

Safety Data Sheet

Hazardous Products Regulations (HPR)

Solar Flux® Type B

Version number: 2.1

SECTION 1: Identification

1.1 Product identifier

Trade name Solar Flux® Type B
CAS number Not relevant (mixture).

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

Relevant identified uses Welding powder

1.3 Details of the supplier of the safety data sheet

Golden Empire Corporation / Solar Flux Telephone: +1 424 645 8845
CA 91372 Calabasas e-mail: eaw.solarflux@gmail.com
United States

e-mail (competent person) sdb@csb-online.de

Please do not use this e-mail address to ask for the latest safety data sheet. For this purpose contact Golden Empire Corporation / Solar Flux.

1.4 Emergency telephone number

As above or next toxicological information centre.

SECTION 2: Hazard(s) identification

2.1 Classification of the substance or mixture

Classification acc. to GHS

Classification				
Section	Hazard class	Category	Hazard class and category	Hazard statement
3.6	carcinogenicity	1A	Carc. 1A	H350
3.7	reproductive toxicity	1B	Repr. 1B	H360FD
3.9	specific target organ toxicity - repeated exposure	1+2	STOT RE 1+2	H372,H373
3.HH	health hazards not otherwise classified	1	HHNOS 1	-

for full text of abbreviations: see SECTION 16

The most important adverse physicochemical, human health and environmental effects

Delayed or immediate effects can be expected after short or long-term exposure.
Spillage and fire water can cause pollution of watercourses.

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2.2 Label elements

Labeling

Signal word danger

Pictograms

GHS08



Hazard statements

H350 May cause cancer.

H360FD May damage fertility. May damage the unborn child.

H372 Causes damage to organs through prolonged or repeated exposure.

H373 May cause damage to organs through prolonged or repeated exposure.

Precautionary statements

P201 Obtain special instructions before use.

P202 Do not handle until all safety precautions have been read and understood.

P260 Do not breathe dust.

P264 Wash thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P308+P313 IF exposed or concerned: Get medical advice/ attention.

P314 Get medical advice/attention if you feel unwell.

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

Supplemental hazard information

For professional users only.

Hazardous ingredients for labelling

manganese dioxide

quartz

boric acid

2.3 Other hazards

The product contains crystalline silicic acids in the form of cristobalite and quartz which, if inhaled, are harmful to health. However, the evaluation of scientific findings is controversial. Recent diagnostic possibilities have provided the certainty that silicosis (pneumoconiosis) is a consequence of heavy exposure to quartz dust. There is also evidence that silicotic people have an increased lung cancer risk.

Hazards not otherwise classified

Contact with acids liberates very toxic gas.

Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

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SECTION 3: Composition/information on ingredients

3.1 Substances

Not relevant (mixture).

3.2 Mixtures

Description of the mixture

Hazardous ingredients				
Name of substance	Identifier	Wt%	Classification acc. to GHS	Pictograms
quartz	CAS No 14808-60-7	10 - < 30	Carc. 1A / H350 STOT RE 1 / H372	
manganese dioxide	CAS No 1313-13-9	5 - < 10	Acute Tox. 4 / H302 Acute Tox. 4 / H332 STOT RE 2 / H373	
boric acid	CAS No 10043-35-3	1 - < 5	Repr. 1B / H360FD	
lithium fluoride	CAS No 7789-24-4	1 - < 5	Acute Tox. 4 / H302 Eye Irrit. 2A / H319	

The actual concentration is withheld as a trade secret.

SECTION 4: First-aid measures

4.1 Description of first-aid measures

General notes

Self-protection of the first aider.

Remove affected person from the danger area and lay down.

Take off immediately all contaminated clothing.

IF exposed or concerned: Get medical advice/attention.

Following inhalation

Provide fresh air.

Get medical advice/attention.

If breathing is irregular or stopped, immediately seek medical assistance and start first aid actions.

Following skin contact

After contact with skin, take off immediately all contaminated clothing, and wash immediately with plenty of water and soap.

Get medical advice/attention.

Following eye contact

Rinse cautiously with water for several minutes.

Remove contact lenses, if present and easy to do. Continue rinsing.

Get medical advice/attention.

Following ingestion

Rinse mouth. Do not induce vomiting.
Call a physician in any case.

Notes for the doctor

None.

