

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Version 8.9

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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 : CRM EPA 610 PAH
mix, 1X1ml, var. conc, meoh: dichloromethane

Product Number : CRM48743
Brand : Supelco
REACH No. :

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

Identified uses : Laboratory chemicals, Manufacture of substances
Uses advised against : For R&D use only. Not for pharmaceutical, household or other uses.

1.3

CHEMIKART

1.4 Emergency telephone

Emergency Phone # : 000 800 1007 141 (CHEMTREC)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Flammable liquids, (Category 2)	H225: Highly flammable liquid and vapor.
Acute toxicity, (Category 3)	H301: Toxic if swallowed.
Acute toxicity, (Category 3)	H331: Toxic if inhaled.
Acute toxicity, (Category 3)	H311: Toxic in contact with skin.
Skin irritation, (Category 2)	H315: Causes skin irritation.
Eye irritation, (Category 2)	H319: Causes serious eye irritation.
Carcinogenicity, (Category 1B)	H350: May cause cancer.

Specific target organ toxicity - single exposure, (Category 1), Eyes, Central nervous system	H370: Causes damage to organs.
Specific target organ toxicity - single exposure, (Category 3), Central nervous system	H336: May cause drowsiness or dizziness.
Short-term (acute) aquatic hazard, (Category 1)	H400: Very toxic to aquatic life.
Long-term (chronic) aquatic hazard, (Category 2)	H411: 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 + H331	Toxic if swallowed, in contact with skin or if inhaled.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.
H350	May cause cancer.
H370	Causes damage to organs (Eyes, Central nervous system).
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.
P301 + P310	IF SWALLOWED: Immediately call a POISON CENTER/ doctor.
P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
P304 + P340 + P311	IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor.
Supplemental Hazard Statements	none
	Restricted to professional users.

Reduced Labeling (<= 125 ml)

Pictogram

Signal Word	Danger
Hazard Statements	
H350	May cause cancer.

H370	Causes damage to organs.
H301 + H311 + H331	Toxic if swallowed, in contact with skin or if inhaled.
Precautionary Statements	
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.
P301 + P310	IF SWALLOWED: Immediately call a POISON CENTER/ doctor.
P304 + P340 + P311	IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor.
Supplemental Hazard Statements	none

2.3 Other hazards

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

Ecological information:

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Toxicological information:

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Component		Classification	Concentration
Methanol			
CAS-No.	67-56-1	Flam. Liq. 2; Acute Tox. 3; STOT SE 1; H225, H301, H331, H311, H370 Concentration limits: >= 10 %: STOT SE 1, H370; 3 - < 10 %: STOT SE 2, H371;	>= 30 - < 50 %
EC-No.	200-659-6		
Index-No.	603-001-00-X		
Registration number	01-2119433307-44-XXXX		
Dichloromethane			
CAS-No.	75-09-2	Skin Irrit. 2; Eye Irrit. 2; Carc. 2; STOT SE 3; H315, H319, H351, H336 Concentration limits: 20 %: STOT SE 3, H336;	>= 30 - < 50 %
EC-No.	200-838-9		
Index-No.	602-004-00-3		
Registration number	01-2119480404-41-XXXX		
Naphthalene			
CAS-No.	91-20-3	Flam. Sol. 2; Acute Tox. 4; Carc. 2; Aquatic Acute 1; Aquatic Chronic 1; H228, H302, H351, H400, H410	>= 0,1 - < 0,25 %
EC-No.	202-049-5		
Index-No.	601-052-00-2		
Registration number	01-2119561346-37-XXXX		

