

**SAFETY DATA SHEET**

according to Regulation (EC) No. 1907/2006

Version 8.4

Revision Date 29.07.2025

Print Date 28.10.2025

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 : Xylenes (histological grade)

Product Number : 534056  
Brand : SIGALD  
Index-No. : 601-022-00-9  
REACH No. : 01-2119488216-32-XXXX  
CAS-No. : 1330-20-7

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

Identified uses : Laboratory chemicals, Manufacture of substances

**1.3 Details of the supplier of the safety data sheet**

Company :

**1.4 Emergency telephone number**

Emergency Phone # : +(44)-870-8200418 (CHEMTREC (GB))  
+(353)-19014670 (CHEMTREC Ireland)  
001-803-017-9114 (CHEMTREC India)

**SECTION 2: Hazards identification****2.1 Classification of the substance or mixture**

|                                                                                    |                                                                          |
|------------------------------------------------------------------------------------|--------------------------------------------------------------------------|
| Flammable liquids, (Category 3)                                                    | H226: Flammable liquid and vapour.                                       |
| Acute toxicity, (Category 4)                                                       | H332: Harmful if inhaled.                                                |
| Acute toxicity, (Category 4)                                                       | H312: Harmful in contact with skin.                                      |
| Skin irritation, (Category 2)                                                      | H315: Causes skin irritation.                                            |
| Eye irritation, (Category 2)                                                       | H319: Causes serious eye irritation.                                     |
| Specific target organ toxicity - single exposure, (Category 3), Respiratory system | H335: May cause respiratory irritation.                                  |
| Specific target organ toxicity - repeated exposure, (Category 2),                  | H373: May cause damage to organs through prolonged or repeated exposure. |



hearing organs

Specific target organ toxicity - repeated exposure, (Category 2), Central nervous system, Liver, Kidney

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

Aspiration hazard, (Category 1)

H304: May be fatal if swallowed and enters airways.

Long-term (chronic) aquatic hazard, (Category 3)

H412: Harmful to aquatic life with long lasting effects.

## 2.2 Label elements

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

Pictogram



Signal Word

Danger

Hazard Statements

H226

Flammable liquid and vapour.

H304

May be fatal if swallowed and enters airways.

H312 + H332

Harmful in contact with skin or if inhaled.

H315

Causes skin irritation.

H319

Causes serious eye irritation.

H335

May cause respiratory irritation.

H373

May cause damage to organs (hearing organs) through prolonged or repeated exposure.

H373

May cause damage to organs (Central nervous system, Liver, Kidney) through prolonged or repeated exposure if inhaled.

H412

Harmful to aquatic life with long lasting effects.

Precautionary Statements

P210

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P273

Avoid release to the environment.

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.

P331

Do NOT induce vomiting.

Supplemental Hazard Statements

none

### Reduced Labelling (<= 125 ml)

Pictogram



Signal Word

Danger

Hazard Statements

H304

May be fatal if swallowed and enters airways.

H412

Harmful to aquatic life with long lasting effects.



#### Precautionary Statements

P301 + P310

IF SWALLOWED: Immediately call a POISON CENTER/ doctor.

P331

Do NOT induce vomiting.

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.

## SECTION 3: Composition/information on ingredients

### 3.1 Substances

Synonyms : Xylene mixture of isomers

Formula : C<sub>8</sub>H<sub>10</sub>  
Molecular weight : 106.17 g/mol  
CAS-No. : 1330-20-7  
EC-No. : 215-535-7  
Index-No. : 601-022-00-9

