

Revision date 06/02/2024

Revision Number 1.94

SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1. Product identifier**

Product Name Non-Silicone Heat Transfer Compound

Product Code(s) HTC, EHTC02S, EHTC10S, EHTC20S, EHTC35SL, EHTC100T, EHTC700G, EHTC01K, EHTC12.5K, ZE

Safety data sheet number 00511

Pure substance/mixture Mixture

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

Recommended use Heat Dissipation

Uses advised against No specific uses advised against are identified

1.3. Details of the supplier of the safety data sheet

<u>Manufacturer</u>	<u>Supplier</u>
ELECTROLUBE MacDermid Alpha Electronics Solutions ASHBY PARK, COALFIELD WAY, ASHBY DE LA ZOUCH, LEICESTERSHIRE LE65 1JR UNITED KINGDOM	HK WENTWORTH LIMITED 32 RUE DE TOURNENFILS 91540 MENNECY FRANCE
+44 (0)1530 419600 +44 (0)1530 416640 info@electrolube.com	+33 (0) 1 82 88 47 94 info@electrolube.com

For further information, please contact

E-mail address info@electrolube.com

1.4. Emergency telephone number

Emergency Telephone POISON INFORMATION CENTRE (Beaumont Hospital, Republic of Ireland only) +353 (0)1 809 2166 (08:00 - 22:00)

Emergency Telephone - IN CASE OF EMERGENCY CALL: +44 1865 407333 (24hr, Provided by Carechem 24)**SECTION 2: Hazards identification****2.1. Classification of the substance or mixture***Classification according to Regulation (EC) No. 1272/2008 [CLP]*

Acute aquatic toxicity	Category 1 - (H400)
Chronic aquatic toxicity	Category 1 - (H410)

2.2. Label elements



Signal word

Warning

Hazard statements

H410 - Very toxic to aquatic life with long lasting effects

Precautionary Statements - EU (§28, 1272/2008)

P273 - Avoid release to the environment.

P391 - Collect spillage.

P501 - Dispose of contents/container in accordance with local, regional, national, and international regulations as applicable.

Unknown aquatic toxicity

Contains 0 % of components with unknown hazards to the aquatic environment.

2.3. Other hazards

This mixture contains no substance considered to be persistent, bioaccumulating or toxic (PBT). This mixture contains no substance considered to be very persistent nor very bioaccumulating (vPvB).

Endocrine Disruptor Information

This product does not contain any known or suspected endocrine disruptors.

SECTION 3: Composition/information on ingredients

3.1 Substances

Not applicable

3.2 Mixtures

Chemical name	Weight-%	REACH registration number	EC No (EU Index No)	Classification according to Regulation (EC) No. 1272/2008 [CLP]	Specific concentration limit (SCL)	M-Factor	M-Factor (long-term)
zinc oxide 1314-13-2	60-100	01-2119463881-32-00 00	215-222-5	Aquatic Chronic 1 (H410) Aquatic Acute 1 (H400)	-	-	-
Diphenylamine 122-39-4	<0.1	No data available	204-539-4	Aquatic Chronic 1 (H410) STOT RE 2 (H373) Aquatic Acute 1 (H400) Acute Tox. 3 (H311) Acute Tox. 3 (H301)	-	-	-

				Acute Tox. 3 (H331)			
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Full text of H- and EUH-phrases: see section 16

Acute Toxicity Estimate

Chemical name	Oral LD50 mg/kg	Dermal LD50 mg/kg	Inhalation LC50 - 4 hour - dust/mist - mg/L	Inhalation LC50 - 4 hour - vapour - mg/L	Inhalation LC50 - 4 hour - gas - ppm
zinc oxide 1314-13-2	5000	2000	5.7	No data available	No data available
Diphenylamine 122-39-4	1120	2000	No data available	No data available	No data available

This product does not contain candidate substances of very high concern at a concentration $\geq 0.1\%$ (Regulation (EC) No. 1907/2006 (REACH), Article 59)

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation	Remove to fresh air.
Eye contact	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a doctor.
Skin contact	Wash skin with soap and water. In the case of skin irritation or allergic reactions see a doctor.
Ingestion	Rinse mouth.

