

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Version 6.12

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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 : EPA 8270 Organophosphorus Pesticides Mix

Product Number : 48469

Brand : Supelco

REACH No. : This product is a mixture. REACH Registration Number see section 3.

### 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 2) H330: Fatal if inhaled.

Acute toxicity, (Category 3) H311: Toxic in contact with skin.

Skin irritation, (Category 2) H315: Causes skin irritation.

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

Reproductive toxicity, (Category 2) H361f: Suspected of damaging fertility.

Specific target organ toxicity - single exposure, (Category 3), Central nervous system	H336: May cause drowsiness or dizziness.
Specific target organ toxicity - repeated exposure, (Category 1), Nervous system	H372: Causes damage to organs through prolonged or repeated exposure if inhaled.
Aspiration hazard, (Category 1)	H304: May be fatal if swallowed and enters airways.
Short-term (acute) aquatic hazard, (Category 1)	H400: Very toxic to aquatic life.
Long-term (chronic) aquatic hazard, (Category 1)	H410: Very toxic to aquatic life with long lasting effects.

## 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	Toxic if swallowed or in contact with skin.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H330	Fatal if inhaled.
H336	May cause drowsiness or dizziness.
H361f	Suspected of damaging fertility.
H372	Causes damage to organs (Nervous system) through prolonged or repeated exposure if inhaled.
H410	Very toxic 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.
P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
P304 + P340 + P310	IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/ doctor.
P331	Do NOT induce vomiting.
Supplemental Hazard Statements	none

### Reduced Labeling (<= 125 ml)

#### Pictogram

Signal Word	Danger
Hazard Statements	
H330	Fatal if inhaled.
H372	Causes damage to organs through prolonged or repeated exposure if inhaled.
H304	May be fatal if swallowed and enters airways.
H361f	Suspected of damaging fertility.
H301 + H311	Toxic if swallowed or in contact with skin.
Precautionary Statements	
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.
P304 + P340 + P310	IF INHALED: Remove person to fresh air and keep comfortable for breathing. 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

### 3.2 Mixtures

Component		Classification	Concentration
<b>n-Hexane</b>			
CAS-No.	110-54-3	Flam. Liq. 2; Skin Irrit. 2; Repr. 2; STOT SE 3; STOT RE 1; Asp. Tox. 1; Aquatic Chronic 2; H225, H315, H361f, H336, H372, H304, H411 Concentration limits: >= 5 %: STOT RE 2, H373; >= 20 %: STOT SE 3, H336;	>= 70 - < 90 %
EC-No.	203-777-6		
Index-No.	601-037-00-0		
Registration number	01-2119480412-44-XXXX		
<b>acetone</b>			
CAS-No.	67-64-1	Flam. Liq. 2; Eye Irrit. 2; STOT SE 3; H225, H319, H336 Concentration limits:	>= 10 - < 20 %
EC-No.	200-662-2		
Index-No.	606-001-00-8		
Registration	01-2119471330-49-		

number	XXXX	>= 20 %: STOT SE 3, H336;	
<b>O,O-Diethyl O-pyrazin-2-yl phosphorothioate</b>			
CAS-No.	297-97-2	Acute Tox. 2; Acute Tox. 1; H300, H310	>= 0,1 - < 1 %
EC-No.	206-049-6		
Index-No.	015-112-00-5 *		
<b>Parathion - methyl</b>			
CAS-No.	298-00-0	Flam. Liq. 3; Acute Tox. 2; Acute Tox. 3; STOT RE 2; Aquatic Acute 1; Aquatic Chronic 1; H226, H300, H330, H311, H373, H400, H410 M-Factor - Aquatic Acute: 100 - Aquatic Chronic: 100	>= 0,1 - < 0,25 %
EC-No.	206-050-1		
Index-No.	015-035-00-7 *		
<b>Phorate</b>			
CAS-No.	298-02-2	Acute Tox. 1; Aquatic Acute 1; Aquatic Chronic 1; H300, H330, H310, H400, H410 M-Factor - Aquatic Acute: 1.000 - Aquatic Chronic: 1.000	>= 0,1 - < 0,25 %
EC-No.	206-052-2		
Index-No.	015-033-00-6 *		
<b>Disulfoton</b>			
CAS-No.	298-04-4	Acute Tox. 2; Acute Tox. 1; Aquatic Acute 1; Aquatic Chronic 1; H300, H310, H400, H410 M-Factor - Aquatic Acute: 100 M-Factor - Aquatic Chronic: 100	>= 0,1 - < 0,25 %
EC-No.	206-054-3		
Index-No.	015-060-00-3 *		
<b>Famophos</b>			
CAS-No.	52-85-7	Acute Tox. 2; Acute Tox. 3; Skin Irrit. 2; Eye Irrit. 2; H300, H311, H315, H319	>= 0,1 - < 1 %
EC-No.	200-154-0 *		
<b>Parathion</b>			
CAS-No.	56-38-2	Acute Tox. 1; STOT RE 1; Aquatic Acute 1; Aquatic Chronic 1; H300, H330, H310, H372, H400, H410 M-Factor - Aquatic Acute: 100 - Aquatic Chronic: 100	>= 0,1 - < 0,25 %
EC-No.	200-271-7		
Index-No.	015-034-00-1 *		

