe skin burns and eye damage.
Precautionary statements	
P260	Do not breathe dust / fume / gas / mist / vapours / spray.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
P280	Wear protective gloves/ protective clothing / eye protection / face protection.
P310	Immediately call a POISON CENTER / doctor.
P264	Wash thoroughly with soap and water after use.



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## SECTION 2. Hazards identification ... / >>

Contains:

DISODIUM METASILICATE SODIUM HYDROXIDE

### 2.3. Other hazards

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

# **SECTION 3. Composition/information on ingredients**

#### 3.2. Mixtures

Contains:

Identification	x = Conc. %	Classification 1272/2008 (CLP)
DISODIUM I	<b>IETASILICATE</b>	
CAS	6834-92-0 1 ≤ x < 3	Met. Corr. 1 H290, Skin Corr. 1B H314, Eye Dam. 1 H318, STOT SE 3 H335
EC	229-912-9	
INDEX	014-010-00-8	
Reg. no.	01-2119449811-37	
SODIUM HY	DROXIDE	
CAS	<i>1310-73-2</i> 0,5 ≤ x < 1	Met. Corr. 1 H290, Skin Corr. 1A H314, Eye Dam. 1 H318
EC	215-185-5	
INDEX	011-002-00-6	
Reg. no.	01-2119457892-27	
Tetrasodiun	n ethylenediaminetetraacetate	
CAS	64-02-8 0≤x< 1	Acute Tox. 4 H302, Acute Tox. 4 H332, STOT RE 2 H373, Eye Dam. 1 H318
EC	200-573-9	
INDEX	607-428-00-2	
Reg. no.	01-2119486762-27	

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

# **SECTION 4. First aid measures**

#### 4.1. Description of first aid measures

EYES: Remove contact lenses, if present. Wash immediately with plenty of water for at least 30-60 minutes, opening the eyelids fully. Get medical advice/attention.

SKIN: Remove contaminated clothing. Rinse skin with a shower immediately. Get medical advice/attention.

INGESTION: Have the subject drink as much water as possible. Get medical advice/attention. Do not induce vomiting unless explicitly authorised by a doctor.

INHALATION: Get medical advice/attention immediately. Remove victim to fresh air, away from the accident scene. If the subject stops breathing, administer artificial respiration. Take suitable precautions for rescue workers.

### 4.2. Most important symptoms and effects, both acute and delayed

Specific information on symptoms and effects caused by the product are unknown.

#### 4.3. Indication of any immediate medical attention and special treatment needed

Information not available

# **SECTION 5. Firefighting measures**

#### 5.1. Extinguishing media

SUITABLE EXTINGUISHING EQUIPMENT 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 Do not breathe combustion products.



# SECTION 5. Firefighting measures ... / >>

# 5.3. Advice for firefighters

## GENERAL INFORMATION

Use jets of water to cool the containers to prevent product decomposition and the development of substances potentially hazardous for health. Always wear full fire prevention gear. Collect extinguishing water to prevent it from draining into the sewer system. Dispose of contaminated water used for extinction and the remains of the fire according to applicable regulations. SPECIAL PROTECTIVE EQUIPMENT FOR FIRE-FIGHTERS

Normal fire fighting clothing i.e. fire kit (BS EN 469), gloves (BS EN 659) and boots (HO specification A29 and A30) in combination with self-contained open circuit positive pressure compressed air breathing apparatus (BS EN 137).

# **SECTION 6.** Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

Block the leakage if there is no hazard.

Wear suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing. These indications apply for both processing staff and those involved in emergency procedures.

## 6.2. Environmental precautions

The product must not penetrate into the sewer system or come into contact with surface water or ground water.

### 6.3. Methods and material for containment and cleaning up

Collect the leaked product into a suitable container. Evaluate the compatibility of the container to be used, by checking section 10. Absorb the remainder with inert absorbent material.

Make sure the leakage site is well aired. Contaminated material should be disposed of in compliance with the provisions set forth in point 13.

#### 6.4. Reference to other sections

Any information on personal protection and disposal is given in sections 8 and 13.

# **SECTION 7. Handling and storage**

## 7.1. Precautions for safe handling

Ensure that there is an adequate earthing system for the equipment and personnel. Avoid contact with eyes and skin. Do not breathe powders, vapours or mists. Do not eat, drink or smoke during use. Wash hands after use. Avoid leakage of the product into the environment.