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

Symptoms	No information available.
Effects of Exposure	None.

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

Note to doctors	Treat symptomatically.
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SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable Extinguishing Media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Large Fire	CAUTION: Use of water spray when fighting fire may be inefficient.
Unsuitable extinguishing media	Do not scatter spilled material with high pressure water streams.

5.2. Special hazards arising from the substance or mixture

Specific hazards arising from the chemical No information available.

5.3. Advice for firefighters

Special protective equipment and precautions for fire-fighters Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions Ensure adequate ventilation.

For emergency responders Use personal protection recommended in Section 8.

6.2. Environmental precautions

Environmental precautions See Section 12 for additional Ecological Information.

6.3. Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Take up mechanically, placing in appropriate containers for disposal.

Prevention of secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations.

6.4. Reference to other sections

Reference to other sections See section 8 for more information. See section 13 for more information.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling Ensure adequate ventilation.

General hygiene considerations Handle in accordance with good industrial hygiene and safety practice.

7.2. Conditions for safe storage, including any incompatibilities

Storage Conditions Keep container tightly closed in a dry and well-ventilated place.

Storage class (TRGS 510) LGK 10.

7.3. Specific end use(s)

Risk Management Methods (RMM) The information required is contained in this Safety Data Sheet.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure Limits

This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Chemical name	European Union	Austria	Belgium	Bulgaria	Croatia
zinc oxide 1314-13-2	-	TWA: 5 mg/m ³	TWA: 2 mg/m ³ STEL: 10 mg/m ³	STEL: 10.0 mg/m ³ TWA: 5.0 mg/m ³	TWA: 2 mg/m ³ STEL: 10 mg/m ³
Diphenylamine 122-39-4	-	TWA: 0.7 ppm TWA: 5 mg/m ³ STEL 1.4 ppm STEL 10 mg/m ³ H*	TWA: 10 mg/m ³	TWA: 10 mg/m ³	TWA: 10 mg/m ³ STEL: 20 mg/m ³
Chemical name	Cyprus	Czech Republic	Denmark	Estonia	Finland
zinc oxide 1314-13-2	-	TWA: 2 mg/m ³ Ceiling: 5 mg/m ³	TWA: 4 mg/m ³ STEL: 8 mg/m ³	TWA: 5 mg/m ³	TWA: 2 mg/m ³ STEL: 10 mg/m ³
Diphenylamine 122-39-4	-	TWA: 10 mg/m ³ Ceiling: 20 mg/m ³ D*	TWA: 5 mg/m ³ STEL: 10 mg/m ³	TWA: 10 mg/m ³	TWA: 5 mg/m ³ STEL: 10 mg/m ³
Chemical name	France	Germany TRGS	Germany DFG	Greece	Hungary
zinc oxide 1314-13-2	TWA: 5 mg/m ³ TWA: 10 mg/m ³	-	TWA: 0.1 mg/m ³ TWA: 2 mg/m ³ Peak: 0.4 mg/m ³ Peak: 4 mg/m ³	TWA: 5 mg/m ³ STEL: 10 mg/m ³	TWA: 5 mg/m ³
Diphenylamine 122-39-4	TWA: 10 mg/m ³	TWA: 5 mg/m ³ H*	TWA: 5 mg/m ³ Peak: 10 mg/m ³ *	TWA: 10 mg/m ³ STEL: 20 mg/m ³	-
Chemical name	Ireland	Italy MDLPS	Italy AIDII	Latvia	Lithuania
zinc oxide 1314-13-2	TWA: 2 mg/m ³ STEL: 10 mg/m ³	-	TWA: 2 mg/m ³ STEL: 10 mg/m ³	TWA: 0.5 mg/m ³	TWA: 5 mg/m ³
Diphenylamine 122-39-4	TWA: 10 mg/m ³ STEL: 20 mg/m ³	-	TWA: 10 mg/m ³	-	STEL: 12 mg/m ³ TWA: 4 mg/m ³
Chemical name	Luxembourg	Malta	Netherlands	Norway	Poland
zinc oxide 1314-13-2	-	-	-	TWA: 5 mg/m ³ STEL: 10 mg/m ³	STEL: 10 mg/m ³ TWA: 5 mg/m ³
Diphenylamine 122-39-4	-	-	-	TWA: 5 mg/m ³ STEL: 10 mg/m ³	TWA: 8 mg/m ³
Chemical name	Portugal	Romania	Slovakia	Slovenia	Spain
zinc oxide 1314-13-2	TWA: 2 mg/m ³ STEL: 10 mg/m ³	TWA: 5 mg/m ³ STEL: 10 mg/m ³	TWA: 1 mg/m ³ Ceiling: 1 mg/m ³	-	TWA: 2 mg/m ³ STEL: 10 mg/m ³
Diphenylamine 122-39-4	TWA: 10 mg/m ³	TWA: 4 mg/m ³ STEL: 6 mg/m ³	-	TWA: 5 mg/m ³ STEL: 10 mg/m ³ K*	TWA: 10 mg/m ³
Chemical name	Sweden		Switzerland	United Kingdom	
zinc oxide 1314-13-2	NGV: 5 mg/m ³		TWA: 3 mg/m ³ STEL: 3 mg/m ³	-	
Diphenylamine 122-39-4	Vägledande KGV: 12 mg/m ³ NGV: 4 mg/m ³		TWA: 10 mg/m ³ H*	TWA: 10 mg/m ³ STEL: 20 mg/m ³	