<b>Dimethoate</b>			
CAS-No.	60-51-5	Acute Tox. 3; Aquatic Chronic 2; H301, H311, H411	$\geq 0,1 - < 0,25 \%$
EC-No.	200-480-3		
Index-No.	015-051-00-4		
	*		
<b>O,O,O-triethyl thiophosphate</b>			
CAS-No.	126-68-1	Acute Tox. 4; Acute Tox. 1; Eye Irrit. 2; H302, H330, H319	$\geq 0,1 - < 1 \%$
EC-No.	204-797-8		
	*		
<b>Sulfotep</b>			
CAS-No.	3689-24-5	Acute Tox. 1; Aquatic Acute 1; Aquatic Chronic 1; H300, H330, H310, H400, H410	$\geq 0,1 - < 0,25 \%$
EC-No.	222-995-2	M-Factor - Aquatic Acute: 1.000 - Aquatic Chronic: 1.000	
Index-No.	015-027-00-3		
	*		

\*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.

## SECTION 4: First aid measures

### 4.1 Description of first-aid measures

#### General advice

First aiders need to protect themselves. Show this material 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. Call a physician immediately.

#### In case of eye contact

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

#### If swallowed

If swallowed: give water to drink (two glasses at most). Seek medical advice immediately. In exceptional cases only, if medical care is not available within one hour, induce vomiting (only in persons who are wide awake and fully conscious), administer activated charcoal (20 - 40 g in a 10% slurry) and consult a doctor as quickly as possible. Pulmonary failure possible after aspiration of vomit.

### 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.

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**

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 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 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. Keep locked up or in an area accessible only to qualified or authorized persons.

**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.

Splash contact

Material: butyl-rubber

Minimum layer thickness: 0,3 mm

Break through time: 30 min

Material tested: Butoject® (KCL 897 / Aldrich Z677647, 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 EC 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                               | 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                                  | -26 °C   |
| 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                               | No data available  |
| p) Density                                      | No data available  |
| Relative density                                | No data available  |
| q) Relative vapor density                       | No data available  |
| 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

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## SECTION 10: Stability and reactivity

### 10.1 Reactivity

Vapors may form explosive mixture with air.

### 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

Warming.

### 10.5 Incompatible materials

Bases, Oxidizing agents, Strong oxidizing agents, Reducing agents, Acetone reacts violently with phosphorous oxychloride., Corrosive to most metals in the presence of moisture, reacts slowly with water to form non-hazardous products

### 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

#### Mixture

#### Acute toxicity

Oral: No data available

Acute toxicity estimate Oral - 216,36 mg/kg

(Calculation method)

Symptoms: Irritations of mucous membranes in the mouth, pharynx, oesophagus and gastrointestinal tract.

Acute toxicity estimate Inhalation - 4 h - 0,5001 mg/l - vapor(Calculation method)

Symptoms: Possible symptoms:, mucosal irritations

Acute toxicity estimate Dermal - 538,73 mg/kg

(Calculation method)

#### Skin corrosion/irritation

Remarks: Mixture causes skin irritation.

#### 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**

Evidence to impair fertility.

**Specific target organ toxicity - single exposure**

Mixture may cause drowsiness or dizziness.

**Specific target organ toxicity - repeated exposure**

Mixture causes damage to organs through prolonged or repeated exposure.

- Nervous system

**Aspiration hazard**

Aspiration hazard, Aspiration may cause pulmonary edema and pneumonitis.