4.2 Most important symptoms and effects, both acute and delayed

Varying degrees of pulmonary injury.

4.3 Indication of any immediate medical attention and special treatment needed

None.

SECTION 5: Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media

use metal fire powder to extinguish

Unsuitable extinguishing media

water

5.2 Special hazards arising from the substance or mixture

Hazardous decomposition products: Section 10.

Hazardous combustion products

metal oxide smoke, toxic

5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes.
Coordinate firefighting measures to the fire surroundings.
Do not allow firefighting water to enter drains or water courses.
Collect contaminated firefighting water separately.
Fight fire with normal precautions from a reasonable distance.

Special protective equipment for firefighters

chemical protection suit, self-contained breathing apparatus (SCBA)

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Follow emergency procedures such as the need to evacuate the danger area or to consult an expert.
Remove persons to safety.
Ventilate affected area.
Do not get in eyes, on skin, or on clothing.
Do not breathe dust.
Control of dust.

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Wearing of 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.

For emergency responders

Wear breathing apparatus if exposed to vapors/dust/aerosols/gases.

Warning and evacuating people in the neighborhood.

6.2 Environmental precautions

Knock down dust with water spray.

Keep away from drains, surface and ground water.

Retain contaminated washing water and dispose of it.

If substance has entered a water course or sewer, inform the responsible authority.

6.3 Methods and material for containment and cleaning up

Advice on how to contain a spill

Take up mechanically.

Advice on how to clean up a spill

Take up mechanically.

Collect spillage.

Other information relating to spills and releases

Place in appropriate containers for disposal.

Ventilate affected area.

6.4 Reference to other sections

Hazardous combustion products: see section 5.

Personal protective equipment: see section 8.

Incompatible materials: see section 10.

Disposal considerations: see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Obtain special instructions before use.

Measures to prevent fire as well as aerosol and dust generation

Use local and general ventilation.

Take precautionary measures against static discharge.

Only vacuum cleaners containing no ignition sources may be used for combustible dusts.

Use explosion-proof electrical/ventilating/lighting/equipment.

Use only non-sparking tools.

Specific notes/details

Layers, deposits and heaps of combustible dust must be considered, like any other source which can form a hazardous explosive atmosphere.

Dust deposits may accumulate on all deposition surfaces in a technical room.

Handling of incompatible substances or mixtures

Do not mix with acids.
Do not mix with alkali.
Do not mix with oxidizer

Measures to protect the environment

Avoid release to the environment.

Advice on general occupational hygiene

Do not eat, drink and smoke in work areas.
Wash hands after use.
Preventive skin protection (barrier creams/ointments) is recommended.
Remove contaminated clothing and protective equipment before entering eating areas.
Do not breathe dust.
Do not get in eyes, on skin, or on clothing.

7.2 Conditions for safe storage, including any incompatibilities

Explosive atmospheres

Only vacuum cleaners containing no ignition sources may be used for combustible dusts.

Flammability hazards

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Take precautionary measures against static discharge.
Ground/bond container and receiving equipment.

Incompatible substances or mixtures

Incompatible materials: see section 10.

Protect against external exposure, such as

heat

Consideration of other advice

Keep away from food, drink and animal feedingstuffs.

Ventilation requirements

Provision of sufficient ventilation.

Specific designs for storage rooms or vessels

Store locked up.
Store in a well-ventilated place. Keep container tightly closed.

Packaging compatibilities

Keep only in original container.

7.3 Specific end use(s)

No information available.

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SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limit values (Workplace Exposure Limits)							
Country	Name of agent	CAS No	Identifier	TWA [mg/m ³]	STEL [mg/m ³]	Notation	Source
CA	boric acid	10043-35-3	OEL (BC)	2	6	i	"BC Regulation"
CA	Wollastonite (Ca(SiO ₃))	13983-17-0	PEV/VEA	10		i, noAsb_less1Sil	Regulation OHS
CA	Wollastonite (Ca(SiO ₃))	13983-17-0	PEV/VEA	5		r, noAsb_less1Sil	Regulation OHS
CA	silica, crystalline - quartz	14808-60-7	PEV/VEA	0.1			Regulation OHS
CA	silica, crystalline - quartz	14808-60-7	OEL (BC)	0.025		r	"BC Regulation"
CA	silica, crystalline - quartz	14808-60-7	OEL (ON)	0.1		r	Regulation 833
CA	silica, crystalline - quartz	14808-60-7	OEL (AB)	0.025		r, particle	OHS Code
CA	manganese	7439-96-5	OEL (AB)	0.2			OHS Code
CA	manganese	7439-96-5	OEL (BC)	0.2			"BC Regulation"
CA	manganese	7439-96-5	OEL (ON)	0.2			Regulation 833
CA	manganese	7439-96-5	PEV/VEA	0.2		Mn, df	Regulation OHS
CA	manganese	7439-96-5	OEL (BC)	0.02		r	"BC Regulation"

