



# SAFETY DATA SHEET

## KM0 4

|        |         |    |   |
|--------|---------|----|---|
| REVIEW | 11.2024 | N. | 3 |
|--------|---------|----|---|

### 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND THE COMPANY/ENTERPRISE

#### 1.1 PRODUCT IDENTIFIER

| Trade name   | UFI                 |
|--------------|---------------------|
| <b>KM0 4</b> | TRA1-51DC-DA9A-43XF |

**1.2 RELEVANT IDENTIFIED USES OF THE SUBSTANCE OR MIXTURE AND USES ADVISED AGAINST**  
RELEVANT USE: CHEMICAL. LIQUID FOR ELECTRONIC CIGARETTES/PERSONAL VAPORIZERS.

Not recommended use: all other than relevant use.

10ml CONTENT

*PROHIBITED FROM SALE TO PERSONS UNDER 18 YEARS OF AGE.*

#### 1.3 INFORMATION ABOUT THE SUPPLIER OF THE SAFETY DATA SHEET

Company name: FLAVORS4YOU Ltd.

Legal and operational headquarters: via Don Sturzo 21/23, 20822 SEVESO (MB)

flavors4you@legalmail.it, Tel. 0239465995

P.I.V.A./ C.F. 12044560964

Administration: amministrazione@flavors4you.com

COMPETENT PERSON RESPONSIBLE FOR THE SAFETY DATA SHEET:

Eng. Renzo Cattaneo, email: renzo.cattaneo@flavors4you.com.

website: www.blendfeel.com

#### 1.4 EMERGENCY TELEPHONE NUMBER

Emergency telephone:

- Marco Marano, CAV "Children's Hospital Bambino Gesù" Dept. of Emergency and Acceptance DEA Rom  
Piazza Sant'Onofrio, 4, ZIP code 00165 TEL .06 68593726
- Anna Lepore, Az. Osp. Univ. Foggia, Foggia V.le Luigi Pinto, 1 CH. 71122 TEL. 800183459
- Romolo Villani, Az. Osp. "A. Cardarelli," Naples, Via A. Cardarelli, 9 zip code 80131, TEL. 081-5453333
- M. Caterina Grassi, CAV Policlinico "Umberto I," Rome V.le del Policlinico, 155, zip code 161 TEL. 06-49978000



- Alessandro Barelli, CAV Policlinico "A. Gemelli" Rome Largo Agostino Gemelli, 8 CH. 168 TEL. 06-3054343
- Francesco Gambassi, Az. Osp. "Careggi" U.O. Medical Toxicology, Florence Largo Brambilla, 3 zip code 50134 TEL. 055-7947819
- Carlo Locatelli, CAV National Center for Information Pavia Via Salvatore Maugeri, 10 zip code 27100 TEL. 0382-24444
- Franca Davanzo Niguarda Ca' Granda Hosp. Milan Piazza Ospedale Maggiore, 3, zip code 20162 TEL. 02-66101029
- Bacis Giuseppe Pope John XXII Hospital Company Bergamo, WHO Square, 1 ZIP CODE TEL. 800883300
- Giorgio Ricci Azienda Ospedaliera Integrata Verona, Verona Piazzale Aristide Stefani, 1 ZIP 37126 TEL. 800011858

## 2. IDENTIFICATION OF HAZARDS

### 2.1 CLASSIFICATION OF THE SUBSTANCE OR MIXTURE

#### Classification according to Regulation (EC) No. 1272/2008

##### Hazard class and category:

H302: NOCIVE IF INGERATED, ACUTE TOXICITY (ORAL) HAZARD CATEGORY 4

### 2.2 LABEL ELEMENTS

#### Classification according to Regulation (EC) No. 1272/2008

##### Warning:

WARNING

##### Hazard statement:

H302: HARMFUL IF SWALLOWED

##### Additional information:

None

##### Cautionary advice:

P270: DO NOT EAT, DRINK OR SMOKE DURING USE

P301+P312: IF INGESTION: CONTACT A POISON CENTER OR PHYSICIAN

P280: WEAR GLOVES



P501 DISPOSE OF THE PRODUCT IN ACCORDANCE WITH APPLICABLE LOCAL AND/OR



NATIONAL REGULATIONS

## Pictograms:

(GHS07)

## 2.3 OTHER HAZARDS

Information not available.

based on available data, the product does not contain PBT or vPvB substances in a percentage  $\geq 0.1\%$ .