## 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.

Prolonged or repeated contact with skin may cause:, defatting, Dermatitis, Contact with eyes can cause:, Redness, Blurred vision, Provokes tears., Effects due to ingestion may include:, Gastrointestinal discomfort, Central nervous system depression, Lung irritation, chest pain, pulmonary edema  
Other dangerous properties can not be excluded.

This substance should be handled with particular care.

Handle in accordance with good industrial hygiene and safety practice.

## Components

### n-Hexane

**Acute toxicity**

LD50 Oral - Rat - male and female - 16.000 mg/kg  
(OECD Test Guideline 401)

LC50 Inhalation - Rat - 4 h - 172 mg/l - vapor

Remarks: (RTECS)

LD50 Dermal - Rabbit - male - > 2.000 mg/kg  
(OECD Test Guideline 402)

**Skin corrosion/irritation**

Skin - Rabbit

Result: Skin irritation - 24 h

(OECD Test Guideline 404)

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

**Serious eye damage/eye irritation**

Eyes - Rabbit

Result: No eye irritation - 72 h

(OECD Test Guideline 405)

**Respiratory or skin sensitization**

Local lymph node assay (LLNA) - Mouse

Result: negative

(OECD Test Guideline 429)

**Germ cell mutagenicity**

Test Type: Ames test

Test system: Salmonella typhimurium

Result: negative

Test Type: In vitro mammalian cell gene mutation test

Test system: Mouse lymphoma test

Result: negative

Method: OECD Test Guideline 478

Species: Mouse - male

Result: negative

Method: OECD Test Guideline 475

Species: Rat - male and female - Bone marrow

Result: negative

**Carcinogenicity**

No data available

**Reproductive toxicity**

Suspected of damaging fertility.

**Specific target organ toxicity - single exposure**

May cause drowsiness or dizziness. - Central nervous system

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

**Specific target organ toxicity - repeated exposure**

Inhalation - Causes damage to organs through prolonged or repeated exposure.  
- Nervous system

**Aspiration hazard**

Aspiration may cause pulmonary edema and pneumonitis.

**acetone**

**Acute toxicity**

LD50 Oral - Rat - female - 5.800 mg/kg

Remarks: (ECHA)

Symptoms: Stomach/intestinal disorders, Risk of aspiration upon vomiting.,  
Pulmonary failure possible after aspiration of vomit.

LC50 Inhalation - Rat - 4 h - 76 mg/l - vapor

Remarks: Unconsciousness

Drowsiness

Dizziness

(External MSDS)

LD50 Dermal - Rabbit - 20.000 mg/kg

Remarks: (IUCLID)

**Skin corrosion/irritation**

Skin - Rabbit

Result: Mild skin irritation - 24 h

(Draize Test)

Remarks: (RTECS)

**Serious eye damage/eye irritation**

Eyes - Rabbit

Result: Eye irritation - 24 h

(Draize Test)

Remarks: (RTECS)

**Respiratory or skin sensitization**

Maximization Test - Guinea pig

Result: negative

Remarks: (ECHA)

Chronic exposure may cause dermatitis.

**Germ cell mutagenicity**

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

Test system: Chinese hamster ovary cells

Result: negative

Test Type: Ames test

Test system: Salmonella typhimurium

Result: negative

Test Type: In vitro mammalian cell gene mutation test

Test system: Mouse lymphoma test

Result: negative

**Carcinogenicity**

No data available

**Reproductive toxicity**

No data available

**Specific target organ toxicity - single exposure**

Inhalation - May cause drowsiness or dizziness. - Narcotic effects

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

Acute oral toxicity - Stomach/intestinal disorders, Risk of aspiration upon vomiting., Pulmonary failure possible after aspiration of vomit.

**Specific target organ toxicity - repeated exposure**

No data available

**Aspiration hazard**

No data available

**O,O-Diethyl O-pyrazin-2-yl phosphorothioate****Acute toxicity**

Acute toxicity estimate Oral - 5,1 mg/kg

(Expert judgment)

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

Inhalation: No data available

LD50 Dermal - Rat - 8 mg/kg

Remarks: (RTECS)

**Skin corrosion/irritation**

No data available

**Serious eye damage/eye irritation**

No data available

**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**

No data available

**Specific target organ toxicity - repeated exposure**

No data available

**Aspiration hazard**

No data available

**Parathion - methyl****Acute toxicity**

LD50 Oral - Rat - 6,01 mg/kg

Remarks: (RTECS)