acenaphthene			
CAS-No.	83-32-9	Aquatic Acute 1; Aquatic Chronic 1; H400, H410	>= 0,1 - < 0,25 %
EC-No.	201-469-6	M-Factor - Aquatic Acute: 1 - Aquatic Chronic: 1	
	*		
Dibenz[a,h]anthracene			
CAS-No.	53-70-3	Carc. 1B; Aquatic Acute 1; Aquatic Chronic 1; H350, H400, H410	>= 0,01 - < 0,025 %
EC-No.	200-181-8	Concentration limits: >= 0,01 %: Carc. 1B, H350;	
Index-No.	601-041-00-2	M-Factor - Aquatic Acute: 100 - Aquatic Chronic: 100	
	*		
Benzo[ghi]perylene Included in the Candidate List of Substances of Very High Concern (SVHC) according to Regulation (EC) No. 1907/2006 (REACH)			
CAS-No.	191-24-2	Aquatic Acute 1; Aquatic Chronic 1; H400, H410	>= 0,0025 - < 0,025 %
EC-No.	205-883-8	M-Factor - Aquatic Acute: 1.000 - Aquatic Chronic: 1.000	
	*		
chrysene Included in the Candidate List of Substances of Very High Concern (SVHC) according to Regulation (EC) No. 1907/2006 (REACH)			
CAS-No.	218-01-9	Muta. 2; Carc. 1B; Aquatic Acute 1; Aquatic Chronic 1; H341, H350, H400, H410	>= 0,0025 - < 0,025 %
EC-No.	205-923-4	M-Factor - Aquatic Acute: 10	
Index-No.	601-048-00-0		
	*		
benzo[a]pyrene Included in the Candidate List of Substances of Very High Concern (SVHC) according to Regulation (EC) No. 1907/2006 (REACH)			
CAS-No.	50-32-8	Skin Sens. 1; Muta. 1B; Carc. 1B; Repr. 1B; Aquatic Acute 1; Aquatic Chronic 1; H317, H340, H350, H360FD, H400, H410	>= 0,01 - < 0,025 %
EC-No.	200-028-5	Concentration limits: >= 0,01 %: Carc. 1B, H350;	
Index-No.	601-032-00-3		
	*		
Pyrene Included in the Candidate List of Substances of Very High Concern (SVHC) according to Regulation (EC) No. 1907/2006 (REACH)			
CAS-No.	129-00-0	Aquatic Acute 1; Aquatic Chronic 1; H400, H410	>= 0,0025 - < 0,025 %
EC-No.	204-927-3	M-Factor - Aquatic Acute: 100 - Aquatic Chronic: 10	
	*		

Benzo[k]fluoranthene Included in the Candidate List of Substances of Very High Concern (SVHC) according to Regulation (EC) No. 1907/2006 (REACH)			
CAS-No.	207-08-9	Carc. 1B; Aquatic Acute 1; Aquatic Chronic 1; H350, H400, H410 M-Factor - Aquatic Acute: 10 M-Factor - Aquatic Chronic: 10	>= 0,0025 - < 0,025 %
EC-No.	205-916-6		
Index-No.	601-036-00-5		
	*		
Benzo[jk]fluorene Included in the Candidate List of Substances of Very High Concern (SVHC) according to Regulation (EC) No. 1907/2006 (REACH)			
CAS-No.	206-44-0	Acute Tox. 4; Aquatic Acute 1; Aquatic Chronic 1; H302, H400, H410 M-Factor - Aquatic Acute: 100 - Aquatic Chronic: 10	>= 0,0025 - < 0,025 %
EC-No.	205-912-4		
	*		
anthracene Included in the Candidate List of Substances of Very High Concern (SVHC) according to Regulation (EC) No. 1907/2006 (REACH)			
CAS-No.	120-12-7	Eye Irrit. 2; Aquatic Acute 1; Aquatic Chronic 1; H319, H400, H410 M-Factor - Aquatic Acute: 1.000 M-Factor - Aquatic Chronic: 100	>= 0,0025 - < 0,025 %
EC-No.	204-371-1		
	*		

*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

After swallowing: fresh air. Make victim drink ethanol (e.g. 1 drinking glass of a 40% alcoholic beverage). Call a doctor immediately (mention methanol ingestion). Only in exceptional cases, if no medical care is available within one hour, induce vomiting (only in fully conscious persons) and make victim drink ethanol again (approx. 0.3 ml of a 40% alcoholic beverage/kg body weight/hour).

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

Hydrogen chloride gas

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. Suppress (knock down) gases/vapors/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

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.

Chemisorb®). 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

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.

Heat sensitive. Store under inert gas.

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

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 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.

