

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Version 6.16

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GENERIC EU MSDS - NO COUNTRY SPECIFIC DATA - NO OEL DATA

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1 Product identifiers

Product name : Methanol

Product Number : 179957

Brand : SIGALD

Index-No. : 603-001-00-X

REACH No. : 01-2119433307-44-XXXX

CAS-No. : 67-56-1

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

Identified uses : Laboratory chemicals, Manufacture of substances

### 1.3

### 1.4 Emergency telephone

Emergency Phone # : 000 800 1007 141 (CHEMTREC)

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

|                                                                 |                                          |
|-----------------------------------------------------------------|------------------------------------------|
| Flammable liquids, (Category 2)                                 | H225: Highly flammable liquid and vapor. |
| Acute toxicity, (Category 3)                                    | H301: Toxic if swallowed.                |
| Acute toxicity, (Category 3)                                    | H331: Toxic if inhaled.                  |
| Acute toxicity, (Category 3)                                    | H311: Toxic in contact with skin.        |
| Specific target organ toxicity - single exposure, (Category 1), | H370: Causes damage to organs.           |

## 2.2 Label elements

### Labelling according Regulation (EC) No 1272/2008

#### Pictogram

|                                |                                                                                                          |
|--------------------------------|----------------------------------------------------------------------------------------------------------|
| Signal Word                    | Danger                                                                                                   |
| Hazard Statements              |                                                                                                          |
| H225                           | Highly flammable liquid and vapor.                                                                       |
| H301 + H311 + H331             | Toxic if swallowed, in contact with skin or if inhaled.                                                  |
| H370                           | Causes damage to organs (Eyes, Central nervous system).                                                  |
| Precautionary Statements       |                                                                                                          |
| P210                           | Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.           |
| P233                           | Keep container tightly closed.                                                                           |
| P280                           | Wear protective gloves/ protective clothing/ eye protection/ face protection.                            |
| P301 + P310                    | IF SWALLOWED: Immediately call a POISON CENTER/ doctor.                                                  |
| P303 + P361 + P353             | IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.             |
| P304 + P340 + P311             | IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor. |
| Supplemental Hazard Statements | none                                                                                                     |

### Reduced Labeling (<= 125 ml)

#### Pictogram

|                                |                                                                                                          |
|--------------------------------|----------------------------------------------------------------------------------------------------------|
| Signal Word                    | Danger                                                                                                   |
| Hazard Statements              |                                                                                                          |
| H370                           | Causes damage to organs.                                                                                 |
| H301 + H311 + H331             | Toxic if swallowed, in contact with skin or if inhaled.                                                  |
| Precautionary Statements       |                                                                                                          |
| P301 + P310                    | IF SWALLOWED: Immediately call a POISON CENTER/ doctor.                                                  |
| P304 + P340 + P311             | IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor. |
| Supplemental Hazard Statements | none                                                                                                     |

## 2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Ecological information:

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.

Toxicological information:

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.

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## SECTION 3: Composition/information on ingredients

### 3.1 Substances

Synonyms : Methyl alcohol

Formula : CH<sub>4</sub>O

Molecular weight : 32,04 g/mol

CAS-No. : 67-56-1

EC-No. : 200-659-6

Index-No. : 603-001-00-X

| Component       |              | Classification                                                                                                                                                     | Concentration |
|-----------------|--------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|
| <b>Methanol</b> |              |                                                                                                                                                                    |               |
| CAS-No.         | 67-56-1      | Flam. Liq. 2; Acute Tox. 3;<br>STOT SE 1; H225, H301,<br>H331, H311, H370<br>Concentration limits:<br>>= 10 %: STOT SE 1,<br>H370; 3 - < 10 %: STOT<br>SE 2, H371; | <= 100 %      |
| EC-No.          | 200-659-6    |                                                                                                                                                                    |               |
| Index-No.       | 603-001-00-X |                                                                                                                                                                    |               |

For the full text of the H-Statements mentioned in this Section, see Section 16.

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## SECTION 4: First aid measures

### 4.1 Description of first-aid measures

#### Notes to physician

Dizziness Drowsiness metabolic acidosis Blurred vision Seizures. Coma Blindness death

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

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

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

No data available

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## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

No data available

## 5.2 Special hazards arising from the substance or mixture

Carbon oxides  
Combustible.

## 5.3 Advice for firefighters

No data available

## 5.4 Further information

No data available

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## SECTION 6: Accidental release measures

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

For personal protection see section 8.