The product does not contain substances with endocrine-disrupting properties in a concentration  $\geq 0.1\%$

## 3. COMPOSITION/INGREDIENT INFORMATION

### 3.2 MIXTURE

Contains:

| SUBSTANCE NAME.                                | CAS / EC            | CONCENTRATION % | Classification according to the Regulation (EC) No. 1272/2008 | Specific conc. Limits, M-factors and ATEs                  |
|------------------------------------------------|---------------------|-----------------|---------------------------------------------------------------|------------------------------------------------------------|
| GLYCERIN                                       | 56-81-5             | 45%<X<50%       | --                                                            | oral LD50 12600 mg/kg (rat), dermal LD50 50 mg/Kg (rabbit) |
| MONOPROPYLENE GLYCOL PROPANE-1,2-DIOL (E 1520) | 57-55-6 / 200-338-0 | 45%<X<50%       | --                                                            | dermal: ATE =2000.01 mg/kg bw-oral: ATE =22000 mg/kg bw    |
| L-MENTHOL                                      | 2216-51-5           | 0.4%<X<0.7%     | SKIN IRRITANT 2, H315                                         | --                                                         |



|          |                        |                       |                                                                                                                                                                                                                                                                                                              |                                                                                                     |
|----------|------------------------|-----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| NICOTINE | 54-11-5 /<br>200-193-3 | 0.3<N<0.5%,<br>4mg/mL | acute toxicity, category<br>2 H300 lethal by<br>ingestion; acute toxicity<br>2 H310 lethal in contact<br>with skin; acute toxicity<br>category 2 H330 lethal<br>if inhaled; H411<br>category 2, aquatic<br>chronic 2: toxic to<br>aquatic organisms with<br>long-term effects to the<br>aquatic environment. | LD50 ORAL<br>MICE:5mg/kg;<br>LD50 CUTANEOUS<br>rabbit: 70mg/kg;<br>LC50 INHALATION<br>RAT: 0.19mg/L |
|----------|------------------------|-----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|

#### **Substances with community workplace exposure limit**

MONOPROPYLENE GLYCOL propane-1,2-diol (E 1520), CAS 57-55-6; EC 200-338-0, dermal:  
ATE = 2000.01 mg/kg bw-oral: ATE =22000 mg/kg bw

#### **Substances that are endocrine disruptors according to Regulation (EU) 2017/2100 or Regulation (EU), 2018/605, greater than 0.1%**

The mixture contains no components considered to have endocrine disrupting properties

#### **Persistent, bioaccumulative and toxic or very persistent and very bioaccumulative substances greater than 0.1 percent:**

Not applicable

## **4. FIRST AID MEASURES**

### **4.1 DESCRIPTION OF FIRST AID MEASURES**

EYES: wash thoroughly with water.

SKIN CONTACT: Wash immediately and thoroughly with soap and water.

INHALATION: Take the subject outdoors and keep him or her at rest in a position conducive to breathing.

INGESTION: Contact a poison control center immediately. Do not induce vomiting or administer anything that is not expressly authorized by a physician.

### **4.2 MAIN SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED**

HARMFUL IF INGESTED

### **4.3 INDICATION OF ANY NEED FOR IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT**

Elementary rescue, decontamination, symptomatic treatment. Never give anything by mouth to unconscious people. Do not induce vomiting. If the person vomits, clear the airway. Keep the person in a comfortable position.



## **5. FIREFIGHTING MEASURES**

### **5.1 EXTINGUISHING MEDIA**

SUITABLE EXTINGUISHING MEDIA

Carbon dioxide, foam, CO<sub>2</sub> and water.

UNSUITABLE EXTINGUISHING MEDIA

None in particular.

### **5.2 SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE.**

Hazards due to exposure in case of fire.

Avoid breathing in the products of combustion.

### **5.3 RECOMMENDATIONS FOR FIREFIGHTERS**

Cool containers with jets of water to prevent decomposition of the product and the development of substances potentially hazardous to health. Always wear full fire protection equipment. Collect firefighting water that must not be discharged into the sewer system. Dispose of contaminated water used for extinguishing and fire residue according to applicable regulations.

Equipment. Protective helmet with visor, fireproof clothing, intervention gloves, overpressure mask with a facemask covering the entire face.