| Component           |              | Classification                                                                                                                                                                        | Concentration     |
|---------------------|--------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|
| <b>Xylene</b>       |              |                                                                                                                                                                                       |                   |
| CAS-No.             | 1330-20-7    | Flam. Liq. 3; Acute Tox. 4;<br>Skin Irrit. 2; Eye Irrit. 2;<br>STOT SE 3; STOT RE 2;<br>Asp. Tox. 1; Aquatic<br>Chronic 3; H226, H332,<br>H312, H315, H319, H335,<br>H373, H304, H412 | >= 70 - < 90<br>% |
| EC-No.              | 215-535-7    |                                                                                                                                                                                       |                   |
| Index-No.           | 601-022-00-9 |                                                                                                                                                                                       |                   |
| <b>ethylbenzene</b> |              |                                                                                                                                                                                       |                   |
| CAS-No.             | 100-41-4     | Flam. Liq. 2; Acute Tox. 4;<br>STOT RE 2; Asp. Tox. 1;<br>Aquatic Chronic 3; H225,<br>H332, H373, H304, H412                                                                          | >= 20 - < 25<br>% |
| EC-No.              | 202-849-4    |                                                                                                                                                                                       |                   |
| Index-No.           | 601-023-00-4 |                                                                                                                                                                                       |                   |

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

#### General advice

Show this safety data sheet to the doctor in attendance.

#### If inhaled

After inhalation: fresh air. Immediately call in physician. If breathing stops: immediately apply artificial respiration, if necessary also oxygen.

#### In case of skin contact

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower. Consult a physician.

#### In case of eye contact

After eye contact: rinse out with plenty of water. Call in ophthalmologist. Remove contact lenses.

#### If swallowed

After swallowing: caution if victim vomits. Risk of aspiration! Keep airways free. Pulmonary failure possible after aspiration of vomit. Call a physician immediately.

### 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

#### Suitable extinguishing media

Foam Carbon dioxide (CO<sub>2</sub>) Dry powder

#### Unsuitable extinguishing media

For this substance/mixture no limitations of extinguishing agents are given.

### 5.2 Special hazards arising from the substance or mixture

Carbon oxides

Combustible.

Vapours are heavier than air and may spread along floors.

Forms explosive mixtures with air at elevated temperatures.

Development of hazardous combustion gases or vapours possible in the event of fire.

### 5.3 Advice for firefighters

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

### 5.4 Further information

Remove container from danger zone and cool with water. Prevent fire extinguishing water from contaminating surface water or the ground water system.



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## SECTION 6: Accidental release measures

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

Advice for non-emergency personnel: Do not breathe vapours, aerosols. Avoid substance contact. Ensure adequate ventilation. Keep away from heat and sources of ignition. Evacuate the danger area, observe emergency procedures, consult an expert. For personal protection see section 8.

### 6.2 Environmental precautions

Do not let product enter drains. Risk of explosion.

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

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up carefully with liquid-absorbent material (e.g. Chemizorb®). Dispose of properly. Clean up affected area.

### 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

#### Advice on safe handling

Work under hood. Do not inhale substance/mixture. Avoid generation of vapours/aerosols.

#### Advice on protection against fire and explosion

Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharge.

#### Hygiene measures

Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance. For precautions see section 2.2.

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

#### Storage conditions

Keep container tightly closed in a dry and well-ventilated place. Keep away from heat and sources of ignition.

#### Storage class

Storage class (TRGS 510): 3: Flammable liquids

### 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**

### **8.2 Exposure controls**

#### **Personal protective equipment**

##### **Eye/face protection**

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Safety glasses

##### **Skin protection**

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

The selected protective gloves have to satisfy the specifications of Regulation (EU) 2016/425 and the standard EN 374 derived from it.

##### **Full contact**

Material: Fluorinated rubber

Minimum layer thickness: 0.7 mm

Break through time: 480 min

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

##### **Splash contact**

Material: Nitrile rubber

Minimum layer thickness: 0.4 mm

Break through time: 30 min

Material tested: Camatril® (KCL 730 / Aldrich Z677442, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

##### **Body Protection**

Flame retardant antistatic protective clothing.

##### **Respiratory protection**

required when vapours/aerosols are generated.

Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system.

Recommended Filter type: Filter type ABEK

The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented.

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

Do not let product enter drains. Risk of explosion.