### 6.2 Environmental precautions

No data available

### 6.3 Methods and materials for containment and cleaning up

No data available

### 6.4 Reference to other sections

For disposal see section 13.

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## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

For precautions see section 2.2.

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

No data available

### 7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

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## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### Ingredients with workplace control parameters

#### Derived No Effect Level (DNEL)

| Application Area | Routes of exposure | Health effect              | Value        |
|------------------|--------------------|----------------------------|--------------|
| Workers          | Skin contact       | Long-term systemic effects | 40mg/kg BW/d |
| Consumers        | Skin contact       | Long-term systemic effects | 8mg/kg BW/d  |
| Consumers        | Ingestion          | Long-term systemic effects | 8mg/kg BW/d  |
| Workers          | Skin contact       | Acute systemic effects     | 40mg/kg BW/d |
| Consumers        | Skin contact       | Acute systemic effects     | 8mg/kg BW/d  |
| Consumers        | Ingestion          | Acute systemic effects     | 8mg/kg BW/d  |
| Workers          | Inhalation         | Acute systemic effects     | 260 mg/m3    |

|           |            |                            |                       |
|-----------|------------|----------------------------|-----------------------|
| Workers   | Inhalation | Acute local effects        | 260 mg/m <sup>3</sup> |
| Workers   | Inhalation | Long-term systemic effects | 260 mg/m <sup>3</sup> |
| Workers   | Inhalation | Long-term local effects    | 260 mg/m <sup>3</sup> |
| Consumers | Inhalation | Acute systemic effects     | 50 mg/m <sup>3</sup>  |
| Consumers | Inhalation | Acute local effects        | 50 mg/m <sup>3</sup>  |
| Consumers | Inhalation | Long-term systemic effects | 50 mg/m <sup>3</sup>  |
| Consumers | Inhalation | Long-term local effects    | 50 mg/m <sup>3</sup>  |

### **Predicted No Effect Concentration (PNEC)**

| Compartment                   | Value       |
|-------------------------------|-------------|
| Soil                          | 23,5 mg/kg  |
| Sea water                     | 15,4 mg/l   |
| Fresh water                   | 154 mg/l    |
| Fresh water sediment          | 570,4 mg/kg |
| Onsite sewage treatment plant | 100 mg/kg   |

## **8.2 Exposure controls**

### **Personal protective equipment**

#### **Skin protection**

This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN 16523-1 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: [www.kcl.de](http://www.kcl.de)).

Full contact

Material: butyl-rubber

Minimum layer thickness: 0,7 mm

Break through time: 480 min

Material tested: Butoject® (KCL 898)

This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN 16523-1 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: [www.kcl.de](http://www.kcl.de)).

Splash contact

Material: Viton®

Minimum layer thickness: 0,7 mm

Break through time: 120 min

Material tested: Vitoject® (KCL 890 / Aldrich Z677698, Size M)

#### **Control of environmental exposure**

Prevent product from entering drains.

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## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

- |                                                 |                                                                                                                      |
|-------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|
| a) Physical state                               | liquid                                                                                                               |
| b) Color                                        | colorless                                                                                                            |
| c) Odor                                         | characteristic                                                                                                       |
| d) Melting point/freezing point                 | Melting point/range: -98 °C - lit.                                                                                   |
| e) Initial boiling point and boiling range      | 64,7 °C - lit.                                                                                                       |
| f) Flammability (solid, gas)                    | No data available                                                                                                    |
| g) Upper/lower flammability or explosive limits | Upper explosion limit: 44 %(V)<br>Lower explosion limit: 5,5 %(V)                                                    |
| h) Flash point                                  | 9,7 °C - closed cup - Regulation (EC) No. 440/2008, Annex, A.9                                                       |
| i) Autoignition temperature                     | 455,0 °C<br>at 1.013 hPa - DIN 51794                                                                                 |
| j) Decomposition temperature                    | Distillable in an undecomposed state at normal pressure.                                                             |
| k) pH                                           | No data available                                                                                                    |
| l) Viscosity                                    | Viscosity, kinematic: 0,54 - 0,59 mm <sup>2</sup> /s at 20 °C<br>Viscosity, dynamic: > 0,544 - < 0,59 mPa.s at 25 °C |
| m) Water solubility                             | 1.000 g/l at 20 °C - completely miscible                                                                             |
| n) Partition coefficient: n-octanol/water       | log Pow: -0,77 at 25 °C - (HSDB), Bioaccumulation is not expected.                                                   |
| o) Vapor pressure                               | 169,27 hPa at 25 °C                                                                                                  |
| p) Density                                      | 0,791 g/cm <sup>3</sup> at 25 °C - lit.                                                                              |
| Relative density                                | 0,79 - 0,8 at 20 °C                                                                                                  |
| q) Relative vapor density                       | 1,11                                                                                                                 |
| r) Particle characteristics                     | No data available                                                                                                    |
| s) Explosive properties                         | No data available                                                                                                    |
| t) Oxidizing properties                         | none                                                                                                                 |