## **6. MEASURES IN CASE OF ACCIDENTAL RELEASE**

### **6.1 PERSONAL PRECAUTIONS PROTECTIVE EQUIPMENT AND PROCEDURES IN CASE OF EMERGENCY**

Eliminate any source of ignition or heat from the area where the leak occurred.

Wear appropriate PPE.

Move people to a safe place.

### **6.2 ENVIRONMENTAL PRECAUTIONS**

Prevent the product from entering sewers, surface water, groundwater and confined areas.

### **6.3 METHODS AND MATERIALS FOR CONTAINMENT AND REMEDIATION**

Absorb the spilled product with inert absorbent material (sand, vermiculite, etc.). provide sufficient ventilation of the place affected by the spill. Disposal of the contaminated material must be carried out in accordance with legal requirements.

### **6.4 REFERENCE TO OTHER SECTIONS**

See SECTIONS 8 and 13.

## **7. HANDLING AND STORAGE**

### **7.1 PRECAUTIONS FOR SAFE HANDLING**

- Avoid contact of the product with the eyes and skin
- Use suitable gloves (preferably made of elastic butyl rubber), protect eyes and face
- do not smoke
- Do not expose the product to flames and sparks or other potential ignition sources
- Do not subject to high temperatures during processing
- do not ingest



- Maintain good air circulation.
- during work do not eat or drink

## **7.2 CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES**

- store the containers in an upright position
- Avoid the possibility of bumps and/or falls
- keep in the original tightly closed container. do not use unlabeled or opened containers
- Store in a cool, well-ventilated place away from heat, open flames, sparks and other sources of ignition
- From direct exposure to the sun's rays
- do not use the empty containers
- keep under lock and key
- do not store together with flammable liquids

## **7.3 SPECIAL END USES**

No special use.

# **8. EXPOSURE/PERSONAL PROTECTION CONTROLS**

## **8.1 CONTROL PARAMETERS**

MONOPROPYLENE GLYCOLE propane-1,2-diol (E 1520), CAS 57-55-6, EC 200-338-0, LONG-TERM EXPOSURE LIMIT (AVERAGE REFERENCE PERIOD PONDERED OVER THE 8-HOUR TIME), 150ppm, 474 mg/m<sup>3</sup>, UK REFERENCE EH40 Oct 2007

MONOPROPYLENE GLYCOLE, CAS 57-55-6, EC 200-338-0, SHORT-TERM EXPOSURE LIMIT (REFERENCE PERIOD 15 MINUTES), ---ppm, ---mg/m<sup>3</sup>, REFERENCE UK EH40 Oct 2007

Nicotine; No. CAS: 54-11-5

Limit value type (country of origin): TWA (EC); Limit value: 0.5 mg/m<sup>3</sup> / 8 hour(s)

Limit value type (country of origin): TWA (EC); Limit value: 1.5 mg/m<sup>3</sup> / 15 min

## **8.2 EXPOSURE CONTROLS**

Wear only suitable, comfortable and clean protective clothing.

### **INDIVIDUAL PROTECTION MEASURES**

#### **EYE/FACE PROTECTION**

When handling the product, wear safety glasses with side protection (DIN EN 166)

#### **SKIN PROTECTION. HAND PROTECTION**

EN ISO 374-tested protective gloves should be worn.

Protective gloves should be chosen for each workplace depending on the concentration and type of harmful substances present. Material: elastic butyl rubber. Minimum thickness: 0.7 mm. Permeation time: 480 min.

#### **BODY PROTECTION**

Full protective coveralls. Wash contaminated clothing before reuse.

#### **RESPIRATORY PROTECTION**



If technical aspiration or ventilation is not possible, respirators should be used. The class of respiratory protection filter must absolutely be adapted to the maximum concentration of toxic substance (gas/vapor/aerosol/particles) that can be generated in treatment with the product. Apparatus for corpuscular filtration (EN 143).

#### THERMAL HAZARDS

There is no information available.