#### 7.2. Conditions for safe storage, including any incompatibilities

Store only in the original container. Store in a ventilated and dry place, far away from sources of ignition. Keep containers well sealed. Keep the product in clearly labelled containers. Avoid overheating. Avoid violent blows. Keep containers away from any incompatible materials, see section 10 for details.

#### 7.3. Specific end use(s)

Information not available

# **SECTION 8. Exposure controls/personal protection**

## 8.1. Control parameters

Regulatory References:

CZE	Česká Republika	Nařízení vlády č. 246/2018 Sb. Nařízení vlády, kterým se mění nařízení vlády č. 361/2007 Sb., kterým se stanoví podmínky ochrany zdraví při práci, ve znění pozdějších předpisů
ESP	España	LÍMITES DE EXPOSICIÓN PROFESIONAL PARA AGENTES QUÍMICOS EN ESPAÑA 2019 (INSST)
FRA	France	Valeurs limites d'exposition professionnelle aux agents chimiques en France. ED 984 - INRS
GBR	United Kingdom	EH40/2005 Workplace exposure limits (Third edition,published 2018)
POL	Polska	ROZPORZĄDZENIE MINISTRA RODZINY, PRACY I POLITYKI SPOŁECZNEJ z dnia 12 czerwca 2018 r
SVK	Slovensko	Nariadenie vlády č. 33/2018 Z. z. Nariadenie vlády Slovenskej republiky, ktorým sa mení a dopĺňa nariadenie vlády Slovenskej republiky č. 355/2006 Z. z. o ochrane zamestnancov pred rizikami súvisiacimi s expozíciou chemickým faktorom pri práci v znení neskorších predpisov
EU	OEL EU	Directive (EU) 2017/2398; Directive (EU) 2017/164; Directive 2009/161/EU; Directive 2006/15/EC; Directive 2004/37/EC; Directive 2000/39/EC; Directive 91/322/EEC.



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# SECTION 8. Exposure controls/personal protection ... / >>

TLV-ACGIH ACGIH 2019

	TLV-A	ACGIH	P	ACGIH 2019						
					DISODIUM	METASILICAT	ΓE			
Predicted no-effe	ct conc	entratio	on - PNEC	;						
Normal value in	ı fresh w	/ater						7,5	mg/l	
Normal value in	marine	water						1	mg/l	
Normal value for	or water,	intermi	ttent relea	ise				7,5	mg/l	
lealth - Derived n	10-effec	t level -	DNEL / D	OMEL					0	
			on consu				Effects on work	ers		
Route of exposi	ure	Acute	Acu		Chronic	Chronic	Acute local	Acute	Chronic	Chronic
riouto or oxpoor	are	local		temic	local	systemic	/ louio local	systemic	local	systemic
Oral		loodi	0,01	onno	looui	0,74		oyotonno	10001	Systemio
Orai						mg/kg bw/d				
Inhalation						1,55				6,22
Innalation						mg/m3				,
Oldin										mg/m3
Skin						0,74				
						mg/kg bw/d				
					SODIUN	I HYDROXIDE				
hreshold Limit V	/alue									
Туре	Count	try 1	TWA/8h		STEL/15	ōmin	Remarks / Ob	servations		
		r	mg/m3	ppm	mg/m3	ppm				
TLV	CZE		1		2					
VLA	ESP		2							
VLEP	FRA		2							
WEL	GBR		_		2					
NDS/NDSCh	POL		0,5		1					
NPEL	SVK		2		1					
TLV-ACGIH	OVIC		2		2 (C)					
		4 [			2(0)					
lealth - Derived n	io-effec									
<b>D</b> ( (			on consu		<u>.</u>	<u>.</u>	Effects on work			<u>.</u>
Route of exposi	ure	Acute	Acu		Chronic	Chronic	Acute local	Acute	Chronic	Chronic
		local	syst	temic	local	systemic		systemic	local	systemic
Inhalation					1				1	VND
					mg/m3				mg/m3	
				Tetras	odium ethyl	enediaminetet	raacetate			
hreshold Limit V	/alue									
Туре	Count	try 7	TWA/8h		STEL/15	ōmin	Remarks / Ob	servations		
		•	mg/m3	ppm	mg/m3	ppm				
OEL	EU		2		<b>J</b> · -					
Predicted no-effe		entratio	_	:						
Normal value in				,				2,2	mg/l	
Normal value in								0,22	mg/l	
			ttant ralas	~~~					-	
Normal value fo				58				1,2	mg/l	
Normal value of								43	mg/l	
Normal value for			•					0,72	mg/kg	
lealth - Derived r	no-effec									
		Effects	on consu	mers			Effects on work	ers		
Route of exposi	ure	Acute	Acu	te	Chronic	Chronic	Acute local	Acute	Chronic	Chronic
		local	syst	temic	local	systemic		systemic	local	systemic
Oral			,		25	25		, -		,
					 ma/m3	 ma/m3				

Legend:

(C) = CEILING ; INHAL = Inhalable Fraction ; RESP = Respirable Fraction ; THORA = Thoracic Fraction.