Notation

df as dust and fumes

i inhalable fraction

Mn calculated as Mn (manganese)

noAsb_less1Sil contains no asbestos and less than 1% free crystalline silica

1Sil

particle as airborne particles

r respirable fraction

STEL short-term exposure limit: a limit value above which exposure should not occur and which is related to a 15-minute period (unless otherwise specified)

TWA time-weighted average (long-term exposure limit): measured or calculated in relation to a reference period of 8 hours time-weighted average (unless otherwise specified)

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Relevant DNELs of components of the mixture						
Name of substance	CAS No	End-point	Threshold level	Protection goal, route of exposure	Used in	Exposure time
manganese dioxide	1313-13-9	DNEL	0.06 mg/m ³	human, inhalatory	worker (industry)	chronic - systemic effects
manganese dioxide	1313-13-9	DNEL	0.004 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects
boric acid	10043-35-3	DNEL	8.3 mg/m ³	human, inhalatory	worker (industry)	chronic - systemic effects
boric acid	10043-35-3	DNEL	392 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects
lithium fluoride	7789-24-4	DNEL	10 mg/m ³	human, inhalatory	worker (industry)	chronic - systemic effects
lithium fluoride	7789-24-4	DNEL	44.8 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects

Relevant PNECs of components of the mixture				
Name of substance	CAS No	Endpoint	Threshold level	Environmental compartment
manganese dioxide	1313-13-9	PNEC	0 mg/l	freshwater
manganese dioxide	1313-13-9	PNEC	0 mg/l	marine water
manganese dioxide	1313-13-9	PNEC	100 mg/l	sewage treatment plant (STP)
manganese dioxide	1313-13-9	PNEC	0.037 mg/kg	freshwater sediment
manganese dioxide	1313-13-9	PNEC	0.004 mg/kg	marine sediment
manganese dioxide	1313-13-9	PNEC	0.028 mg/kg	soil
boric acid	10043-35-3	PNEC	2.9 mg/l	freshwater
boric acid	10043-35-3	PNEC	2.9 mg/l	marine water
boric acid	10043-35-3	PNEC	10 mg/l	sewage treatment plant (STP)
boric acid	10043-35-3	PNEC	5.7 mg/kg	soil
lithium fluoride	7789-24-4	PNEC	5.05 mg/l	freshwater
lithium fluoride	7789-24-4	PNEC	0.505 mg/l	marine water
lithium fluoride	7789-24-4	PNEC	85.78 mg/l	sewage treatment plant (STP)
lithium fluoride	7789-24-4	PNEC	25.05 mg/kg	freshwater sediment
lithium fluoride	7789-24-4	PNEC	2.505 mg/kg	marine sediment

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Relevant PNECs of components of the mixture				
Name of substance	CAS No	Endpoint	Threshold level	Environmental compartment
lithium fluoride	7789-24-4	PNEC	2.06 mg/kg	soil

8.2 Exposure controls

Appropriate engineering controls

General ventilation.

Individual protection measures (personal protective equipment)

Eye/face protection

Wear eye/face protection.

Hand protection

Protective gloves		
Material	Material thickness	Breakthrough times of the glove material
no information available	no information available	no information available

Wear suitable gloves.

Chemical protection gloves are suitable, which are tested according to EN 374.

Check leak-tightness/impermeability prior to use.

In the case of wanting to use the gloves again, clean them before taking off and air them well.

Other protection measures

Protective clothing for use against solid particulates.

Respiratory protection

In case of inadequate ventilation wear respiratory protection.

Particulate filter device (EN 143).

Environmental exposure controls

Use appropriate container to avoid environmental contamination.