#### ENVIRONMENTAL EXPOSURE CONTROLS

There is no information available.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 INFORMATION ON PHYSICAL AND CHEMICAL PROPERTIES

Data on the basic physical-chemical properties of the mixture are not available; however, the physical-chemical parameters of the constituent substances are provided.

| FEATURES                                                       | GLYCERIN E422                      | PROPYLENE GLYCOL EP      | NICOTINE EP                           | AROMS                    |
|----------------------------------------------------------------|------------------------------------|--------------------------|---------------------------------------|--------------------------|
| <i>physical state</i>                                          | clear and colorless fluid          | liquid                   | <i>liquid</i>                         | liquid                   |
| <i>color</i>                                                   | Colorless to clear, apha color <10 | colorless apha color <10 | <i>colorless</i>                      | <i>characteristic</i>    |
| <i>smell</i>                                                   | odorless                           | odorless                 | <i>characteristic</i>                 | <i>characteristic</i>    |
| <i>melting/freezing point</i>                                  | <i>No data available</i>           | -59° C                   | -79°C                                 | <i>No data available</i> |
| <i>boiling point or initial boiling point or boiling range</i> | 290° C                             | 184° C                   | 243-248°C                             | >250°C                   |
| <i>flammability</i>                                            | 177° C                             | <i>No data available</i> | <i>No data available</i>              | <i>No data available</i> |
| <i>lower and upper explosive limit</i>                         | <i>No data available</i>           | <i>No data available</i> | <i>Lower 0.7 Vol-%; higher 4Vol-%</i> | <i>No data available</i> |
| <i>Flash point</i>                                             | 177° C                             | 103° C                   | 101°C                                 | <i>No data available</i> |
| <i>self-ignition temperature</i>                               | <i>No data available</i>           | <i>No data available</i> | 240°C                                 | <i>No data available</i> |
| <i>decomposition temperature</i>                               | <i>No data available</i>           | <i>No data available</i> | 247°C                                 | <i>No data available</i> |



| FEATURES                                                 | GLYCERIN E422                | PROPYLENE GLYCOL EP            | NICOTINE EP         | AROMS                                |
|----------------------------------------------------------|------------------------------|--------------------------------|---------------------|--------------------------------------|
| <i>ph</i>                                                | min 0.05ml<br>NaOH 0.1N/10ml | 6.4 (500gr/Kg,<br>20°C)        | 10,2                | No data available                    |
| <i>Kinematic viscosity</i>                               | No data available            | 43.43 mPas (25°C)              | No data available   | No data available                    |
| <i>solubility</i>                                        | soluble                      | completely soluble             | soluble             | Yes, in organic solvents and ethanol |
| <i>octanol/water partition coeff (logarithmic value)</i> | No data available            | No data available              | Log pow 1.17        | No data available                    |
| <i>vapour pressure</i>                                   | No data available            | 0.2 hPa                        | 0.06 hPa at 20°C    | No data available                    |
| <i>density and/or relative density</i>                   | 1.26kg/l                     | 1.04g/cm <sup>3</sup> (at 20°) | about 1kg/l at 20°C | > 0.90g/cm <sup>3</sup> (at 20°)     |
| <i>relative vapor density</i>                            | No data available            | No data available              | No data available   | No data available                    |
| <i>particle characteristics</i>                          | No data available            | No data available              | No data available   | No data available                    |

## 9.2 OTHER INFORMATION

None available.

## 10. STABILITY AND RESPONSIVENESS

### 10.1 REACTIVITY

There are no particular hazards with other substances and/or mixtures under normal conditions of use.

### 10.2 CHEMICAL STABILITY

Stable under normal conditions of use and storage.

### 10.3 POSSIBILITY OF DANGEROUS REACTIONS

under normal conditions of use and storage, no hazardous reactions are to be expected.

### 10.4 CONDITIONS TO AVOID

Avoid high temperatures.

Avoid high humidity and direct exposure to sunlight.

can ignite in contact with oxidizing mineral acids, elemental metals, nitrides, organic peroxides and hydroperoxides, oxidizing and reducing agents.

### 10.5 INCOMPATIBLE MATERIALS

Avoid contact with oxidizing agents, concentrated acids and alkalis.

### 10.6 HAZARDOUS DECOMPOSITION PRODUCTS





none.

## 11. TOXICOLOGICAL INFORMATION

### 11.1 INFORMATION ON HAZARD CLASSES DEFINED IN REGULATION (CE) NO 1272/2008.

#### H302: HARMFUL IF SWALLOWED

Oral ATE mix= 1428mg/kg

Dermal ATE mix=19995/kg

Inhalation ATE mix=54mg/L

The calculation method used for classification of the mixture is the one related to paragraph 3.1.3.6.1 of Regulation (EC) 1272/2008

No toxicological data are available on the mixture as such.