Biological occupational exposure limits

This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies.

Chemical name	European Union	Austria	Bulgaria	Croatia	Czech Republic
Diphenylamine	-	10 g/dL Hemoglobin	-	-	-

122-39-4		(blood - not provided) 12 g/dL Hemoglobin (blood - not provided) 79 - 97 fL mean corpuscular volume (blood - not provided) 3.2 million/ μ L Erythrocytes (blood - not provided) 3.8 million/ μ L Erythrocytes (blood - not provided) 4000 Leukocytes/ μ L (blood - not provided) 13000 Leukocytes/ μ L (blood - not provided) 130000 Thrombocytes/ μ L (blood - not provided) 150000 Thrombocytes/ μ L (blood - not provided) ≤ 50 U/I (- Serum transaminases SGOT not provided) ≤ 35 U/I (- Serum transaminases SGOT not provided) ≤ 50 U/I (- Serum transaminases SGPT not provided) ≤ 35 U/I (- Serum transaminases SGPT not provided) ≤ 66 U/I (- Serum transaminases GGT not provided) ≤ 39 U/I (- Serum transaminases GGT not provided) (urine - one time yearly urine cytological examination)			
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Derived No Effect Level (DNEL) - Workers

Chemical name	Oral	Dermal	Inhalation
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Chemical name	Oral	Dermal	Inhalation
zinc oxide 1314-13-2	-	83 mg/kg bw/day [4] [6]	5 mg/m ³ [4] [6] 0.5 mg/m ³ [5] [6]

Notes

[4]	Systemic health effects.
[5]	Local health effects.
[6]	Long term.

Derived No Effect Level (DNEL) - General Public

Chemical name	Oral	Dermal	Inhalation
zinc oxide 1314-13-2	0.83 mg/kg bw/day [4] [6]	-	2.5 mg/m ³ [4] [6]

Notes

[4]	Systemic health effects.
[6]	Long term.