### 9.2 Other safety information

- |                         |         |
|-------------------------|---------|
| Minimum ignition energy | 0,14 mJ |
|-------------------------|---------|

|                        |           |
|------------------------|-----------|
| Conductivity           | < 1 µS/cm |
| Relative vapor density | 1,11      |

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## SECTION 10: Stability and reactivity

### 10.1 Reactivity

No data available

### 10.2 Chemical stability

No data available

### 10.3 Possibility of hazardous reactions

Risk of explosion with:

Oxidizing agents  
perchloric acid  
perchlorates  
salts of oxyhalogenic acids  
chromium(VI) oxide  
halogen oxides  
nitrogen oxides  
nonmetallic oxides  
chromosulfuric acid  
chlorates  
hydrides  
zinc diethyl  
halogens  
powdered magnesium  
hydrogen peroxide  
Nitric acid  
sulfuric acid  
permanganic acid  
sodium hypochlorite

Exothermic reaction with:

acid halides  
Acid anhydrides  
Reducing agents  
acids  
Bromine  
Chlorine  
Chloroform  
magnesium  
tetrachloromethane

Risk of ignition or formation of inflammable gases or vapours with:

Fluorine  
Oxides of phosphorus  
Raney-nickel

Generates dangerous gases or fumes in contact with:

Alkaline earth metals  
Alkali metals

#### **10.4 Conditions to avoid**

No data available

#### **10.5 Incompatible materials**

No data available

#### **10.6 Hazardous decomposition products**

In the event of fire: see section 5

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### **SECTION 11: Toxicological information**

#### **11.1 Information on toxicological effects**

##### **Acute toxicity**

Acute toxicity estimate Oral - 100,1 mg/kg

(Expert judgment)

Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

Symptoms: Nausea, Vomiting

Acute toxicity estimate Inhalation - 4 h - 3,1 mg/l - vapor

(Expert judgment)

Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

Symptoms: Irritation symptoms in the respiratory tract.

Acute toxicity estimate Dermal - 300,1 mg/kg

(Expert judgment)

Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

##### **Skin corrosion/irritation**

Skin - Rabbit

Result: No skin irritation

Remarks: (ECHA)

Remarks: Drying-out effect resulting in rough and chapped skin.

##### **Serious eye damage/eye irritation**

Eyes - Rabbit

Result: No eye irritation

Remarks: (ECHA)

##### **Respiratory or skin sensitization**

Sensitisation test: - Guinea pig

Result: negative

(OECD Test Guideline 406)

##### **Germ cell mutagenicity**

Based on available data the classification criteria are not met.

Test Type: Ames test

Test system: Salmonella typhimurium

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 471

Result: negative

Test Type: In vitro mammalian cell gene mutation test

Test system: Chinese hamster lung cells

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 476

Result: negative

Test Type: Micronucleus test

Species: Mouse

Cell type: Bone marrow

Application Route: Intraperitoneal injection

Method: OECD Test Guideline 474

Result: negative

### **Carcinogenicity**

Did not show carcinogenic effects in animal experiments.

### **Reproductive toxicity**

Based on available data the classification criteria are not met.

### **Specific target organ toxicity - single exposure**

Causes damage to organs. - Eyes, Central nervous system

Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

### **Specific target organ toxicity - repeated exposure**

No data available

### **Aspiration hazard**

No data available

## **11.2 Additional Information**

### **Endocrine disrupting properties**

#### **Product:**

Assessment

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.

RTECS: PC1400000

Acute effects: , Headache, Dizziness, Drowsiness, narcosis, Blindness, Impairment of vision, irritant effects, Nausea, Vomiting, agitation, spasms, inebriation, Coma  
Drying-out effect resulting in rough and chapped skin.

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Systemic effects:

acidosis  
drop in blood pressure  
agitation, spasms  
inebriation  
Dizziness  
Drowsiness  
Headache  
Impairment of vision  
Blindness  
narcosis  
Coma

Symptoms may be delayed.