Therefore, the concentration of the individual substances should be kept in mind in order to assess the toxicological effects resulting from exposure to the mixture. Toxicological information regarding the main substances (taken individually) in the mixture is given below:

|                                                                    |                                                                                                                                                                                                                                                                             |                                                                                                                     |
|--------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|
| <b>NICOTINE EP<br/>updated to<br/>Regulation (EU)<br/>2017/776</b> | Acute toxicity, category 2 H300 lethal by ingestion;<br>acute toxicity 2 H310 lethal in contact with skin; acute toxicity category 2 H330 lethal if inhaled; H411 aquatic chronic category 2: toxic to aquatic organisms with long-term effects to the aquatic environment. | LD50 ORAL MICE: 5mg/kg;<br>ECHA.<br>LD50 CUTANEOUS rabbit:<br>70mg/kg ECHA<br>LC50 INHALATION RAT:<br>0.19mg/L ECHA |
|--------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|

Unless otherwise specified, the data required by Regulation 453/2010/EC below are intended to be N.A.

- skin corrosion/irritation

*nicotine only:*

Irritant effect: mild irritant, but not relevant to classification.

Irritant effect on eyes:

Method: OECD Guideline 437 (Bovine Corneal Opacity and Permeability Test Method for Identifying Ocular Corrosives and Severe Irritants).

Species: in vitro

Result: negative.



Bibliographic reference: ECHA Dossier.

Skin irritation: mild irritant, but not relevant for classification.

- Sensitizing effects:

*nicotine only:*

Method: OECD Guideline 429 (Skin Sensitisation: Local Lymph Node Assay).

Species: Mouse

Result: negative.

Bibliographic reference: ECHA Dossier.

- germ cell mutagenicity, carcinogenicity and reproductive toxicity. Based on the available data, the classification criteria are not met.

- specific target organ toxicity (STOT) - single exposure. There is no information available

- specific target organ toxicity (STOT) - repeated exposure

*nicotine only* NOAEL: 1.25 mg/kg (EFSA, 2009)

- hazard in case of aspiration. Based on available data, the classification criteria are not met.

## 11.2 INFORMATION ON OTHER HAZARDS

There is no information available.

## 12. ECOLOGICAL INFORMATION

### 12.1 TOXICITY.

Water toxicity

Acute toxicity (short-term) on fish

Parameter : LC50 ( Nicotine ; CAS No. : 54-11-5 )

Species : Oncorhynchus mykiss (Rainbow trout)

Interpretive parameters : Acute toxicity (short-term) on fish

Effective dose : 4 mg/l

Exposure time : 96 hour(s)

Acute (short-term) shellfish toxicity.

Parameter : EC50 ( Nicotine ; CAS No. : 54-11-5 )

Species : Daphnia pulex (water flea)

Interpretive parameters : Acute (short-term) crustacean toxicity.

Effective dose : 0.24 mg/l

Exposure time : 48 hour(s)

### 12.2 PERSISTENCE AND DEGRADABILITY

There is no information available.

### 12.3 Bioaccumulation potential

No data available

### 12.4 MOBILITY IN SOIL

There is no information available.

### 12.5 PBT AND VPvB ASSESSMENT RESULTS

This substance does not meet the PBT/vPvB criteria of the REACH regulation, Annex XIII.

### 12.6 ENDOCRINE INTERFERENCE PROPERTIES

There is no information available.

### 12.7 OTHER ADVERSE EFFECTS

There is no information available.



## **13. DISPOSAL CONSIDERATIONS**

### **13.1 WASTE TREATMENT METHODS**

Do not use the empty containers, which must be sent for disposal according to current regulations.

Packaging: do not disperse into the environment, recover if possible, send for disposal according to current regulations.

Product residues containing nicotine are to be considered hazardous waste. The container must therefore be disposed of in accordance with the law, as must the packaging if contaminated.

Send to approved disposal facilities or incineration under controlled conditions. Operate in accordance with current local and national regulations.

## **14. TRANSPORTATION INFORMATION**

### **14.1 ONU NUMBER OR ID NUMBER**

A 3144 LIQUID NICOTINE PREPARATION, N.O.S.

### **14.2 OFFICIAL ONU TRANSPORT DESIGNATION**

There is no information available.

### **14.3 TRANSPORT-RELATED HAZARD CLASSES**

ADR, IMDG, IATA, ADN, RID: HAZARD LABEL 6.1

### **14.4 PACKING GROUP**

III

### **14.5 ENVIRONMENTAL HAZARDS**

DANGEROUS TO THE ENVIRONMENT: NO

### **14.6 SPECIAL PRECAUTIONS FOR USERS**

See chapters 6 and 8

### **14.7 MARITIME TRANSPORT IN BULK IN ACCORDANCE WITH ACTS OF THE IMO**

There is no information available.