Keep away from drains, surface and ground water.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

Physical state	solid
Form	powder
Color	dark grey
Odor	these information are not available

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Odor threshold these information are not available

Other safety parameters

pH (value) these information are not available

Melting point/freezing point these information are not available

Initial boiling point and boiling range 1,682 °C

Flash point not applicable

Evaporation rate these information are not available

Flammability (solid, gas) non-combustible

Explosion limits of dust clouds not determined

Vapor pressure these information are not available

Density 2.2 g/cm³ at 20 °C

Vapor density these information are not available

Relative density these information are not available

Solubility(ies)

Water solubility 42 mg/l
not miscible in any proportion

Partition coefficient

n-octanol/water (log KOW) these information are not available

Auto-ignition temperature not relevant
(Solid matter)

Decomposition temperature these information are not available

Viscosity

Kinematic viscosity not relevant
(solid matter)

Dynamic viscosity not relevant
(solid matter)

Explosive properties these information are not available

Oxidizing properties shall not be classified as oxidizing

9.2 Other information

None

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SECTION 10: Stability and reactivity

10.1 Reactivity

No information available.

10.2 Chemical stability

The material is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

10.3 Possibility of hazardous reactions

Contact with acids liberates very toxic gas.

10.4 Conditions to avoid

Take precautionary measures against static discharge.

10.5 Incompatible materials

acids, bases, oxidizers, aluminum, halogen

10.6 Hazardous decomposition products

Hazardous combustion products: see section 5.

Hydrogen fluoride (HF).

Metallic oxides containing heavy metals.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Classification procedure

If not otherwise specified the classification is based on:

Ingredients of the mixture (additivity formula).

Classification acc. to GHS

Acute toxicity

Acute toxicity estimate (ATE) of components of the mixture			
Name of substance	CAS No	Exposure route	ATE
manganese dioxide	1313-13-9	oral	500 mg/kg
manganese dioxide	1313-13-9	inhalation: dust/mist	1.5 mg/l/4h
lithium fluoride	7789-24-4	oral	706 mg/kg

Acute toxicity of components of the mixture							
Name of substance	CAS No	Exposure route	End-point	Value	Species	Method	Source
boric acid	10043-35-3	oral	LD50	>2,600 mg/kg	rat, male	OECD Guideline	ECHA

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Acute toxicity of components of the mixture							
Name of substance	CAS No	Exposure route	End-point	Value	Species	Method	Source
						401	
boric acid	10043-35-3	dermal	LD50	>2,000 mg/kg	rabbit	FIFRA (40 CFR 163)	ECHA
lithium fluoride	7789-24-4	oral	LD50	706 mg/kg	rat	OECD Guideline 401	ECHA
lithium fluoride	7789-24-4	inhalation: dust/mist	LC50	>15.57 mg/l/4h	rat	OECD Guideline 403	ECHA
lithium fluoride	7789-24-4	dermal	LD50	>2,000 mg/kg	rat	OECD Guideline 402	ECHA

Skin corrosion/irritation

Classification could not be established because:
Data are lacking, inconclusive, or conclusive but not sufficient for classification.

Serious eye damage/eye irritation

Classification could not be established because:
Data are lacking, inconclusive, or conclusive but not sufficient for classification.

Respiratory or skin sensitization

Skin sensitization

Classification could not be established because:
Data are lacking, inconclusive, or conclusive but not sufficient for classification.

Respiratory sensitization

Classification could not be established because:
Data are lacking, inconclusive, or conclusive but not sufficient for classification.

Germ cell mutagenicity

Classification could not be established because:
Data are lacking, inconclusive, or conclusive but not sufficient for classification.

Carcinogenicity

May cause cancer.

IARC Monographs

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IARC Monographs on the Evaluation of Carcinogenic Risks to Humans					
Name of substance	Name acc. to inventory	CAS No	Classification	Remarks	Number
Solar Flux® Type B	welding fumes		2A		

Legend

2A Probably carcinogenic to humans

National Toxicology Program (United States)

None of the ingredients are listed.

OSHA Carcinogens

None of the ingredients are listed.

Reproductive toxicity

May damage the unborn child.

May damage fertility.

Specific target organ toxicity - single exposure

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

Specific target organ toxicity - repeated exposure

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

Aspiration hazard

Shall not be classified as presenting an aspiration hazard.