Predicted No Effect Concentration (PNEC)

Chemical name	Freshwater	Freshwater (intermittent release)	Marine water	Marine water (intermittent release)	Air
zinc oxide 1314-13-2	20.6 µg/L	-	6.1 µg/L	-	-

Chemical name	Freshwater sediment	Marine sediment	Sewage treatment	Soil	Food chain
zinc oxide 1314-13-2	117.8 mg/kg sediment dw	56.5 mg/kg sediment dw	100 µg/L	35.6 mg/kg soil dw	-

8.2. Exposure controls

Engineering controls Ensure adequate ventilation, especially in confined areas.

Personal protective equipment

Eye/face protection No special protective equipment required.

Skin and body protection No special protective equipment required.

Respiratory protection No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

General hygiene considerations Handle in accordance with good industrial hygiene and safety practice.

Environmental exposure controls No information available.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Liquid
Appearance	Paste
Colour	white
Odour	Odourless.
Odour threshold	No information available

Property	Values	Remarks • Method
Melting point / freezing point	No data available	None known
Initial boiling point and boiling range	No data available	None known
Flammability	No data available	None known
Flammability Limit in Air		None known
Upper flammability or explosive limits	No data available	
Lower flammability or explosive limits	No data available	
Flash point	No data available	None known
Autoignition temperature	No data available	None known
Decomposition temperature		None known
pH	No data available	None known
pH (as aqueous solution)	No data available	None known
Kinematic viscosity	No data available	None known
Dynamic viscosity	202-205 Pa s @ 20°C/68°F	
Water solubility	Insoluble in water	None known
Solubility(ies)	No data available	None known
Partition coefficient	No data available	None known
Vapour pressure	No data available	None known
Relative density	2.04 @ 20°C/68°F	
Bulk density	No data available	
Liquid Density	No data available	
Relative vapour density	No data available	None known
Particle characteristics		
Particle Size	No information available	
Particle Size Distribution	No information available	

9.2. Other information

9.2.1. Information with regards to physical hazard classes

Explosive properties	Not considered to be explosive.
Oxidising properties	Does not meet the criteria for classification as oxidizing.

9.2.2. Other safety characteristics

No information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity	No information available.
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10.2. Chemical stability

Stability	Stable under normal conditions.
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Explosion data

Sensitivity to mechanical impact None.

Sensitivity to static discharge None.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions None under normal processing.

10.4. Conditions to avoid

Conditions to avoid None known based on information supplied.

10.5. Incompatible materials

Incompatible materials None known based on information supplied.

10.6. Hazardous decomposition products

Hazardous decomposition products None known based on information supplied.

SECTION 11: Toxicological information

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

Information on likely routes of exposure

Product Information

Inhalation Specific test data for the substance or mixture is not available.

Eye contact Specific test data for the substance or mixture is not available.

Skin contact Specific test data for the substance or mixture is not available.

Ingestion Specific test data for the substance or mixture is not available.

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms No information available.

Acute toxicity

Numerical measures of toxicity

Based on available data, the classification criteria are not met

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral) 5,021.20 mg/kg

ATEmix (inhalation-dust/mist) 5.724 mg/l

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
zinc oxide	> 5000 mg/kg (Rat)	> 2000 mg/kg (Rat)	> 5700 mg/m ³ (Rat) 4 h
Diphenylamine	= 1120 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	-

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

Skin corrosion/irritation Based on available data, the classification criteria are not met.

Serious eye damage/eye irritation Based on available data, the classification criteria are not met.

Respiratory or skin sensitisation Based on available data, the classification criteria are not met.

Germ cell mutagenicity Based on available data, the classification criteria are not met.

Carcinogenicity Based on available data, the classification criteria are not met.

Reproductive toxicity Based on available data, the classification criteria are not met.

STOT - single exposure Based on available data, the classification criteria are not met.

STOT - repeated exposure Based on available data, the classification criteria are not met.

Aspiration hazard Based on available data, the classification criteria are not met.

11.2. Information on other hazards

11.2.1. Endocrine disrupting properties

Endocrine disrupting properties The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

11.2.2. Other information

Other adverse effects No information available.

SECTION 12: Ecological information

12.1. Toxicity

Ecotoxicity Very toxic to aquatic life with long lasting effects.