## **15. REGULATORY INFORMATION**

### **15.1 HEALTH, SAFETY AND ENVIRONMENTAL LAWS AND REGULATIONS SPECIFIC TO THE SUBSTANCE OR MIXTURE**

- EC REGULATION 1907/2006 REACH
- EC REGULATION 1272/2008 CLP
- LEGISLATIVE DECREE 12/01/2016, NO. 6 TRANSPOSITION OF DIRECTIVE 2014/40/EU ON THE APPROXIMATION OF THE LAWS, REGULATIONS AND ADMINISTRATIVE PROVISIONS OF THE MEMBER STATES CONCERNING THE MANUFACTURE, PRESENTATION AND SALE OF TOBACCO PRODUCTS AND RELATED PRODUCTS AND REPEALING DIRECTIVE 2001/37/EC. (16G00009)
- EC REGULATION NO. 878/2020

Workers exposed to this health-threatening chemical agent must undergo health surveillance carried out in accordance with the provisions of Article 41 of Legislative Decree 81/2008 unless the risk to



the safety and health of the worker has been assessed as insignificant in accordance with the provisions of Article 224 paragraph 2.

## 15.2 CHEMICAL SAFETY ASSESSMENT

A chemical safety assessment was not conducted for this mixture

## 16. OTHER INFORMATION

### DESCRIPTION OF HAZARD STATEMENTS H

H302: HARMFUL IF SWALLOWED

### DESCRIPTION OF CAUTIONARY ADVICE P

P270: DO NOT EAT, DRINK OR SMOKE DURING USE

P301+P312: IF INGESTION: CONTACT A POISON CENTER OR PHYSICIAN

P280: WEAR GLOVES

P501 DISPOSE OF THE PRODUCT IN ACCORDANCE WITH APPLICABLE LOCAL AND/OR NATIONAL REGULATIONS

### CHANGES FROM HEMI01:

- BREAKDOWN INTO SDS BY INDIVIDUAL PRODUCT

### CHANGES FROM REVISION 02:

MODIFY "IDENTIFIED USES," CAUTIONARY ADVICE IN SECTION 2.2, MODIFY SECTION 11.1, MODIFY SECTION 15

#### Abbreviations used:

DN - European Agreement Concerning the International Carriage of Dangerous Goods by Water; ADR - Agreement Concerning the International Carriage of Dangerous Goods by Road; AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for Testing of Materials; bw - Body weight; CMR - Carcinogenic, mutagenic or toxic to reproduction; DIN - Standard of the German Institute for Standardization; DSL - Domestic List of Substances (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency program; ENCS - Existing and new chemicals (Japan); ErCx - Concentration associated with x% response degree; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships Carrying Hazardous Chemicals in Bulk; IC50 - Half the concentration maximum inhibitory; ICAO - International Civil Aviation Organization; IECSC - China Inventory of Existing Chemical Substances; IMDG - International Maritime for the Transport of Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organization for Standardization; KECI - Korean Inventory of Existing Chemical Substances; LC50 - 50% lethal concentration for a test population; LD50 - 50% lethal dose for a test population (median lethal dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - not otherwise specified; NO(A)EC - Concentration with no observed (adverse) effects; NO(A)EL - Level with no observed (adverse) effects; NOELR - observed effects loading rate; NZIoC - New Zealand Inventory of Chemical Substances; OECD - Organization for Economic Cooperation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic Substance; PICCS - Inventory of Chemical Substances of the Philippines; (Q)SAR - (Quantitative) structure-activity relationships; REACH - Regulation (EC) No. 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorization and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substances Inventory; TECI - Inventory of Existing Chemical Substances in Thailand; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative.

### NOTE TO THE USER

The information in this sheet is based on the knowledge available to us as of the date of the latest release.  
The user must ensure the suitability and completeness of the information in relation to the specific use of the product.  
This document should not be construed as a guarantee of any specific product property.



Since the use of the product does not fall under our direct control, it is the user's obligation to comply on his or her own responsibility with current laws and regulations on hygiene and safety.

No responsibility is assumed for misuse.

Permission is granted to print an unlimited number of copies for internal use only.