SECTION 12: Ecological information

12.1 Toxicity

Aquatic toxicity (acute)

Test data are not available for the complete mixture.

Aquatic toxicity (acute) of components of the mixture

Name of substance	CAS No	Endpoint	Value	Species	Method	Source	Exposure time
manganese dioxide	1313-13-9	EC50	>0.073 mg/l	daphnia magna		ECHA	48 h
lithium fluoride	7789-24-4	EC50	132.4 mg/l	aquatic invertebrates		ECHA	48 h
lithium fluoride	7789-24-4	EC50	112 mg/l	algae (Desmod-esmus subspicatus)	OECD Guideline 201	ECHA	72 h

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Name of substance	CAS No	Endpoint	Value	Species	Method	Source	Exposure time
lithium fluoride	7789-24-4	ErC50	>400 mg/l	algae (Desmod-esmus sub-spicatus)	OECD Guideline 201	ECHA	72 h

Aquatic toxicity (chronic)

Test data are not available for the complete mixture.

Aquatic toxicity (chronic) of components of the mixture

Name of substance	CAS No	Endpoint	Value	Species	Method	Source	Exposure time
lithium fluoride	7789-24-4	NOEC	14.1 mg/l	daphnia magna		ECHA	21 d
lithium fluoride	7789-24-4	NOEC	4 mg/l	rainbow trout (Oncorhynchus mykiss)		ECHA	21 d
lithium fluoride	7789-24-4	NOEC	25 mg/l	algae (Desmod-esmus sub-spicatus)	OECD Guideline 201	ECHA	72 h
lithium fluoride	7789-24-4	LOEC	50 mg/l	algae (Desmod-esmus sub-spicatus)	OECD Guideline 201	ECHA	72 h
lithium fluoride	7789-24-4	growth rate (ErCx) 10%	80 mg/l	algae (Desmod-esmus sub-spicatus)	OECD Guideline 201	ECHA	72 h

12.2 Persistence and degradability

Biodegradation

Inorganic product, is not eliminable from water by means of biological cleaning processes.

Persistence

Data are not available.

12.3 Bioaccumulative potential

Test data are not available for the complete mixture.

Bioaccumulative potential of components of the mixture

Name of substance	CAS No	BCF	Log KOW
boric acid	10043-35-3		-1.09 (pH value: 7.5, 22 °C)

12.4 Mobility in soil

Data are not available.

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12.5 Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

12.6 Other adverse effects

Data are not available.

Remarks

Wassergefährdungsklasse, WGK (water hazard class): 3

SECTION 13: Disposal considerations

13.1 Waste treatment methods

This material and its container must be disposed of as hazardous waste.

Sewage disposal-relevant information

Do not empty into drains.

Waste treatment of containers/packages

Handle contaminated packages in the same way as the substance itself.

Remarks

Please consider the relevant national or regional provisions.

SECTION 14: Transport information

14.1	UN number	not subject to transport regulations
14.2	UN proper shipping name	-
14.3	Transport hazard class(es)	
	Class	-
14.4	Packing group	not assigned to a packing group
14.5	Environmental hazards	non-environmentally hazardous acc. to the dangerous goods regulations
14.6	Special precautions for user	
		There is no additional information.
14.7	Transport in bulk according to Annex II of MARPOL and the IBC Code	
		The cargo is not intended to be carried in bulk.
14.8	<u>Information for each of the UN Model Regulations</u>	
	Transport information National regulations Additional information (UN RTDG)	
		not assigned
	International Maritime Dangerous Goods Code (IMDG)	
		Not subject to IMDG.

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International Civil Aviation Organization (ICAO-IATA/DGR)

Not subject to ICAO-IATA.

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations specific for the product in question

National regulations (United States)

Clean Air Act

none of the ingredients are listed

VOC content

Regulated Volatile Organic Compounds (VOC-EPA): Regulated Volatile Organic Compounds (VOC-Cal ARB):

Industry or sector specific available guidance(s)

NPCA-HMIS® III

Hazardous Materials Identification System.
American Coatings Association.

Category	Rating	Description
Chronic	*	chronic (long-term) health effects may result from repeated overexposure
Health	0	no significant risk to health
Flammability	0	material that will not burn under typical fire conditions
Physical hazard	0	material that is normally stable, even under fire conditions, and will not react with water, polymerize, decompose, condense, or self-react. Non-explosive
Personal protection	-	

NFPA® 704

National Fire Protection Association: Standard System for the Identification of the Hazards of Materials for Emergency Response (United States).