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## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

|                                                 |                                                                                  |
|-------------------------------------------------|----------------------------------------------------------------------------------|
| a) Physical state                               | clear, liquid                                                                    |
| b) Color                                        | colourless                                                                       |
| c) Odor                                         | No data available                                                                |
| d) Melting point/freezing point                 | < 0 °C                                                                           |
| e) Initial boiling point and boiling range      | 136 - 140 °C at 1,013 hPa                                                        |
| f) Flammability (solid, gas)                    | No data available                                                                |
| g) Upper/lower flammability or explosive limits | Upper explosion limit: 7 %(V)<br>Lower explosion limit: 1.1 %(V)                 |
| h) Flash point                                  | 25 °C - closed cup                                                               |
| i) Autoignition temperature                     | No data available                                                                |
| j) Decomposition temperature                    | No data available                                                                |
| k) pH                                           | No data available                                                                |
| l) Viscosity                                    | Viscosity, kinematic: No data available<br>Viscosity, dynamic: No data available |
| m) Water solubility                             | No data available                                                                |
| n) Partition coefficient: n-octanol/water       | No data available                                                                |
| o) Vapor pressure                               | 24 hPa at 37.70 °C                                                               |
| p) Density                                      | 0.865 g/cm <sup>3</sup> at 20 °C                                                 |
| Relative density                                | No data available                                                                |
| q) Relative vapour density                      | No data available                                                                |
| r) Particle characteristics                     | No data available                                                                |
|                                                 |                                                                                  |
| s) Explosive properties                         | No data available                                                                |
| t) Oxidizing properties                         | No data available                                                                |

### 9.2 Other safety information

|                         |                    |
|-------------------------|--------------------|
| Relative vapour density | 3.67 - (Air = 1.0) |
|-------------------------|--------------------|



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## SECTION 10: Stability and reactivity

### 10.1 Reactivity

Vapour/air-mixtures are explosive at intense warming.

### 10.2 Chemical stability

The product is chemically stable under standard ambient conditions (room temperature) .

### 10.3 Possibility of hazardous reactions

No data available

### 10.4 Conditions to avoid

Heating.

### 10.5 Incompatible materials

Strong oxidizing agents

### 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

LD50 Oral - Rat - male - 3,523 mg/kg (Xylene)  
(EC Directive 92/69/EEC B.1 Acute Toxicity (Oral))

Remarks: (ECHA)

Acute toxicity estimate Inhalation - 4 h - 12 mg/l - vapour(Calculation method)

Acute toxicity estimate Inhalation - 11.1 mg/l - vapour  
(Xylene)

(Expert judgement)

Acute toxicity estimate Dermal - 1,376 mg/kg

(Calculation method)

Acute toxicity estimate Dermal - 1,100.1 mg/kg (Xylene)

(Expert judgement)

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

#### Skin corrosion/irritation

Skin - Rabbit (Xylene)

Result: Moderate skin irritation - 24 h

Remarks: (IUCLID)

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

After long-term exposure to the chemical:

Dermatitis

#### Serious eye damage/eye irritation

Eyes - Rabbit (Xylene)

Result: Causes serious eye irritation. - 24 h

Remarks: (RTECS)

#### Respiratory or skin sensitization

Local lymph node assay (LLNA) - Mouse (Xylene)

Result: negative

(OECD Test Guideline 429)

#### Germ cell mutagenicity

Test Type: Mutagenicity (mammal cell test): chromosome aberration.



(Xylene)

Test system: Chinese hamster ovary cells

Metabolic activation: with and without metabolic activation

Method: Regulation (EC) No. 440/2008, Annex, B.10

Result: negative

Remarks: (National Toxicology Program)

Test Type: Ames test

(Xylene)

Test system: Salmonella typhimurium

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 471

Result: negative

Test Type: sister chromatid exchange assay

(Xylene)

Test system: Chinese hamster ovary cells

Metabolic activation: with and without metabolic activation

Method: Regulation (EC) No. 440/2008, Annex, B.19

Result: negative

(Xylene)

Test Type: dominant lethal test

Species: Mouse

Method: OECD Test Guideline 478

Result: negative

### **Carcinogenicity**

No data available

### **Reproductive toxicity**

No data available

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

No data available

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

No data available

### **Aspiration hazard**

May be fatal if swallowed and enters airways.