VND = hazard identified but no DNEL/PNEC available ; NEA = no exposure expected ; NPI = no hazard identified.

mg/m3

mg/m3

1,2

## 8.2. Exposure controls

Inhalation

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.

mg/m3

mg/m3

3

mg/m3

3

mg/m3

1,5

mg/m3

1,5

mg/m3

1,2

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



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#### SECTION 8. Exposure controls/personal protection ..../>>

Protect hands with category III work gloves (see standard EN 374). The following should be considered when choosing work glove material: compatibility, degradation, failure time and permeability.

The work gloves' resistance to chemical agents should be checked before use, as it can be unpredictable. The gloves' wear time depends on the duration and type of use.

### SKIN PROTECTION

Wear category 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, use a mask with a type B filter whose class (1, 2 or 3) must be chosen according to the limit of use concentration. (see standard EN 14387). In the presence of gases or vapours of various kinds and/or gases or vapours containing particulate (aerosol sprays, fumes, mists, etc.) combined filters are required. Respiratory protection devices must be used if the technical measures adopted are not suitable for restricting the worker's exposure to the threshold values considered. The protection provided by masks is in any case limited.

If the substance considered is odourless or its olfactory threshold is higher than the corresponding TLV-TWA and in the case of an emergency, wear open-circuit compressed air breathing apparatus (in compliance with standard EN 137) or external air-intake breathing apparatus (in compliance with standard EN 138). For a correct choice of respiratory protection device, see standard EN 529. ENVIRONMENTAL EXPOSURE CONTROLS

The emissions generated by manufacturing processes, including those generated by ventilation equipment, should be checked to ensure compliance with environmental standards.

# **SECTION 9.** Physical and chemical properties

#### 9.1. Information on basic physical and chemical properties

Properties	Value
Appearance	liquid
Colour	colorless-pale
Odour	characteristic
Odour threshold	Not available
рН	>10
Melting point / freezing point	Not available
Initial boiling point	Not available
Boiling range	Not available
Flash point	Combustion not sustained.
Evaporation Rate	Not available
Flammability of solids and gases	Not available
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	1,00 - 1,03
Solubility	soluble in water
Partition coefficient: n-octanol/water	Not available
Auto-ignition temperature	Not available
Decomposition temperature	Not available
Viscosity	Not available
Explosive properties	Not available
Oxidising properties	Not available
01 1	

#### 9.2. Other information

Information not available

# **SECTION 10. Stability and reactivity**

## 10.1. Reactivity

There are no particular risks of reaction with other substances in normal conditions of use.

SODIUM HYDROXIDE It can be corrosive to metals. Highly reactive with aluminum, zinc, tin and



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## SECTION 10. Stability and reactivity ... / >>

alloys of these metals, with production of flammable hydrogen gas. Contact withsome organic substances can generate violent or explosive reactions.

#### 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.

#### DISODIUM METASILICATE

The aqueous solutions react with aluminum, zinc, tin, copper and their alloys producing hydrogen which in turn can form explosive mixtures in contact with air. Exothermic reactions if in contact with acids.

#### SODIUM HYDROXIDE

Generates heat when adding water (exothermic). Can react violently with: Halogens, Acids, organic materials.

### 10.4. Conditions to avoid

None in particular. However the usual precautions used for chemical products should be respected.

DISODIUM METASILICATE Avoid contact with concentrated acids.

SODIUM HYDROXIDE

Avoid contact with moisture. Avoid contact with combustible material.

#### 10.5. Incompatible materials

## DISODIUM METASILICATE

Avoid contact with aluminum, zinc, tin, copper and their alloys.

#### SODIUM HYDROXIDE

Strong oxidizers, Acids, Aluminum, Light metals, chlorinated hydrocarbons, solution of ammonia.