Unknown aquatic toxicity Contains 0 % of components with unknown hazards to the aquatic environment.

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
zinc oxide	-	LC50: =1.55mg/L (96h, Danio rerio)	-	-
Diphenylamine	EC50: =1.5mg/L (72h, Scenedesmus)	LC50: 3.47 - 4.14mg/L (96h, Pimephales)	-	EC50: 1.69 - 2.46mg/L (48h, Daphnia magna)

	subspicatus)	promelas)		
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12.2. Persistence and degradability

Persistence and degradability No information available.

12.3. Bioaccumulative potential

Bioaccumulation There is no data for this product.

Chemical name	Partition coefficient
Diphenylamine	3.4

12.4. Mobility in soil

Mobility in soil No information available.

12.5. Results of PBT and vPvB assessment

PBT and vPvB assessment The product does not contain any substance(s) classified as PBT or vPvB above the threshold of declaration.

Chemical name	PBT and vPvB assessment
zinc oxide	The substance is not PBT / vPvB

12.6. Endocrine disrupting properties

Endocrine disrupting properties The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

12.7. Other adverse effects

No information available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste from residues/unused products Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

Contaminated packaging Do not reuse empty containers.

SECTION 14: Transport information

IATA

- 14.1 UN number or ID number UN3082
- 14.2 UN proper shipping name Environmentally hazardous substances, liquid, n.o.s. (zinc oxide)
- 14.3 Transport hazard class(es) 9
- 14.4 Packing group III
- 14.4 Description UN3082, Environmentally hazardous substances, liquid, n.o.s. (zinc oxide), 9, III
- 14.5 Environmental hazards Yes
- 14.6 Special precautions for user

Special Provisions A97, A158, A197
ERG Code 9L

IMDG

14.1 UN number or ID number UN3082
14.2 UN proper shipping name Environmentally hazardous substances, liquid, n.o.s. (zinc oxide)
14.3 Transport hazard class(es) 9
14.4 Packing group III
Description UN3082, Environmentally hazardous substances, liquid, n.o.s. (zinc oxide), 9, III, Marine pollutant
14.5 Environmental hazards Yes
14.6 Special precautions for user
Special Provisions 274, 335, 969
EmS-No. F-A, S-F
14.7 Maritime transport in bulk according to IMO instruments No information available

RID

14.1 UN number or ID number UN3082
14.2 UN proper shipping name Environmentally hazardous substances, liquid, n.o.s. (zinc oxide)
14.3 Transport hazard class(es) 9
14.4 Packing group III
Description UN3082, Environmentally hazardous substances, liquid, n.o.s. (zinc oxide), 9, III
14.5 Environmental hazards Yes
14.6 Special precautions for user
Special Provisions 274, 335, 375, 601
Classification code M6

ADR

14.1 UN number or ID number UN3082
14.2 UN proper shipping name Environmentally hazardous substances, liquid, n.o.s. (zinc oxide)
14.3 Transport hazard class(es) 9
14.4 Packing group III
Description UN3082, Environmentally hazardous substances, liquid, n.o.s. (zinc oxide), 9, III, (-)
14.5 Environmental hazards Yes
14.6 Special precautions for user
Special Provisions 274, 335, 601, 375
Classification code M6
Tunnel restriction code (-)

SECTION 15: Regulatory information

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

National regulations

France

Occupational Illnesses (R-463-3, France)

Chemical name	French RG number
Diphenylamine - 122-39-4	RG 15, RG 15bis

Germany

Water hazard class (WGK) obviously hazardous to water (WGK 2)

European Union

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work.

