

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Version 7.13 Revision Date 20.11.2024 Print Date 30.04.2025

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

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

**Product identifiers** 

Product name : EPA 8040A Phenol Calibration Mix

**Product Number** : 47899 Brand : Supelco

REACH No. : This product is a mixture. REACH Registration Number see

section 3.

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

Identified uses : Laboratory chemicals, Manufacture of substances

1.3

**Emergency telephone** 

## 1.4

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.

Eye irritation, (Category 2) H319: Causes serious eye irritation.

Specific target organ toxicity single exposure, (Category 3),

Central nervous system

H336: May cause drowsiness or dizziness.

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

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#### Pictogram

Signal Word Danger

Hazard Statements

H319 Highly flammable liquid and vapor.
Causes serious eye irritation.
May cause drowsiness or dizziness.

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.

P233 Keep container tightly closed.

P240 Ground and bond container and receiving equipment.

P241 Use explosion-proof electrical/ ventilating/ lighting/ equipment.

P273 Avoid release to the environment.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes.

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

rinsing.

Supplemental Hazard

Statements

none

## Reduced Labeling (<= 125 ml)

Pictogram

Signal Word Danger

**Hazard Statements** 

H412 Harmful to aquatic life with long lasting effects.

Precautionary Statements none Supplemental Hazard none

Statements

#### 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**

#### 3.2 Mixtures

Component Classification Concentra	ation
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2-Propanol			
CAS-No. EC-No. Index-No. Registration number	67-63-0 200-661-7 603-003-00-0 01-2119457558-25- XXXX	Flam. Liq. 2; Eye Irrit. 2; STOT SE 3; H225, H319, H336 Concentration limits: >= 20 %: STOT SE 3, H336;	>= 90 - <= 100 %
Pentachlorophenol		-	
CAS-No. EC-No. Index-No.	87-86-5 201-778-6 604-002-00-8 *	Acute Tox. 3; Acute Tox. 2; Acute Tox. 3; Skin Irrit. 2; Eye Irrit. 2; Carc. 2; STOT SE 3; Aquatic Acute 1; Aquatic Chronic 1; H301, H330, H311, H315, H319, H351, H335, H400, H410  M-Factor - Aquatic Acute: 10 - Aquatic Chronic: 1	>= 0,025 - < 0,1 %
	the Candidate List of Subs on (EC) No. 1907/2006 (R	stances of Very High Concern ( EACH)	SVHC)
CAS-No. EC-No. Index-No.	88-85-7 201-861-7 609-025-00-7	Acute Tox. 2; Acute Tox. 3; Skin Irrit. 2; 1; Skin Sens. 1; Repr. 1B; Aquatic Acute 1; Aquatic Chronic 1; H300, H311, H315, H318, H317, H360, H400, H410 M-Factor - Aquatic Acute: 10	>= 0,025 - < 0,1 %
2,3,4,6-Tetrachloro	phenol		
CAS-No. EC-No. Index-No.	58-90-2 200-402-8 604-013-00-8 *	Acute Tox. 3; Skin Irrit. 2; Eye Irrit. 2; Aquatic Acute 1; Aquatic Chronic 1; H301, H311, H315, H319, H400, H410 Concentration limits: >= 5 %: Eye Irrit. 2, H319; >= 5 %: Skin Irrit. 2, H315; M-Factor - Aquatic Acute: 10 M-Factor - Aquatic Chronic: 1	>= 0,025 - < 0,1 %

<sup>\*</sup>A registration number is not available for this substance as the substance or its use are exempted from registration according to Article 2 REACH Regulation (EC) No 1907/2006, or the annual tonnage does not require a registration.

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 material safety data sheet to the doctor in attendance.

#### If inhaled

After inhalation: fresh air. Call in physician.

#### In case of skin contact

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

#### In case of eye contact

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

#### If swallowed

After swallowing: immediately make victim drink water (two glasses at most). Consult a physician.

## 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

## **SECTION 5: Firefighting measures**

## 5.1 Extinguishing media

## Suitable extinguishing media

Foam Carbon dioxide (CO2) 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.

Pay attention to flashback.

Vapors are heavier than air and may spread along floors.

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

Forms explosive mixtures with air at ambient temperatures.

## **5.3** Advice for firefighters

In the event of fire, wear self-contained breathing apparatus.

#### 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 vapors, 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 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.

## **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**

Change contaminated clothing. Wash hands 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

required

#### **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 entrepeneur 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.

#### **SECTION 9: Physical and chemical properties**

## 9.1 Information on basic physical and chemical properties

a)	Physical state	liquid
b)	Color	No data available
c)	Odor	No data available
d)	Melting point/freezing point	No data available
e)	Initial boiling point and boiling range	No data available
f)	Flammability (solid, gas)	No data available
g)	Upper/lower flammability or explosive limits	No data available
h)	Flash point	12,0 °C - closed cup
i)	Autoignition	No data available

temperature

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j) Decomposition No data available

temperature

k) pH No data available

I) Viscosity Viscosity, kinematic: No data available

Viscosity, dynamic: No data available

m) Water solubilityNo data availablen) Partition coefficient:No data available

n-octanol/water

o) Vapor pressure No data available

p) Density No data available

Relative density No data available

q) Relative vapor No data available

density

r) Particle No data available

characteristics

s) Explosive properties Not classified as explosive.

t) Oxidizing properties none

## 9.2 Other safety information

No data available

## **SECTION 10: Stability and reactivity**

#### 10.1 Reactivity

Vapors may form explosive mixture with air.

## 10.2 Chemical stability

Reacts with air to form peroxides.

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

Warming.

#### 10.5 Incompatible materials

Strong oxidizing agents

## 10.6 Hazardous decomposition products

In the event of fire: see section 5

## **SECTION 11: Toxicological information**

#### 11.1 Information on toxicological effects

## **Mixture**

#### **Acute toxicity**

Oral: No data available

Symptoms: Possible symptoms:, mucosal irritations

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Dermal: No data available

## Skin corrosion/irritation

No data available

## Serious eye damage/eye irritation

Remarks: Mixture causes serious eye irritation.

## Respiratory or skin sensitization

No data available

## Germ cell mutagenicity

No data available

## Carcinogenicity

No data available

## Reproductive toxicity

No data available

## Specific target organ toxicity - single exposure

Mixture may cause drowsiness or dizziness.

## 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.

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

Other dangerous properties can not be excluded.

Handle in accordance with good industrial hygiene and safety practice.

## **Components**

## 2-Propanol

## **Acute toxicity**

LD50 Oral - Rat - 5.840 mg/kg (OECD Test Guideline 401) LC50 Inhalation - Rat - male and female - 4 h - 37,5 mg/l - vapor (OECD Test Guideline 403) LD50 Dermal - Rabbit - 12.800 mg/kg Remarks: (RTECS)

## Skin corrosion/irritation

Skin - Rabbit

Result: No skin irritation - 4 h

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(OECD Test Guideline 404)

## Serious eye damage/eye irritation

Eyes - Rabbit

Result: Eye irritation

(OECD Test Guideline 405)

Remarks: (Regulation (EC) No 1272/2008, Annex VI)

## Respiratory or skin sensitization

Buehler Test - Guinea pig

Result: negative

(OECD Test Guideline 406)

## Germ cell mutagenicity

Test Type: Ames test

Test system: Salmonella typhimurium

Result: negative

Test Type: In vitro mammalian cell gene mutation test

Test system: Chinese hamster ovary cells

Result: negative

Method: OECD Test Guideline 474

Species: Mouse - male and female - Bone marrow

Result: negative

## Carcinogenicity

This product is or contains a component that is not classifiable as to its carcinogenicity based on its IARC, ACGIH, NTP, or EPA classification.

## Reproductive toxicity

No data available

## Specific target organ toxicity - single exposure

Inhalation, Oral - May cause drowsiness or dizziness. - Central nervous system Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

Acute inhalation toxicity - Central nervous system

#### Specific target organ toxicity - repeated exposure

No data available

#### **Aspiration hazard**

No data available

## **Pentachlorophenol**

#### Acute toxicity

LD50 Oral - Rat - 27 mg/kg

Remarks: Vascular:BP elevation not charactertized in autonomic section.

Endocrine: Hyperglycemia.

Nutritional and Gross Metabolic: Changes in: Body temperature increase.

LC50 Inhalation - 4 h - 0,051 mg/l - dust/mist LC50 Inhalation - Rat - 355 mg/m3 - dust/mist

Remarks: Behavioral: Excitement.

Behavioral: Muscle contraction or spasticity. Lungs, Thorax, or Respiration: Dyspnea.