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 | 11,0 °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
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 characteristics | No data available |
|
 | |
| 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

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

10.3 Possibility of hazardous reactions

Violent reactions possible with:

10.4 Conditions to avoid

Warming.

10.5 Incompatible materials

Acids, Bases, Oxidizing agents, Alkali metals, Strong acids and strong bases, Strong oxidizing agents, Amines, Acid chlorides, Acid anhydrides, Reducing agents, Vinyl compounds, Aluminum, Magnesium

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

Inhalation: No data available

Dermal: No data available

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

Possible carcinogen.

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

Mixture causes damage to organs. - Eyes, Central nervous system

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.

Methyl alcohol may be fatal or cause blindness if swallowed., Cannot be made non-poisonous., Effects due to ingestion may include:, Nausea, Dizziness, Gastrointestinal disturbance, Weakness, Confusion., Drowsiness, Unconsciousness, To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

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**Methanol****Acute toxicity**

Acute toxicity estimate Oral - 100,1 mg/kg

(Expert judgment)

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

Symptoms: Nausea, Vomiting

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

(Expert judgment)

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

Symptoms: Irritation symptoms in the respiratory tract.

Acute toxicity estimate Dermal - 300,1 mg/kg

(Expert judgment)

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

Skin corrosion/irritation

Skin - Rabbit

Result: No skin irritation

Remarks: (ECHA)

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

Serious eye damage/eye irritation

Eyes - Rabbit

Result: No eye irritation

Remarks: (ECHA)

Respiratory or skin sensitization

Sensitisation test: - Guinea pig

Result: negative

(OECD Test Guideline 406)

Germ cell mutagenicity

Based on available data the classification criteria are not met.

Test Type: Ames test

Test system: Salmonella typhimurium

Result: negative

Test Type: In vitro mammalian cell gene mutation test

Test system: Chinese hamster lung cells

Result: negative

Method: OECD Test Guideline 474

Species: Mouse - male and female - Bone marrow

Result: negative

Carcinogenicity

Did not show carcinogenic effects in animal experiments.

Reproductive toxicity

Based on available data the classification criteria are not met.

Specific target organ toxicity - single exposure

Causes damage to organs. - Eyes, Central nervous system

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

Acute oral toxicity - Nausea, Vomiting

Acute inhalation toxicity - Irritation symptoms in the respiratory tract.

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

Dichloromethane**Acute toxicity**

LD50 Oral - Rat - male and female - > 2.000 mg/kg

(OECD Test Guideline 401)

LC50 Inhalation - Mouse - 4 h - 86 mg/l - vapor

Remarks: (ECHA)

Symptoms: Possible damages:, mucosal irritations

LD50 Dermal - Rat - male and female - > 2.000 mg/kg

(OECD Test Guideline 402)

Skin corrosion/irritation

Skin - Rabbit

Result: Irritations - 4 h

(OECD Test Guideline 404)

Remarks: Repeated or prolonged exposure may cause skin irritation and dermatitis, due to degreasing properties of the product.

Serious eye damage/eye irritation

Eyes - Rabbit

Result: Eye irritation

Remarks: (ECHA)

Remarks: Risk of corneal clouding.

Respiratory or skin sensitization

Local lymph node assay (LLNA) - Mouse

Result: negative

(OECD Test Guideline 429)

Germ cell mutagenicity

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

Test system: Chinese hamster ovary cells

Result: positive

Test Type: Ames test

Test system: Salmonella typhimurium

Result: positive

Method: OECD Test Guideline 474

Species: Mouse - male and female - Bone marrow

Result: negative

Carcinogenicity

Suspected of causing cancer.

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

Inhalation - May cause drowsiness or dizziness. - Central nervous system

Acute inhalation toxicity - Possible damages: , mucosal irritations

Specific target organ toxicity - repeated exposure**Aspiration hazard**

No data available

Naphthalene**Acute toxicity**

Acute toxicity estimate Oral - 533 mg/kg

(ATE value derived from LD50/LC50 value)

LC50 Inhalation - Rat - male and female - 4 h - > 0,4 mg/l - vapor

(OECD Test Guideline 403)

LD50 Dermal - Rabbit - 20.000 mg/kg

Remarks: (RTECS)