Acute toxicity estimate Oral - 6,01 mg/kg

(ATE value derived from LD50/LC50 value)

Acute toxicity estimate Inhalation - 4 h - 0,51 mg/l - vapor

(Expert judgment)

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

LD50 Dermal - Rabbit - 300 mg/kg

Remarks: (RTECS)

Acute toxicity estimate Dermal - 300 mg/kg

(ATE value derived from LD50/LC50 value)

**Skin corrosion/irritation**

No data available

**Serious eye damage/eye irritation**

No data available

**Respiratory or skin sensitization**

No data available

**Germ cell mutagenicity**

Test Type: Ames test

Test system: Salmonella typhimurium

Result: Positive results were obtained in some in vitro tests.

Remarks: (Lit.)

Test Type: Ames test

Test system: Escherichia coli

Result: negative

Remarks: (Lit.)

Test Type: Chromosome aberration test in vitro

Test system: mammalian cells

Result: positive

Remarks: (Lit.)

Species: Mouse - Bone marrow

Result: positive

Remarks: (Lit.)

**Carcinogenicity**

No data available

**Reproductive toxicity**

No data available

**Specific target organ toxicity - single exposure**

No data available

**Specific target organ toxicity - repeated exposure**

May cause damage to organs through prolonged or repeated exposure.

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

**Aspiration hazard**

No data available

**Phorate****Acute toxicity**

LD50 Oral - Rat - 1 mg/kg

Remarks: (RTECS)

Acute toxicity estimate Oral - 1 mg/kg

(ATE value derived from LD50/LC50 value)

LC50 Inhalation - Rat - 4 h - 0,00275 mg/l - vapor

Remarks: (RTECS)

Acute toxicity estimate Inhalation - 0,00275 mg/l - vapor

(ATE value derived from LD50/LC50 value)

LD50 Dermal - Rat - 2,5 mg/kg

Remarks: Behavioral:Tremor.

Behavioral:Convulsions or effect on seizure threshold.

Behavioral:Excitement.

(RTECS)

Acute toxicity estimate Dermal - 2,5 mg/kg

(ATE value derived from LD50/LC50 value)

**Skin corrosion/irritation**

No data available

**Serious eye damage/eye irritation**

No data available

**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**

No data available

**Specific target organ toxicity - repeated exposure**

No data available

**Aspiration hazard**

No data available

**Disulfoton****Acute toxicity**

Acute toxicity estimate Oral - 5,1 mg/kg

(Expert judgment)

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

LC50 Inhalation - Rat - 200 mg/m<sup>3</sup> - vapor

Remarks: (RTECS)

LD50 Dermal - Rat - 3,6 mg/kg

Remarks: (RTECS)

Acute toxicity estimate Dermal - 3,6 mg/kg

(Calculation method)

**Skin corrosion/irritation**

No data available

**Serious eye damage/eye irritation**

No data available

**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**

No data available

**Specific target organ toxicity - repeated exposure**

No data available

**Aspiration hazard**

No data available

**Famophos****Acute toxicity**

LD50 Oral - Rat - 28 mg/kg

Remarks: (RTECS)

Inhalation: No data available

LD50 Dermal - Rat - 400 mg/kg

Remarks: (RTECS)

**Skin corrosion/irritation**

Remarks: No data available

**Serious eye damage/eye irritation**

Remarks: No data available

**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**

No data available

**Specific target organ toxicity - repeated exposure**

No data available

**Aspiration hazard**

No data available

**Parathion****Acute toxicity**

LD50 Oral - Rat - 2 mg/kg

Remarks: Biochemical:Enzyme inhibition, induction, or change in blood or tissue levelsTrue cholinesterase.

(RTECS)

Acute toxicity estimate Oral - 2 mg/kg

(ATE value derived from LD50/LC50 value)

LC50 Inhalation - Rat - 4 h - 0,084 mg/l - vapor

Remarks: Behavioral:Tremor.

Behavioral:Convulsions or effect on seizure threshold.

Lungs, Thorax, or Respiration:Dyspnea.

(RTECS)

Acute toxicity estimate Inhalation - 0,084 mg/l - vapor

(ATE value derived from LD50/LC50 value)

LD50 Dermal - Rabbit - 15 mg/kg

Remarks: (RTECS)

Acute toxicity estimate Dermal - 15 mg/kg

(ATE value derived from LD50/LC50 value)

**Skin corrosion/irritation**

Skin - Rabbit

Result: Mild skin irritation

Remarks: (IUCLID)

**Serious eye damage/eye irritation**

Eyes - Rabbit

Result: Mild eye irritation

Remarks: (IUCLID)

**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**

No data available

**Specific target organ toxicity - repeated exposure**

Causes damage to organs through prolonged or repeated exposure.