Acute toxicity estimate Inhalation - 0,051 mg/l - dust/mist

(ATE value derived from LD50/LC50 value)

LD50 Dermal - Rat - 96,0 mg/kg Remarks: Behavioral:Excitement. Behavioral: Muscle contraction or spasticity. Lungs, Thorax, or Respiration: Dyspnea.

#### Skin corrosion/irritation

Skin - Rabbit

Result: Open irritation test - 24,00 h

## Serious eye damage/eye irritation

Eyes - Rabbit

Result: Mild eye irritation - 24,00 h

## Respiratory or skin sensitization

No data available

## Germ cell mutagenicity

No data available

## Carcinogenicity

The evidence for carcinogenicity of pentachlorophenol (PCP) is based on assays that utilized less than pure PCP. Contaminants of PCP include: tri- or tetra- chlorophenol, hexachlorobenzene, polychlorinated dibenzo-p-dioxins, or polychlorinated dibenzofurans. Indications are that positive evidence for carcinogenicity is from the contaminant(s) and not the PCP. This product is or contains a component that has been reported to be possibly carcinogenic based on its IARC, ACGIH, NTP, or EPA classification.

Limited evidence of carcinogenicity in animal studies

## **Reproductive toxicity**

Overexposure may cause reproductive disorder(s) based on tests with laboratory animals.

## Specific target organ toxicity - single exposure

May cause respiratory irritation.

## Specific target organ toxicity - repeated exposure

No data available

## **Aspiration hazard**

No data available

#### **Dinoseb**

#### **Acute toxicity**

LD50 Oral - Rat - male and female - 27 mg/kg (OECD Test Guideline 401)
Inhalation: No data available
LD50 Dermal - Rat - male and female - 217,5 mg/kg (OECD Test Guideline 402)

## Skin corrosion/irritation

Skin - EPISKIN Human Skin Model Test Result: Irritating to skin. - 15 min (OECD Test Guideline 439)

#### Serious eye damage/eye irritation

Eyes - Rabbit Result: Corrosive (OECD Test Guideline 405)

## Respiratory or skin sensitization

Maximization Test - Guinea pig

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May cause allergic skin reaction. (OECD Test Guideline 406)

## **Germ cell mutagenicity**

No data available Test Type: Ames test

Test system: S. typhimurium

Result: negative

Method: OECD Test Guideline 474 Species: Mouse - male and female

Result: negative

Carcinogenicity

No data available

## **Reproductive toxicity**

Presumed human reproductive toxicant

## Specific target organ toxicity - single exposure

No data available

## Specific target organ toxicity - repeated exposure

No data available

## **Aspiration hazard**

No data available

## 2,3,4,6-Tetrachlorophenol

## **Acute toxicity**

LD50 Oral - Rat - 140 mg/kg

Remarks: (RTECS)

Inhalation: No data available

LD50 Dermal - Rabbit - 250 mg/kg

Remarks: (RTECS)

#### Skin corrosion/irritation

Remarks: Causes skin irritation.

(Regulation (EC) No 1272/2008, Annex VI)

#### Serious eye damage/eye irritation

Remarks: Causes serious eye irritation. (Regulation (EC) No 1272/2008, Annex VI)

#### Respiratory or skin sensitization

No data available

## Germ cell mutagenicity

No data available Test Type: Hamster Test system: Lungs

Remarks: Cytogenetic analysis

Test Type: Hamster Test system: Lungs

Remarks: Mutation in mammalian somatic cells.

## Carcinogenicity

This product is or contains a component that has been reported to be possibly carcinogenic based on its IARC, ACGIH, NTP, or EPA classification.

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## 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**

No data available

## **SECTION 12: Ecological information**

## 12.1 Toxicity

#### **Mixture**

No data available

## 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

## **Components**

## 2-Propanol

Toxicity to fish flow-through test LC50 - Pimephales promelas (fathead

minnow) - 9.640 mg/l - 96 h (OECD Test Guideline 203)

Toxicity to daphnia and other aquatic invertebrates

EC50 - Daphnia magna (Water flea) - 13.299 mg/l - 48 h

ther aquatic Remarks: (IUCLID)

Toxicity to algae IC50 - Desmodesmus subspicatus (green algae) - > 1.000 mg/l

- 72 h

Remarks: (IUCLID)

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Toxicity to bacteria EC5 - Pseudomonas putida - 1.050 mg/l - 16 h

Remarks: (Lit.)