Authorisations and/or restrictions on use:

This product does not contain substances subject to authorisation (Regulation (EC) No. 1907/2006 (REACH), Annex XIV) This product does not contain substances subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII)

Chemical name	Restricted substance per REACH Annex XVII	Substance subject to authorisation per REACH Annex XIV
zinc oxide - 1314-13-2	75.	-
Diphenylamine - 122-39-4	75.	-

Persistent Organic Pollutants

Not applicable

Export Notification requirements

Chemical name	European Export/Import Restrictions per (EC) 649/2012 - Annex Number
Diphenylamine - 122-39-4	I.1 I.2

Dangerous substance category per Seveso Directive (2012/18/EU)

E1 - Hazardous to the Aquatic Environment in Category Acute 1 or Chronic 1

Ozone-depleting substances (ODS) regulation (EC) 1005/2009

Not applicable

International Inventories

TSCA	Contact supplier for inventory compliance status
DSL/NDL	Contact supplier for inventory compliance status
EINECS/ELINCS	Contact supplier for inventory compliance status
ENCS	Contact supplier for inventory compliance status
IECSC	Contact supplier for inventory compliance status
KECI	Contact supplier for inventory compliance status
PICCS	Contact supplier for inventory compliance status
AIIC	Contact supplier for inventory compliance status
NZIoC	Contact supplier for inventory compliance status

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AIIC - Australian Inventory of Industrial Chemicals
NZIoC - New Zealand Inventory of Chemicals

15.2. Chemical safety assessment

Chemical Safety Report

Chemical safety assessments for substances in this mixture were not carried out

SECTION 16: Other information

Key or legend to abbreviations and acronyms used in the safety data sheet

Full text of H-Statements referred to under section 3

H301 - Toxic if swallowed
H311 - Toxic in contact with skin
H331 - Toxic if inhaled
H373 - May cause damage to organs through prolonged or repeated exposure
H400 - Very toxic to aquatic life
H410 - Very toxic to aquatic life with long lasting effects

Legend

SVHC: Substances of Very High Concern for Authorisation:

Legend SECTION 8: Exposure controls/personal protection

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	Sk*	Skin designation
+	Sensitisers		

Classification procedure	
Classification according to Regulation (EC) No. 1272/2008 [CLP]	Method Used
Acute oral toxicity	Calculation method
Acute dermal toxicity	Calculation method
Acute inhalation toxicity - gas	Calculation method
Acute inhalation toxicity - vapour	Calculation method
Acute inhalation toxicity - dust/mist	Calculation method
Skin corrosion/irritation	Calculation method
Serious eye damage/eye irritation	Calculation method
Respiratory sensitisation	Calculation method
Skin sensitisation	Calculation method
Mutagenicity	Calculation method
Carcinogenicity	Calculation method
Reproductive toxicity	Calculation method
STOT - single exposure	Calculation method
STOT - repeated exposure	Calculation method
Acute aquatic toxicity	Calculation method
Chronic aquatic toxicity	Calculation method
Aspiration hazard	Calculation method
Ozone	Calculation method

Key literature references and sources for data used to compile the SDS

Agency for Toxic Substances and Disease Registry (ATSDR)
U.S. Environmental Protection Agency ChemView Database
European Food Safety Authority (EFSA)
European Chemicals Agency (ECHA) Committee for Risk Assessment (ECHA_RAC)
European Chemicals Agency (ECHA) (ECHA_API)
Environmental Protection Agency
Acute Exposure Guideline Level(s) (AEGL(s))
U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
U.S. Environmental Protection Agency High Production Volume Chemicals

Food Research Journal
Hazardous Substance Database
International Uniform Chemical Information Database (IUCLID)
National Institute of Technology and Evaluation (NITE)
Australian National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
NIOSH (National Institute for Occupational Safety and Health)
National Library of Medicine's ChemID Plus (NLM CIP)
National Library of Medicine's PubMed database (NLM PUBMED)
U.S. National Toxicology Program (NTP)
New Zealand's Chemical Classification and Information Database (CCID)
Organisation for Economic Co-operation and Development Environment, Health, and Safety Publications
Organisation for Economic Co-operation and Development High Production Volume Chemicals Programme
Organisation for Economic Co-operation and Development Screening Information Data Set
World Health Organization

Revision date 06/02/2024

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH)

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet