

# Design Report of Safety Data Sheet

Report No. :HGBZ2211TAH2 Issue date:2022/11/17	
<b>Product Name:</b>	Lithium ion Battery Module CM2800H
<b>Applicant:</b>	FOXESS CO., LTD.
<b>Supplier:</b>	FOXESS CO., LTD.
<b>Composition of the product:</b>	Ferrous Lithium Phosphate: 35%; Graphite: 18%; Aluminium: 15%; Copper: 7%; Ethyl methyl carbonate: 6%; Dimethyl carbonate: 6%; Ethylene carbonate: 6%; Polyethylene: 4%; Carbon: 1%; Poly(1,1-difluoroethylene): 1%; Polymerized Styrene Butadiene Rubber: 0.7%; Carboxymethylcellulose Sodium: 0.3%
<b>Warranty of Design:</b>	GLOBALLY HARMONIZED SYSTEM OF CLASSIFICATION AND LABELLING OF CHEMICALS (GHS) Ninth revised edition
<b>Design Result of SDS please see next page.</b>	
<b>Designer:</b>	江帆
<b>Auditor:</b>	李五
<b>Approver:</b>	戎霄
 <p>常州合規思遠產品安全技術服務有限公司                      Changzhou Hegui Siyuan Products Safety Technology Service Co., Ltd.</p>	

## Terms of the Using of the Report

1. According to the needs of the report, our company requires the client to provide true and complete samples and information.
2. Information from applicant is the key of this report, our company will not respond for the wrong of applicant.
3. If there is any change in the chemical information submitted by the client, this report will automatically become invalid.
4. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested.
5. This report will be effective only after it is signed by the inspector, approver and stamped by our company.
6. Our company guarantees the objectivity and fairness of this report, and carries out confidentiality obligations on business secrets such as business information, technical documents and so on.
7. This report does not consider the differences between countries and operators.
8. The partly duplicating of this report is prohibited without the written approver.
9. The report is invalid when anything of the following happens-illegal transfer, embezzlement, imposture, modification or tampering in any media form.
10. This report is valid before the implementation of the new version of the standard.

名称：常州合规思远产品安全技术有限公司（简称：合规化学）

Name: Changzhou Hegui Siyuan Products Safety Technology Service Co., Ltd. (CRchemical)

地址：江苏省常州市新北区太湖东路9号4幢1205室

Address: 4-1205, Creative Industries Park, No.9, East Taihu Road, Xinbei District, Changzhou, 213022, Jiangsu P.R.China.

网址|Web: [www.hgmsds.com](http://www.hgmsds.com)

电话|Tel: +86-519-8515 0306

邮箱|E-mail: [msds@hgmsds.com](mailto:msds@hgmsds.com)

## Safety Data Sheet

# Lithium ion Battery Module CM2800H

Version : V2.0.0.1

Report No. : HGBZ2211TAH2

Creation Date : 2022/11/17

Revision Date : 2022/11/17

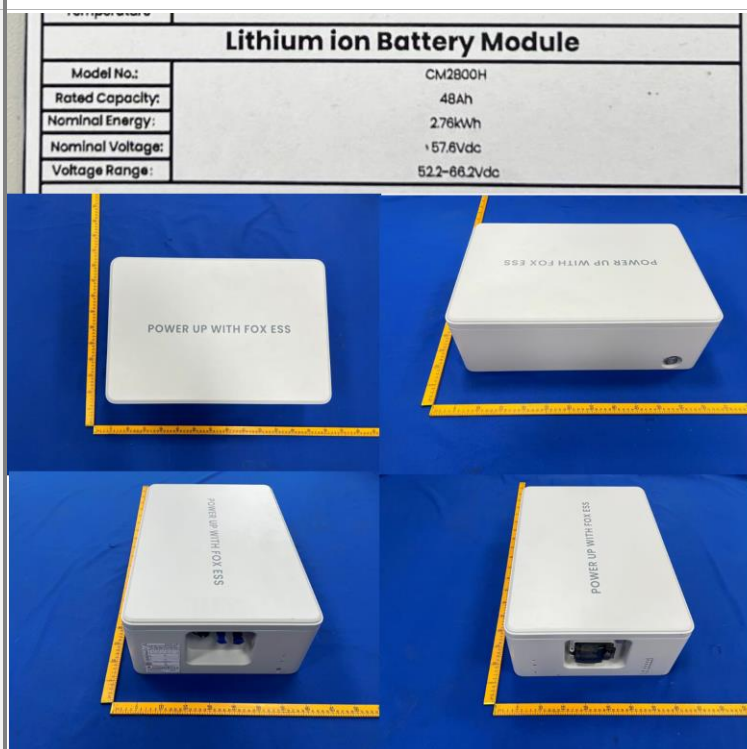
\*According to GHS (Ninth Revised Edition)

## 1 Identification

### Product identifier

Product Name	Lithium ion Battery Module CM2800H
Product Model	CM2800H
CAS No.	Not applicable
EC No.	Not applicable
Molecular Formula	Not applicable

### Product Picture



### Recommended use of the product and restrictions on use

Relevant identified uses	Please consult manufacturer.
Uses advised against	Please consult manufacturer.

### Details of the supplier

Applicant Name	FOXESS CO., LTD.
Applicant Address	No.939, Jinhai Third Road, New Airport Industry Area, Longwan District, Wenzhou, Zhejiang, China
Applicant Post Code	325025
Applicant Telephone	0510-68092998
Applicant Fax	—
Applicant E-mail	foxrd@fox-ess.com

<b>Supplier Name</b>	FOXESS CO., LTD.
<b>Supplier Address</b>	No.939, Jinhai Third Road, New Airport Industry Area, Longwan District, Wenzhou, Zhejiang, China
<b>Supplier Post Code</b>	325025
<b>Supplier Telephone</b>	0510-68092998
<b>Supplier Fax</b>	—
<b>Supplier E-mail</b>	foxrd@fox-ess.com

### | Emergency phone number

<b>Emergency phone number</b>	+90 530 200 27 22
-------------------------------	-------------------

## 2 Hazard(s) identification

### | Hazard classification according to GHS

The product meets the definition of "article". In the Globally Harmonized Chemical Classification and Labeling System (GHS), the "articles" defined by the US Occupational Safety and Health Administration "Hazard Communication Standard" (29 CFR 1910.1200) or similar definitions do not fall within the scope of this system. [Rev. 9 (2021) Part 1.3.2.1.1]. According to GHS system (9th revised edition), not classified as a hazardous chemical.

### | GHS Label elements

<b>Hazard pictograms</b>	Not applicable
<b>Signal word</b>	Not applicable

### | Hazard statements

<b>Hazard statements</b>	Not applicable
--------------------------	----------------

### | Precautionary statements

#### ◆ Prevention

<b>Prevention</b>	Not applicable
-------------------	----------------

#### ◆ Response

<b>Response</b>	Not applicable
-----------------	----------------

#### ◆ Storage

<b>Storage</b>	Not applicable
----------------	----------------

#### ◆ Disposal

<b>Disposal</b>	Not applicable
-----------------	----------------

### | Hazard description

#### ◆ Physical and chemical hazards

	When the outer enclosure and safety circuits have been compromised or have been significantly damaged, it is likely to contain substantial electrical charge and can cause injury or death if mishandled. Mechanical damage can lead to danger. Battery products exposed to high temperature conditions, may produce heat out of control, causing fire.
--	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

#### ◆ Health hazards

<b>Inhaled</b>	According to the material form, it is not the normal way of contacting.
<b>Ingestion</b>	Accidental ingestion of the product may be harmful to the health of the individual.
<b>Skin Contact</b>	No harm in general situation.

<b>Eye</b>	This product may cause temporary discomfort following direct contact with the eye.
◆ Environmental hazards	
	Please refer to 12th chapter of SDS.

### 3 Composition/information on ingredients

#### Substance/mixture

	Mixture
--	---------

Component	CAS No.	EC No.	Concentration (wt, %)
Ferrous Lithium Phosphate	15365-14-7	604-917-2	35
Graphite	7782-42-5	231-955-3	18
Aluminium	7429-90-5	231-072-3	15
Copper	7440-50-8	231-159-6	7
Ethyl methyl carbonate	623-53-0	613-014-2	6
Dimethyl carbonate	616-38-6	210-478-4	6
Ethylene carbonate	96-49-1	202-510-0	6
Polyethylene	9002-88-4	618-339-3	4
Carbon	7440-44-0	231-153-3	1
Poly(1,1-difluoroethylene)	24937-79-9	607-458-6	1
Polymerized Styrene Butadiene Rubber	9003-55-8	618-370-2	0.7
Carboxymethylcellulose Sodium	9004-32-4	618-378-6	0.3

### 4 First-aid measures

#### Description of first aid measures

<b>General advice</b>	Immediate medical attention is required. Show this safety data sheet (SDS) to the doctor in attendance.
<b>Eye contact</b>	Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician if feel uncomfortable.
<b>Skin contact</b>	No harm in general situation. First aid is not needed.
<b>Ingestion</b>	Never give anything by mouth to an unconscious person. Call a physician immediately.
<b>Inhalation</b>	Move victim into fresh air. If breathing is difficult, give oxygen and consult a physician immediately.
<b>Protecting of first-aiders</b>	Ensure that medical personnel are aware of the substance involved. Take precautions to protect themselves and prevent spread of contamination.

#### Most important symptoms/effects, acute and delayed

1	Please see section 11.
---	------------------------

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

1	Treat symptomatically.
2	Symptoms may be delayed.

## 5 Fire-fighting measures

### Extinguishing media

Suitable extinguishing media	Use extinguishing media suitable for surrounding area.
Unsuitable extinguishing media	There is no restriction on the type of extinguisher which may be used.

### Specific hazards arising from the substance or mixture

1	Development of hazardous combustion gases or vapor possible in the event of fire.
2	May expansion or decompose explosively when heated or involved in fire.

### Special protective equipment and precautions for fire-fighters

1	As in any fire, wear self-contained breathing apparatus ( MSHA/NIOSH approved or equivalent) and full protective gear.
2	Fight fire from a safe distance, with adequate cover.
3	Prevent fire extinguishing water from contaminating surface water or the ground water system.

## 6 Accidental release measures

### Personal precautions, protective equipment and emergency procedures

1	Ensure adequate ventilation. Remove all sources of ignition. Take precautionary measures against static discharges.
2	Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.
3	Use personal protective equipment, do not breathe dust/fume.

### Environmental precautions

1	Prevent further leakage or spillage if safe to do so.
2	Discharge into the environment must be avoided.

### Methods and materials for containment and cleaning up

1	Cut off the source of the leak as much as possible.
2	Keep leaks in a ventilated place.
3	Isolation of contaminated areas and restrictions on access.
4	It is recommended that emergency personnel wear dust masks.
5	Collect the spill with a clean shovel and place it in a clean, dry, loosely closed container and move the container away from the leak.
6	Adhered or collected material should be promptly disposed of, in accordance with appropriate laws and regulations.

## 7 Handling and storage

### Precautions for safe handling

1	Handling is performed in a well ventilated place.
2	Wear suitable protective equipment.
3	Avoid contact with skin and eyes.
4	Keep away from heat/sparks/open flames/ hot surfaces.

### Conditions for safe storage, including any incompatibilities

1	Keep containers tightly closed.
---	---------------------------------

2	Keep containers in a dry, cool and well-ventilated place.
3	Keep away from heat/sparks/open flames/hot surfaces.
4	Store away from incompatible materials and foodstuff containers.

## 8 Exposure controls/personal protection

### Control parameters

Component	Country/Region	Limit value - Eight hours		Limit value - Short term	
		ppm	mg/m <sup>3</sup>	ppm	mg/m <sup>3</sup>
Graphite	USA - OSHA		15		
	South Korea		2		
	Ireland		10		
	Germany (DFG)		4		
	Denmark		2.5		5
	Australia		3 (4)		
Aluminium	USA - OSHA		15		
	South Korea		10		
	Ireland		1		
	Germany (DFG)		4		
	Denmark		5		10
	Australia		10		
Copper	The Netherlands		0.1		
	Poland		0.2		
	Latvia		0.5		1
	Germany (DFG)		0.01		0.02

#### ◆ Biological limit values

<b>Biological limit values</b>	No relevant regulations
--------------------------------	-------------------------

#### ◆ Monitoring methods

1	EN 14042 Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents.
2	GBZ/T 300 series standard Determination of toxic substances in workplace air.

### Engineering controls

1	Ensure adequate ventilation, especially in confined areas.
2	Ensure that eyewash stations and safety showers are close to the workstation location.
3	Set up emergency exit and necessary risk-elimination area.
4	Handle in accordance with good industrial hygiene and safety practice.

### Personal protection equipment

<b>General requirement</b>	No special requirements, please see the description below.
<b>Eye protection</b>	In general situation, eye protection is not needed. In the production process, when

	contacting with vapour or dust, tightly fitting safety goggles.
<b>Hand protection</b>	In general situation, hand protection is not needed.
<b>Respiratory protection</b>	In general situation, respiratory protection is not needed. If exposure limits are exceeded or if irritation or other symptoms are experienced, wear dust proof mask or gas defence mask.
<b>Skin and body protection</b>	In general situation, skin and body protection are not needed.

## 9 Physical and chemical properties and safety characteristics

### Physical and chemical properties

<b>Physical state</b>	Solid (see picture for details)
<b>Colour</b>	White
<b>Odor</b>	No special odor
<b>Odor threshold</b>	No information available
<b>pH</b>	No information available
<b>Melting point/freezing point(°C)</b>	No information available
<b>Initial boiling point and boiling range(°C)</b>	No information available
<b>Flash point(Closed cup,°C)</b>	Not applicable
<b>Evaporation rate</b>	Not applicable
<b>Flammability</b>	Not flammable
<b>Upper/lower explosive limits[%(v/v)]</b>	Upper limit : No information available ; Lower limit : No information available
<b>Vapor pressure</b>	Not applicable
<b>Relative vapour density(Air = 1)</b>	Not applicable
<b>Relative density(Water=1)</b>	No information available
<b>Solubility</b>	Insoluble in water
<b>n-octanol/water partition coefficient</b>	No information available
<b>Auto-ignition temperature(°C)</b>	No information available
<b>Decomposition temperature(°C)</b>	No information available
<b>Kinematic viscosity</b>	Not applicable
<b>Particle characteristics</b>	No information available

## 10 Stability and reactivity

### Stability and reactivity

<b>Reactivity</b>	Contact with incompatible substances can cause decomposition or other chemical reactions.
<b>Chemical stability</b>	Stable under proper operation and storage conditions.
<b>Possibility of hazardous reactions</b>	No information available.
<b>Conditions to avoid</b>	Incompatible materials, heat, flame and spark.
<b>Incompatible materials</b>	Metal acetylide, halogen, interhalogen, halogen oxides, nitric acid, nitrous oxide, nitrates, nitrites, halogen oxyacid salts, chromates, permanganates, inorganic peroxides, metal oxides and peroxyformic acid. Oxidants, halogen, interhalogen



	and mercury. Halogen, interhalogen, strong oxidant, water and acids.
<b>Hazardous decomposition products</b>	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## 11 Toxicological information

### | Acute toxicity

Component	LD <sub>50</sub> (oral)	LD <sub>50</sub> (dermal)	LC <sub>50</sub> (inhalation,4h)
Dimethyl carbonate	13000mg/kg(Rat)	> 5000mg/kg(Rabbit)	No information available
Ethylene carbonate	10000mg/kg(Rat)	> 3000mg/kg(Rabbit)	No information available
Carboxymethylcellulose Sodium	27000mg/kg(Rat)	> 2000mg/kg(Rabbit)	> 5.8mg/L(Rat)

### | Carcinogenicity

Component	List of carcinogens by the IARC Monographs	Report on Carcinogens by NTP
Ferrous Lithium Phosphate	Not Listed	Not Listed
Graphite	Not Listed	Not Listed
Aluminium	Not Listed	Not Listed
Copper	Not Listed	Not Listed
Ethyl methyl carbonate	Not Listed	Not Listed
Dimethyl carbonate	Not Listed	Not Listed
Ethylene carbonate	Not Listed	Not Listed
Polyethylene	Category 3	Not Listed
Carbon	Not Listed	Not Listed
Poly(1,1-difluoroethylene)	Not Listed	Not Listed
Polymerized Styrene Butadiene Rubber	Category 3	Not Listed
Carboxymethylcellulose Sodium	Not Listed	Not Listed

### | Others

Lithium ion Battery Module CM2800H	
Skin corrosion/irritation	Based on available data, the classification criteria are not met
Serious eye damage/irritation	Based on available data, the classification criteria are not met
Skin sensitization	Based on available data, the classification criteria are not met
Respiratory sensitization	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
Germ cell mutagenicity	Based on available data, the classification criteria are not met
Reproductive toxicity(additional)	Based on available data, the classification criteria are not met

## 12 Ecological information

### Acute aquatic toxicity

Component	Fish	Crustaceans	Algae
<b>Ferrous Lithium Phosphate</b>	LC <sub>50</sub> : > 28mg/L (96h)(Fish)	EC <sub>50</sub> : > 28mg/L (48h)(Crustaceans)	No information available
<b>Copper</b>	LC <sub>50</sub> : 0.665mg/L (96h)(Fish)	EC <sub>50</sub> : 0.02mg/L (48h)(Crustaceans)	ErC <sub>50</sub> : 7.9mg/L (96h)(Algae)
<b>Ethyl methyl carbonate</b>	LC <sub>50</sub> : > 100mg/L (96h)(Fish)	EC <sub>50</sub> : > 100mg/L (48h)(Crustaceans)	No information available
<b>Dimethyl carbonate</b>	LC <sub>50</sub> : ≥ 100mg/L (96h)(Fish)	EC <sub>50</sub> : > 100mg/L (48h)(Crustaceans)	No information available
<b>Graphite</b>	LC <sub>50</sub> :100mg/L (96h)(Fish)	No information available	No information available
<b>Aluminium</b>	LC <sub>50</sub> : 1.55mg/L (96h)(Fish)	No information available	No information available
<b>Ethylene carbonate</b>	LC <sub>50</sub> : > 100mg/L (96h)(Fish)	EC <sub>50</sub> : > 100mg/L (48h)(Crustaceans)	No information available
<b>Carboxymethylcellulose Sodium</b>	No information available	EC <sub>50</sub> : 87.3mg/L (48h)(Crustaceans)	No information available

### Chronic aquatic toxicity

Chronic aquatic toxicity	No information available
--------------------------	--------------------------

### Persistence and degradability

Component	Persistence (water/soil)	Persistence (air)
<b>Graphite</b>	Low	Low
<b>Ethyl methyl carbonate</b>	High	High
<b>Ethylene carbonate</b>	High	High
<b>Polyethylene</b>	Low	Low

### Bioaccumulative potential

Component	Bioaccumulative potential	Comments
<b>Graphite</b>	Low	Log Kow=0.5294
<b>Ethyl methyl carbonate</b>	Low	Log Kow=0.7247
<b>Ethylene carbonate</b>	Low	Log Kow=-0.3388
<b>Polyethylene</b>	Low	Log Kow=1.2658

### Mobility in soil

Component	Mobility in soil	Soil Organic Carbon-Water Partitioning Coefficient (Koc)
<b>Graphite</b>	Low	23.74
<b>Ethyl methyl carbonate</b>	Low	15.22
<b>Ethylene carbonate</b>	Low	9.168
<b>Polyethylene</b>	Low	14.3

## Results of PBT and vPvB assessment

Component	Results of PBT and vPvB assessment [according to (EC) No 1907/2006]
Ferrous Lithium Phosphate	Not available
Graphite	Not applicable
Aluminium	Not applicable
Copper	Not applicable
Ethyl methyl carbonate	Not PBT/vPvB
Dimethyl carbonate	Not PBT/vPvB
Ethylene carbonate	Not PBT/vPvB
Polyethylene	Not available
Carbon	Not available
Poly(1,1-difluoroethylene)	Not available
Polymerized Styrene Butadiene Rubber	Not available
Carboxymethylcellulose Sodium	Not available


## 13 Disposal considerations

### Disposal considerations

Waste chemicals	Before disposal should refer to the relevant national and local laws and regulation. Recommend the use of incineration disposal.
Contaminated packaging	Containers may still present chemical hazard when empty. Keep away from hot and ignition source of fire. Return to supplier for recycling if possible.
Disposal recommendations	Refer to section waste chemicals and contaminated packaging.

## 14 Transport information

### Label

Transporting Label	
--------------------	-------------------------------------------------------------------------------------

### IMDG-CODE

UN number	3480
UN proper shipping name	LITHIUM ION BATTERIES (including lithium ion polymer batteries)
Transport hazard class	9
Transport subsidiary hazard class	None
Packing group	Packagings shall conform to the packing group II performance level
Marine pollutant ( Yes or no )	No

### ICAO/IATA-DGR

<b>UN number</b>	3480
<b>UN proper shipping name</b>	LITHIUM ION BATTERIES (including lithium ion polymer batteries)
<b>Transport hazard class</b>	9
<b>Transport subsidiary hazard class</b>	None
<b>Packing group</b>	Packagings shall conform to the packing group II performance level

**UN-ADR**

<b>UN number</b>	3480
<b>UN proper shipping name</b>	LITHIUM ION BATTERIES (including lithium ion polymer batteries)
<b>Transport hazard class</b>	9
<b>Transport subsidiary hazard class</b>	None
<b>Packing group</b>	Packagings shall conform to the packing group II performance level

**15** Regulatory information**International chemical inventory**

Component	EC inventory	TSCA	DSL	IECSC	NZIoC	PICCS	KECI	AIICS	ENCS
Ferrous Lithium Phosphate	×	√	√	√	×	×	√	×	√
Graphite	√	√	√	√	√	√	√	√	×
Aluminium	√	√	√	√	√	√	√	√	√
Copper	√	√	×	√	√	√	√	√	√
Ethyl methyl carbonate	×	√	×	√	×	√	√	×	√
Dimethyl carbonate	√	√	√	√	√	√	√	√	√
Ethylene carbonate	√	√	√	√	√	√	√	√	√
Polyethylene	×	√	√	√	√	√	√	√	√
Carbon	√	√	√	√	√	√	√	√	√
Poly(1,1-difluoroethylene)	×	√	√	√	√	√	√	√	√
Polymerized Styrene Butadiene Rubber	×	√	√	√	√	√	√	√	√
Carboxymethylcellulose Sodium	×	√	×	√	√	√	√	√	√

[EC inventory] European Inventory of Existing Commercial Chemical Substances

[TSCA] United States Toxic Substances Control Act Inventory

[DSL] Canadian Domestic Substances List

[IECSC] China Inventory of Existing Chemical Substances

[NZIoC] New Zealand Inventory of Chemicals

[PICCS] Philippines Inventory of Chemicals and Chemical Substances

[KECI] Korea Existing Chemicals Inventory

[AIICS] Australian. Inventory of Industrial Chemical (AIICS)

[ENCS] Japan Inventory of Existing &amp; New Chemical Substances

Note:

“√” Indicates that the substance included in the regulations.

“x” No data or not included in the regulations.

## 16 Other information

### Information on revision

Creation Date	2022/11/17
Revision Date	2022/11/17
Reason for revision	-

### Reference

- [1] IPCS: The International Chemical Safety Cards (ICSC), website: <http://www.ilo.org/dyn/icsc/showcard.home>.
- [2] IARC, website: <http://www.iarc.fr/>.
- [3] OECD: The Global Portal to Information on Chemical Substances, website: <https://www.echemportal.org/echemportal/substancesearch/index.action>.
- [4] CAMEO Chemicals, website: <http://cameochemicals.noaa.gov/search/simple>.
- [5] NLM: ChemIDplus, website: <http://chem.sis.nlm.nih.gov/chemidplus/chemidlite.jsp>.
- [6] EPA: Integrated Risk Information System, website: <http://cfpub.epa.gov/iris/>.
- [7] U.S. Department of Transportation: ERG, website: <http://www.phmsa.dot.gov/hazmat/library/erg>.
- [8] Germany GESTIS-database on hazard substance, website: <http://gestis-en.itrust.de/>.

### Abbreviations and acronyms

CAS	Chemical Abstracts Service	UN	The United Nations
PC-STEL	Short term exposure limit	OECD	Organization for Economic Co-operation and Development
PC-TWA	Time Weighted Average	IMDG-CODE	International Maritime Dangerous Goods CODE
MAC	Maximum Allowable Concentration	IARC	International Agency for Research on Cancer
DNEL	Derived No Effect Level	ICAO	International Civil Aviation Organization
PNEC	Predicted No Effect Concentration	IATA	International Air Transportation Association
NOEC	No Observed Effect Concentration	ACGIH	American Conference of Governmental Industrial Hygienists
LC <sub>50</sub>	Lethal Concentration 50%	NFPA	National Fire Protection Association
LD <sub>50</sub>	Lethal Dose 50%	NTP	National Toxicology Program
EC <sub>50</sub>	Effective Concentration 50%	PBT	Persistent, Bioaccumulative, Toxic
EC <sub>x</sub>	Effective Concentration X%	vPvB	very Persistent, very Bioaccumulative
P <sub>OW</sub>	Partition coefficient Octanol: Water	CMR	Carcinogens, mutagens or substances toxic to reproduction
BCF	Bioconcentration factor	RPE	Respiratory Protective Equipment
ED	Endocrine disruptor		

### Disclaimer

This Safety Data Sheet (SDS) was prepared according to UN GHS (the 9th revised edition). The data included was derived from international authoritative database and provided by the enterprise. Other information was based on the present state of our knowledge. We try to ensure the correctness of all information. However, due to the diversity of information sources and the limitations of our knowledge, this document is only for user's reference. Users should make their independent judgment of suitability of this information for their particular purposes. We do not assume responsibility for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product.