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

**Aspiration hazard**

No data available

**Dimethoate****Acute toxicity**

LD50 Oral - Rat - 60 mg/kg

Remarks: (RTECS)

Acute toxicity estimate Oral - 60 mg/kg

(ATE value derived from LD50/LC50 value)

LC50 Inhalation - Rat - 4 h - > 1.553 mg/l - dust/mist

Remarks: (IUCLID)

LD50 Dermal - Rat - 353 mg/kg

Remarks: (RTECS)

Acute toxicity estimate Dermal - 353 mg/kg

(ATE value derived from LD50/LC50 value)

**Skin corrosion/irritation**

Skin - Rabbit

Result: No skin irritation

Remarks: (IUCLID)

**Serious eye damage/eye irritation**

Eyes - Rabbit

Result: No eye irritation

Remarks: (IUCLID)

**Respiratory or skin sensitization**

Buehler Test - Guinea pig

Result: negative

Remarks: (IUCLID)

**Germ cell mutagenicity**

No data available

**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**

No data available

## **O,O,O-triethyl thiophosphate**

### **Acute toxicity**

LD50 Oral - Mouse - 750 mg/kg

Remarks: (RTECS)

Acute toxicity estimate Oral - 750 mg/kg

(ATE value derived from LD50/LC50 value)

LC50 Inhalation - Rat - 4 h - 41 ppm - vapor

Remarks: (RTECS)

Acute toxicity estimate Inhalation - 0,33236 mg/l - vapor

(ATE value derived from LD50/LC50 value)

Dermal: No data available

### **Skin corrosion/irritation**

No data available

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

Eyes - Rabbit

Result: Moderate eye irritation

Remarks: Causes serious eye damage.

The value / statement given is based on a (Q)SAR approach

### **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**

No data available

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

No data available

### **Aspiration hazard**

No data available

## **Sulfotep**

### **Acute toxicity**

LD50 Oral - Rat - 5 mg/kg

Remarks: (RTECS)

LC50 Inhalation - Rat - 4 h - 38 mg/m<sup>3</sup> - dust/mist

Remarks: Autonomic Nervous System:Other (direct) parasymphomimetic.  
(RTECS)

LD50 Dermal - Rabbit - 20 mg/kg

Remarks: (RTECS)

### **Skin corrosion/irritation**

No data available

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

No data available

**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**

No data available

**Specific target organ toxicity - repeated exposure**

No data available

**Aspiration hazard**

No data available

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**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****n-Hexane**

Toxicity to fish

LC50 - Pimephales promelas (fathead minnow) - 2,5 mg/l - 96 h  
Remarks: (ECOTOX Database)

Toxicity to daphnia

EC50 - Daphnia magna (Water flea) - 2,1 mg/l - 48 h

and other aquatic  
invertebrates

Remarks: (Lit.)

### **acetone**

Toxicity to fish

flow-through test LC50 - Pimephales promelas (fathead minnow) - 6.210 mg/l - 96 h  
(OECD Test Guideline 203)

Toxicity to daphnia  
and other aquatic  
invertebrates

static test LC50 - Daphnia pulex (Water flea) - 8.800 mg/l - 48 h  
Remarks: (ECHA)

Toxicity to algae

static test NOEC - M.aeruginosa - 530 mg/l - 8 d  
(DIN 38412)  
Remarks: (maximum permissible toxic concentration)  
(IUCLID)

Toxicity to bacteria

static test EC50 - activated sludge - 61,15 mg/l - 30 min  
(OECD Test Guideline 209)

Toxicity to daphnia  
and other aquatic  
invertebrates(Chronic  
toxicity)

flow-through test NOEC - Daphnia magna (Water flea) - 2.212 mg/l - 28 d  
Remarks: (ECHA)

### **O,O-Diethyl O-pyrazin-2-yl phosphorothioate**

Toxicity to fish

LC50 - other fish - 0,09 mg/l - 48 h

### **Parathion - methyl**

Toxicity to fish

flow-through test LC50 - Morone saxatilis (Striped bass) - 0,79 mg/l - 96 h  
(US-EPA)