Tetrasodium ethylenediaminetetraacetate Incompatible with: light metals,amphoteric metals.

## 10.6. Hazardous decomposition products

SODIUM HYDROXIDE Sodium oxides

# **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



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## SECTION 11. Toxicological information ... / >>

Information not available

#### ACUTE TOXICITY

LC50 (Inhalation) of the mixture: LD50 (Oral) of the mixture: LD50 (Dermal) of the mixture:

> Tetrasodium ethylenediaminetetraacetate LD50 (Oral) LC50 (Inhalation)

DISODIUM METASILICATE LD50 (Oral) LD50 (Dermal) LC50 (Inhalation) Not classified (no significant component) Not classified (no significant component) Not classified (no significant component)

> 1000 mg/kg Rat > 1 mg/l Rat

1152 mg/kg Rat > 5000 mg/kg Rat 2,06 g/m3 Rat

### SKIN CORROSION / IRRITATION

Corrosive for the skin

## SERIOUS EYE DAMAGE / IRRITATION

Causes serious eye damage

### **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**

Does not meet the classification criteria for this hazard class

#### STOT - REPEATED EXPOSURE

Does not meet the classification criteria for this hazard class

#### **ASPIRATION HAZARD**

Does not meet the classification criteria for this hazard class

# **SECTION 12. Ecological information**

Use this product according to good working practices. Avoid littering. Inform the competent authorities, should the product reach waterways or contaminate soil or vegetation.

#### 12.1. Toxicity

Tetrasodium ethylenediaminetetraacetate LC50 - for Fish EC50 - for Crustacea EC50 - for Algae / Aquatic Plants

- > 100 mg/l/96h Lepomis macrochirus
- > 100 mg/l/48h Daphnia magna
- > 100 mg/l/72h Scenedesmus obliquus

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> 35 mg/l/96h Fish

### SECTION 12. Ecological information ... / >>

SODIUM HYDROXIDE LC50 - for Fish EC50 - for Crustacea

DISODIUM METASILICATE LC50 - for Fish EC50 - for Crustacea EC50 - for Algae / Aquatic Plants 1108 mg/l/96h Fish: Brachydanio rerio

207 mg/l/72h Scenedesmus subspicatus

40,4 mg/l/48h Ceriodaphnia dubia

1700 mg/l/48h Daphnia magna

#### 12.2. Persistence and degradability

SODIUM HYDROXIDE Degradability: information not available

DISODIUM METASILICATE Degradability: information not available

#### 12.3. Bioaccumulative potential

Information not available

### 12.4. Mobility in soil

Information not available

#### 12.5. Results of PBT and vPvB assessment

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

#### 12.6. Other adverse effects

Information not available

# **SECTION 13. Disposal considerations**

### 13.1. Waste treatment methods

Reuse, when possible. Product residues should be considered special hazardous waste. The hazard level of waste containing this product should be evaluated according to applicable regulations.

Disposal must be performed through an authorised waste management firm, in compliance with national and local regulations.

Waste transportation may be subject to ADR restrictions.

CONTAMINATED PACKAGING

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

# **SECTION 14. Transport information**

## 14.1. UN number

ADR / RID, IMDG, IATA: 3266

#### 14.2. UN proper shipping name

ADR / RID:	CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S. (DISODIUM METASILICATE; SODIUM HYDROXIDE)
IMDG:	CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S. (DISODIUM METASILICATE; SODIUM HYDROXIDE)
IATA:	CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S. (DISODIUM METASILICATE; SODIUM HYDROXIDE)

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# SECTION 14. Transport information ... / >>

44.2	Trananar	+ honord		()	
14.3.	Transpor	i nazaru	Class	(85)	

-	• •		
ADR / RID:	Class: 8	Label: 8	
IMDG:	Class: 8	Label: 8	
IATA:	Class: 8	Label: 8	



## 14.4. Packing group

ADR / RID, IMDG, IATA: III

### 14.5. Environmental hazards

ADR / RID:	NO
IMDG:	NO
IATA:	NO

#### 14.6. Special precautions for user

ADR / RID:	HIN - Kemler: 80	Limited Quantities: 5 L	Tunnel restriction code: (E)
	Special Provision: -		
IMDG:	EMS: F-A, S-B	Limited Quantities: 5 L	
IATA:	Cargo:	Maximum quantity: 60 L	Packaging instructions: 856
	Pass.:	Maximum quantity: 5 L	Packaging instructions: 852
	Special Instructions:	A3, A803	

#### 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:

Restrictions relating to the product or contained substances pursuant to Annex XVII to EC Regulation 1907/2006
Product
Point 3

None

<u>Substances in Candidate List (Art. 59 REACH)</u> On the basis of available data, the product does not contain any SVHC in percentage greater than 0,1%.