Category	Degree of hazard	Description
Flammability	0	material that will not burn under typical fire conditions
Health	0	material that, under emergency conditions, would offer no hazard beyond that of ordinary combustible material
Instability	0	material that is normally stable, even under fire conditions
Special hazard		

National regulations (Canada)

Domestic Substances List (DSL)/Non-domestic Substances List (NDSL)

All ingredients are listed or exempt from listing.

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15.2 Chemical Safety Assessment

No Chemical Safety Assessment has been carried out for this mixture by the supplier.

SECTION 16: Other information, including date of preparation or last revision

Date of preparation: 2019-04-03

Date of last revision: 2020-01-15.

Abbreviations and acronyms

Abbr.	Descriptions of used abbreviations
"BC Regulation"	OHS Regulation: Section 5.48 (British Columbia)
Acute Tox.	Acute toxicity
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
Cal ARB	California Air Resources Board
Carc.	Carcinogenicity
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)
DGR	Dangerous Goods Regulations (see IATA/DGR)
DNEL	Derived No-Effect Level
EC50	Effective Concentration 50 %. The EC50 corresponds to the concentration of a tested substance causing 50 % changes in response (e.g. on growth) during a specified time interval
EPA	Environmental Protection Agency. An agency of the federal government of the United States charged with protecting human health and the environment
ErC50	≡ EC50: in this method, that concentration of test substance which results in a 50 % reduction in either growth (EbC50) or growth rate (ErC50) relative to the control
Eye Dam.	Seriously damaging to the eye
Eye Irrit.	Irritant to the eye
GHS	"Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations
IARC Mono-graphs	IARC Monographs on the Evaluation of Carcinogenic Risks to Humans
IATA	International Air Transport Association
IATA/DGR	Dangerous Goods Regulations (DGR) for the air transport (IATA)
ICAO	International Civil Aviation Organization
IMDG	International Maritime Dangerous Goods Code
LC50	Lethal Concentration 50%: the LC50 corresponds to the concentration of a tested substance causing 50 % lethality during a specified time interval
LD50	Lethal Dose 50 %: the LD50 corresponds to the dose of a tested substance causing 50 % lethality during a specified time interval

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Abbr.	Descriptions of used abbreviations
LOEC	Lowest Observed Effect Concentration
log KOW	n-Octanol/water
MARPOL	International Convention for the Prevention of Pollution from Ships (abbr. of "Marine Pollutant")
NOEC	No Observed Effect Concentration
NPCA-HMIS® III	National Paint and Coatings Association: Hazardous Materials Identification System - HMIS® III, Third Edition
OHS Code	Occupational Health and Safety Code: Occupational exposure limits for chemical substances (Alberta)
PBT	Persistent, Bioaccumulative and Toxic
PNEC	Predicted No-Effect Concentration
Regulation 833	R.R.O. 1990, Reg. 833: Control of exposure to biological or chemical agents (Ontario)
Regulation OHS	Regulation respecting occupational health and safety: Permissible exposure values for airborne contaminants (Quebec)
Repr.	Reproductive toxicity
STEL	Short-term exposure limit
STOT RE	Specific target organ toxicity - repeated exposure
TWA	Time-weighted average
VOC	Volatile Organic Compounds
vPvB	Very Persistent and very Bioaccumulative

Key literature references and sources for data

Hazardous Products Regulations (HPR).

UN Recommendations on the Transport of Dangerous Good.

International Maritime Dangerous Goods Code (IMDG).

Dangerous Goods Regulations (DGR) for the air transport (IATA).

Classification procedure

Physical and chemical properties.

Health hazards.

Environmental hazards.

The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

List of relevant phrases (code and full text as stated in chapter 2 and 3)

Code	Text
-	-
H302	Harmful if swallowed.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H350	May cause cancer.

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Code	Text
H360FD	May damage fertility. May damage the unborn child.
H372	Causes damage to organs through prolonged or repeated exposure.
H373	May cause damage to organs through prolonged or repeated exposure.

Responsible for the safety data sheet

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Disclaimer

This information is based upon the present state of our knowledge.
This SDS has been compiled and is solely intended for this product.

Dated: 4 February 2020