**Pentachlorophenol** 

Toxicity to fish LC50 - Cyprinodon variegatus (sheepshead minnow) - 0,16 -

0,5 mg/l - 96,0 h

LC50 - Carassius auratus (goldfish) - 0,16 - 0,38 mg/l - 96,0 h LC50 - Oncorhynchus mykiss (rainbow trout) - 0,075 mg/l -

96.0 h

NOEC - other fish - 0,01 mg/l - 24,0 h

LOEC - other fish - 0,1 mg/l - 24,0 h

Toxicity to daphnia and other aquatic invertebrates

EC50 - Daphnia magna (Water flea) - 0,30 - 1,30 mg/l - 48 h

Toxicity to algae EC50 - Chlorella vulgaris (Fresh water algae) - 10,30 mg/l - 96

h

Growth inhibition EC50 - Scenedesmus quadricauda (Green

algae) - 0,08 mg/l - 96 h

Toxicity to fish(Chronic toxicity)

Growth inhibition NOEC - Pimephales promelas (fathead

minnow) - 0,056 mg/l - 28 d

Growth inhibition LOEC - Pimephales promelas (fathead

minnow) - 0,056 mg/l - 28 d

Toxicity to daphnia and other aquatic invertebrates(Chronic

Growth inhibition LOEC - Daphnia magna (Water flea) - 0,56

mg/l - 21 d

**Dinoseb** 

toxicity)

Toxicity to fish static test LC50 - Pimephales promelas (fathead minnow) -

0,17 mg/l - 96 h

Toxicity to daphnia and other aquatic invertebrates

mortality EC50 - Daphnia magna (Water flea) - 0,24 mg/l - 48

h

Toxicity to algae Growth inhibition EC50 - Scenedesmus capricornutum (fresh

water algae) - 0,74 mg/l - 72 h (OECD Test Guideline 201)

Growth inhibition NOEC - Scenedesmus capricornutum (fresh

water algae) - 0,03 mg/l - 72 h (OECD Test Guideline 201)

Toxicity to bacteria Respiration inhibition EC50 - Sludge Treatment - 130 mg/l - 3

h

(OECD Test Guideline 209)

Toxicity to mortality NOEC - Pimephales promelas (fathead minnow) -

fish(Chronic toxicity) 0,0145 - 0,0485 mg/l - 64 d

2,3,4,6-Tetrachlorophenol

Toxicity to fish LC50 - Oncorhynchus mykiss (rainbow trout) - 0,29 - 0,38 mg/l

- 96,0 h

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Remarks: (ECOTOX Database)

Toxicity to daphnia

and other aquatic invertebrates

LC50 - Daphnia magna (Water flea) - 0,09 mg/l - 48 h

Remarks: (ECOTOX Database)

Toxicity to daphnia and other aquatic

mortality NOEC - Daphnia magna (Water flea) - 0.25 mg/l - 21

d

invertebrates(Chronic Remarks: (ECOTOX Database)

toxicity)

## **SECTION 13: Disposal considerations**

#### 13.1 Waste treatment methods

No data available

## **SECTION 14: Transport information**

14.1 UN number

ADR/RID: 1219 IMDG: 1219 IATA: 1219

14.2 UN proper shipping name

ADR/RID: ISOPROPANOL, SOLUTION IMDG: ISOPROPANOL, SOLUTION IATA: Isopropanol, SOLUTION

14.3 Transport hazard class(es)

ADR/RID: 3 IMDG: 3 IATA: 3

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

#### **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

Regulation (EU) 2019/1021 on persistent organic : Pentachlorophenol pollutants (recast)

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## **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.

## Other regulations

Take note of Dir 94/33/EC on the protection of young people at work.

## **15.2 Chemical Safety Assessment**

For this product a chemical safety assessment was not carried out

## **SECTION 16: Other information**

## **Full text of H-Statements**

H225 H300	Highly flammable liquid and vapor. Fatal if swallowed.
H301	Toxic if swallowed.
H311	Toxic in contact with skin.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H330	Fatal if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H351	Suspected of causing cancer.
H360	May damage fertility or the unborn child.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
EUH044	Risk of explosion if heated under confinement.

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#### 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

Classification of the	e mixture	Classification procedure:
Flam. Liq.2	H225	Based on product data or assessment
Eye Irrit.2	H319	Calculation method
STOT SE3	H336	Calculation method
Aquatic Chronic3	H412	Calculation method

## **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 and/or the reverse side of invoice or packing slip for additional terms and conditions of sale.

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