## **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.

Repeated dose toxicity - Rat - male - Oral - 90 d - No observed adverse effect level - 100 mg/kg

(Xylene)

Repeated dose toxicity - Rat - female - Oral - 90 d - No observed adverse effect level - 200 mg/kg

(Xylene)



Blurred vision, Incoordination., Headache, Nausea, Vomiting, Dizziness, Weakness, anemia, Prolonged or repeated exposure to skin causes defatting and dermatitis. (Xylene)  
To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated. (Xylene)

After absorption:

(Xylene)

Systemic effects:

(Xylene)

Headache

somnolence

Dizziness

agitation, spasms

narcosis

inebriation

(Xylene)

Effect potentiated by: ethanol

(Xylene)

Other dangerous properties can not be excluded.

(Xylene)

Handle in accordance with good industrial hygiene and safety practice.

(Xylene)

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## SECTION 12: Ecological information

### 12.1 Toxicity

No data available

Toxicity to fish                      static test LC50 - *Oncorhynchus mykiss* (rainbow trout) - 2.60 mg/l  
- 96 h (Xylene)  
(OECD Test Guideline 203)

Toxicity to algae                      static test EC50 - *Pseudokirchneriella subcapitata* - 4.36 mg/l - 73 h  
(Xylene)  
(OECD Test Guideline 201)

Toxicity to bacteria                      Remarks: (ECHA)  
(Xylene)

Toxicity to  
fish(Chronic toxicity)                      flow-through test NOEC - *Oncorhynchus mykiss* (rainbow trout) - >  
1.3 mg/l - 56 d (Xylene)  
Remarks: (ECHA)

Toxicity to daphnia  
and other aquatic  
invertebrates(Chronic  
toxicity)                      NOEC - *Ceriodaphnia dubia* (water flea) - 0.96 mg/l - 7 d (Xylene)  
(US-EPA)

### 12.2 Persistence and degradability

No data available

### 12.3 Bioaccumulative potential

No data available

### 12.4 Mobility in soil

No data available

### 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

No data available

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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: 1307                      IMDG: 1307                      IATA: 1307

### 14.2 UN proper shipping name

ADR/RID: XYLENES  
IMDG: XYLENES  
IATA: Xylenes

### 14.3 Transport hazard class(es)

ADR/RID: 3                      IMDG: 3                      IATA: 3

### 14.4 Packaging group

ADR/RID: III                      IMDG: III                      IATA: III

### 14.5 Environmental hazards

ADR/RID: no                      IMDG Marine pollutant: no                      IATA: no

### 14.6 Special precautions for user

Further information : No data available

### 14.7 Maritime transport in bulk according to IMO instruments

Not applicable for product as supplied.

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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**

#### **National legislation**

Seveso III: Directive 2012/18/EU of the P5c FLAMMABLE LIQUIDS  
European Parliament and of the Council  
on the control of major-accident hazards  
involving dangerous substances.

### **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 vapour.                                |
| H226 | Flammable liquid and vapour.                                       |
| H304 | May be fatal if swallowed and enters airways.                      |
| H312 | Harmful in contact with skin.                                      |
| H315 | Causes skin irritation.                                            |
| H319 | Causes serious eye irritation.                                     |
| H332 | Harmful if inhaled.                                                |
| H335 | May cause respiratory irritation.                                  |
| H373 | May cause damage to organs through prolonged or repeated exposure. |
| H412 | Harmful to aquatic life with long lasting effects.                 |



## 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 Harmonised 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 Organisation; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardisation; 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 - Organisation 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

## Further information

The information is believed to be correct but is not exhaustive and will be used solely as a guideline, which is based on current knowledge of the chemical substance or mixture and is applicable to appropriate safety precautions for the product. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Corporation and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See [www.sigma-aldrich.com](http://www.sigma-aldrich.com) and/or the reverse side of invoice or packing slip for additional terms and conditions of sale.

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