Damage to:

Liver  
Kidney  
Cardiac  
Irreversible damage of the optical nerve.

Other dangerous properties can not be excluded.

This substance should be handled with particular care.

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## SECTION 12: Ecological information

### 12.1 Toxicity

|                                                     |                                                                                                                                  |
|-----------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|
| Toxicity to fish                                    | flow-through test LC50 - <i>Lepomis macrochirus</i> (Bluegill) - 15.400,0 mg/l - 96 h<br>(US-EPA)                                |
| Toxicity to daphnia and other aquatic invertebrates | semi-static test EC50 - <i>Daphnia magna</i> (Water flea) - 18.260 mg/l - 96 h<br>(OECD Test Guideline 202)                      |
| Toxicity to algae                                   | static test ErC50 - <i>Pseudokirchneriella subcapitata</i> (green algae) - ca. 22.000,0 mg/l - 96 h<br>(OECD Test Guideline 201) |
| Toxicity to bacteria                                | static test IC50 - activated sludge - > 1.000 mg/l - 3 h<br>(OECD Test Guideline 209)                                            |
| Toxicity to fish(Chronic toxicity)                  | NOEC - <i>Oryzias latipes</i> (Orange-red killifish) - 7.900 mg/l - 200 h<br>Remarks: (External MSDS)                            |

### 12.2 Persistence and degradability

|                                 |                                                                     |
|---------------------------------|---------------------------------------------------------------------|
| Biodegradability                | Result: 99 % - Readily biodegradable.<br>(OECD Test Guideline 301D) |
| Biochemical Oxygen Demand (BOD) | 600 - 1.120 mg/g<br>Remarks: (IUCLID)                               |
| Chemical Oxygen Demand (COD)    | 1.420 mg/g<br>Remarks: (IUCLID)                                     |
| Theoretical oxygen demand       | 1.500 mg/g<br>Remarks: (Lit.)                                       |
| Ratio BOD/ThBOD                 | 76 %<br>Remarks: Closed Bottle test(IUCLID)                         |

### 12.3 Bioaccumulative potential

|                 |                                      |
|-----------------|--------------------------------------|
| Bioaccumulation | <i>Cyprinus carpio</i> (Carp) - 72 d |
|-----------------|--------------------------------------|

at 20 °C - 5 mg/l(Methanol)

Bioconcentration factor (BCF): 1,0

#### 12.4 Mobility in soil

Will not adsorb on soil.

#### 12.5 Results of PBT and vPvB assessment

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

#### 12.6 Endocrine disrupting properties

##### Product:

Assessment

: 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

Additional ecological information      Avoid release to the environment.

Stability in water      at 19 °C 83 - 91 % - 72 h  
Remarks: Hydrolyzes on contact with water. Hydrolyzes readily.  
- 2,2 yr  
Remarks: reaction with hydroxyl radicals(IUCLID)

CHEMIKART

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### SECTION 13: Disposal considerations

#### 13.1 Waste treatment methods

No data available

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### SECTION 14: Transport information

#### 14.1 UN number

ADR/RID: 1230

IMDG: 1230

IATA: 1230

#### 14.2 UN proper shipping name

ADR/RID: METHANOL

IMDG: METHANOL

IATA: Methanol

#### 14.3 Transport hazard class(es)

ADR/RID: 3 (6.1)

IMDG: 3 (6.1)

IATA: 3 (6.1)

**14.4 Packaging group**

ADR/RID: II

IMDG: II

IATA: II

**14.5 Environmental hazards**

ADR/RID: no

IMDG Marine pollutant: no

IATA: no

**14.6 Special precautions for user**

Tunnel restriction code : (D/E)

Further information : No data available

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**SECTION 15: Regulatory information****15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006.

**Authorisations and/or restrictions on use**

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII) : Methanol

**National legislation**

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances. H2 ACUTE TOXIC

P5c FLAMMABLE LIQUIDS

22 Methanol

**15.2 Chemical Safety Assessment**

A Chemical Safety Assessment has been carried out for this substance.

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**SECTION 16: Other information****Full text of H-Statements**

|      |                                    |
|------|------------------------------------|
| H225 | Highly flammable liquid and vapor. |
| H301 | Toxic if swallowed.                |
| H311 | Toxic in contact with skin.        |
| H331 | Toxic if inhaled.                  |
| H370 | Causes damage to organs.           |

## Full text of other abbreviations

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; 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 Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of 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 - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation 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 Substance Inventory; TECI - Thailand Existing Chemicals Inventory; 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

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