Toxicity to daphnia  
and other aquatic  
invertebrates

flow-through test EC50 - Daphnia magna (Water flea) - 0,0087 mg/l - 48 h  
(US-EPA)

Toxicity to algae

static test ErC50 - Desmodesmus subspicatus (green algae) - 15 mg/l - 72 h  
Remarks: (ECOTOX Database)

Toxicity to  
fish(Chronic toxicity)

flow-through test NOEC - Cyprinodon variegatus (sheepshead minnow) - 0,00019 mg/l - 28 d  
(US-EPA)

Toxicity to daphnia  
and other aquatic  
invertebrates(Chronic  
toxicity)

static test NOEC - Daphnia magna (Water flea) - 0,16 mg/l - 21 d  
(US-EPA)

NOEC - Ceriodaphnia dubia (water flea) - 0,001 mg/l - 7 d  
Remarks: (ECOTOX Database)

## Phorate

No data available

## Disulfoton

Toxicity to fish	LC50 - <i>Lepomis macrochirus</i> (Bluegill) - 0,07 mg/l - 96,0 h Remarks: (ECOTOX Database)
Toxicity to daphnia and other aquatic invertebrates	EC50 - <i>Daphnia magna</i> (Water flea) - 0,01 mg/l - 48 h Remarks: (ECOTOX Database)
Toxicity to algae	EC50 - <i>Desmodesmus subspicatus</i> (green algae) - 11 mg/l - 72 h Remarks: (ECOTOX Database)

## Famophos

No data available

## Parathion

No data available

## Dimethoate

Toxicity to fish	static test LC50 - <i>Salmo gairdneri</i> - 7,5 mg/l - 96 h Remarks: (IUCLID)
Toxicity to daphnia and other aquatic invertebrates	EC50 - <i>Daphnia magna</i> (Water flea) - 5,4 mg/l - 48 h (OECD Test Guideline 202)
Toxicity to algae	Growth inhibition ErC50 - <i>Scenedesmus capricornutum</i> (fresh water algae) - 282,3 mg/l - 72 h (OECD Test Guideline 201) Remarks: (IUCLID)
Toxicity to fish(Chronic toxicity)	NOEC - <i>Salmo gairdneri</i> - 8,88 mg/l - 21 d
Toxicity to daphnia and other aquatic invertebrates(Chronic toxicity)	NOEC - <i>Daphnia magna</i> (Water flea) - 0,04 mg/l - 21 d

## O,O,O-triethyl thiophosphate

No data available

## Sulfotep

Toxicity to daphnia and other aquatic invertebrates	EC50 - <i>Daphnia magna</i> (Water flea) - 0,0025 mg/l - 48 h Remarks: (ECOTOX Database)
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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: 1208

IMDG: 1208

IATA: 1208

### 14.2 UN proper shipping name

ADR/RID: HEXANES, SOLUTION

IMDG: HEXANES, SOLUTION

IATA: Hexanes, 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: yes

IMDG Marine pollutant: yes

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

Regulation (EU) 2019/1148 on the marketing and use of explosives precursors : acetone

#### 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

E1 ENVIRONMENTAL HAZARDS

**Other regulations**

Observe work restrictions regarding maternity protection in accordance to Dir 92/85/EEC or stricter national regulations where applicable.

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

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

H225	Highly flammable liquid and vapor.
H226	Flammable liquid and vapor.
H300	Fatal if swallowed.
H301	Toxic if swallowed.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H310	Fatal in contact with skin.
H311	Toxic in contact with skin.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H330	Fatal if inhaled.
H336	May cause drowsiness or dizziness.
H361f	Suspected of damaging fertility.
H372	Causes damage to organs through prolonged or repeated exposure if inhaled.
H373	May cause damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.
EUH066	Repeated exposure may cause skin dryness or cracking.

## 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 mixture

Flam. Liq.2	H225
Acute Tox.3	H301
Acute Tox.2	H330
Acute Tox.3	H311
Skin Irrit.2	H315
Eye Irrit.2	H319
Repr.2	H361f
STOT SE3	H336
STOT RE1	H372
Asp. Tox.1	H304
Aquatic Acute1	H400
Aquatic Chronic1	H410

### Classification procedure:

Based on product data or assessment
Calculation method
Calculation method
Calculation method
Calculation method
Calculation method
Calculation method
Calculation method
Calculation method
Calculation method
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](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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