Substances subject to authorisation (Annex XIV REACH) None

Substances subject to exportation reporting pursuant to (EC) Reg. 649/2012: None

Substances subject to the Rotterdam Convention: None

Substances subject to the Stockholm Convention: None

#### Healthcare controls

Workers exposed to this chemical agent must not undergo health checks, provided that available risk-assessment data prove that the risks related to the workers' health and safety are modest and that the 98/24/EC directive is respected.

#### 15.2. Chemical safety assessment

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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:

Met. Corr. 1	Substance or mixture corrosive to metals, category 1
Acute Tox. 4	Acute toxicity, category 4
STOT RE 2	Specific target organ toxicity - repeated exposure, category 2
Skin Corr. 1A	Skin corrosion, category 1A
Skin Corr. 1B	Skin corrosion, category 1B
Eye Dam. 1	Serious eye damage, category 1
STOT SE 3	Specific target organ toxicity - single exposure, category 3
H290	May be corrosive to metals.
H302	Harmful if swallowed.
H332	Harmful if inhaled.
H373	May cause damage to organs through prolonged or repeated exposure.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H335	May cause respiratory irritation.

LEGEND:

- ADR: European Agreement concerning the carriage of Dangerous goods by Road
- CAS NUMBER: Chemical Abstract Service Number
- CE50: Effective concentration (required to induce a 50% effect)
- CE NUMBER: Identifier in ESIS (European archive of existing substances)
- CLP: EC Regulation 1272/2008
- DNEL: Derived No Effect Level
- EmS: Emergency Schedule
- GHS: Globally Harmonized System of classification and labeling of chemicals
- IATA DGR: International Air Transport Association Dangerous Goods Regulation
- IC50: Immobilization Concentration 50%
- IMDG: International Maritime Code for dangerous goods
- IMO: International Maritime Organization
- INDEX NUMBER: Identifier in Annex VI of CLP
- LC50: Lethal Concentration 50%
- LD50: Lethal dose 50%
- OEL: Occupational Exposure Level
- PBT: Persistent bioaccumulative and toxic as REACH Regulation
- PEC: Predicted environmental Concentration
- PEL: Predicted exposure level
- PNEC: Predicted no effect concentration
- REACH: EC Regulation 1907/2006
- RID: Regulation concerning the international transport of dangerous goods by train
- TLV: Threshold Limit Value
- TLV CEILING: Concentration that should not be exceeded during any time of occupational exposure.
- TWA STEL: Short-term exposure limit
- TWA: Time-weighted average exposure limit
- VOC: Volatile organic Compounds
- vPvB: Very Persistent and very Bioaccumulative as for REACH Regulation
- WGK: Water hazard classes (German).

# GENERAL BIBLIOGRAPHY

- 1. Regulation (EC) 1907/2006 (REACH) of the European Parliament
- 2. Regulation (EC) 1272/2008 (CLP) of the European Parliament
- 3. Regulation (EU) 790/2009 (I Atp. CLP) of the European Parliament
- 4. Regulation (EU) 2015/830 of the European Parliament
- 5. Regulation (EU) 286/2011 (II Atp. CLP) of the European Parliament
- 6. Regulation (EU) 618/2012 (III Atp. CLP) of the European Parliament
- 7. Regulation (EU) 487/2013 (IV Atp. CLP) of the European Parliament
- 8. Regulation (EU) 944/2013 (V Atp. CLP) of the European Parliament
- 9. Regulation (EU) 605/2014 (VI Atp. CLP) of the European Parliament
- 10. Regulation (EU) 2015/1221 (VII Atp. CLP) of the European Parliament
- 11. Regulation (EU) 2016/918 (VIII Atp. CLP) of the European Parliament
- 12. Regulation (EU) 2016/1179 (IX Atp. CLP)
- 13. Regulation (EU) 2017/776 (X Atp. CLP)
- 14. Regulation (EU) 2018/669 (XI Atp. CLP)



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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.

Product's classification is based on the calculation methods set out in Annex I of the CLP Regulation, unless otherwise indicated in sections 11 and 12.

The data for evaluation of chemical-physical properties are reported in section 9.