Skin corrosion/irritation

Skin - Rabbit

Result: No skin irritation - 24 h

Remarks: (ECHA)

Serious eye damage/eye irritation

Eyes - Rabbit

Result: No eye irritation - 24 h

Remarks: (ECHA)

Respiratory or skin sensitization

Maximization Test - Guinea pig

Result: negative
(OECD Test Guideline 406)

Germ cell mutagenicity

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

Test system: Chinese hamster ovary cells

Result: positive

Test Type: Ames test

Test system: Salmonella typhimurium

Result: negative

Method: OECD Test Guideline 486

Species: Rat - male - Liver cells

Result: negative

Method: US-EPA

Species: Mouse - male and female - Bone marrow

Result: negative

Remarks: (ECHA)

Carcinogenicity

Suspected of causing cancer.

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

Aspiration hazard

No data available

acenaphthene

Acute toxicity

LD50 Oral - Rat - > 16.000 mg/kg

Remarks: (IUCLID)

Inhalation: No data available

Dermal: No data available

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: negative

Remarks: (IUCLID)

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

Dibenz[a,h]anthracene**Acute toxicity**

Oral: No data available

Inhalation: No data available

Dermal: No data available

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

Presumed to have carcinogenic potential for humans

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

Benzo[ghi]perylene**Acute toxicity**

Oral: No data available

Inhalation: No data available

Dermal: No data available

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

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

No data available

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

chrysene**Acute toxicity**

Oral: No data available

Inhalation: No data available

Dermal: No data available

Skin corrosion/irritation

No data available

Serious eye damage/eye irritation

No data available

Respiratory or skin sensitization

No data available

Germ cell mutagenicity

In vitro tests showed mutagenic effects

Test Type: Ames test

Test system: Salmonella typhimurium

Result: positive

Remarks: (Lit.)

Carcinogenicity

Possible human carcinogen

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

benzo[a]pyrene**Acute toxicity**

Oral: No data available

Inhalation: No data available

Dermal: No data available

Skin corrosion/irritation

Skin - Mouse

Result: Mild skin irritation

Remarks: (RTECS)

Serious eye damage/eye irritation

No data available

Respiratory or skin sensitization

May cause allergic skin reaction. Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

Germ cell mutagenicity

May cause genetic defects.

Test Type: Ames test

Test system: Salmonella typhimurium

Result: positive

Remarks: (Lit.)

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

Test system: Chinese hamster ovary cells

Result: positive

Remarks: (National Toxicology Program)

Test Type: sister chromatid exchange assay

Test system: Chinese hamster ovary cells

Result: positive

Remarks: (National Toxicology Program)

Species: Mouse - male - Bone marrow

Result: positive

Remarks: (National Toxicology Program)

Carcinogenicity

Presumed to have carcinogenic potential for humans

Reproductive toxicity

May damage the unborn child.

May damage fertility.

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

Pyrene**Acute toxicity**

LD50 Oral - Rat - 2.700 mg/kg

Remarks: Sense Organs and Special Senses (Nose, Eye, Ear, and Taste): Eye: Conjunctive irritation.

Behavioral: Excitement.

Behavioral: Muscle contraction or spasticity.

(RTECS)

Inhalation: No data available

Dermal: No data available

Skin corrosion/irritation

Skin - Rabbit

Result: slight irritation

Remarks: (External MSDS)

Serious eye damage/eye irritation

Eyes - Rabbit

Result: No eye irritation

Remarks: (External MSDS)

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**Aspiration hazard**

No data available

Benzo[k]fluoranthene**Acute toxicity**

Oral: No data available

Inhalation: Irritating to respiratory system.

Dermal: No data available

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

Presumed to have carcinogenic potential for humans

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

Benzo[jk]fluorene

Acute toxicity

LD50 Oral - Rat - 2.000 mg/kg

Remarks: (RTECS)

Acute toxicity estimate Oral - 2.000 mg/kg

(ATE value derived from LD50/LC50 value)

Inhalation: No data available

LD50 Dermal - Rabbit - 3.180 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

anthracene

Acute toxicity

LD50 Oral - Rat - male and female - > 16.000 mg/kg

Remarks: (ECHA)

Symptoms: Nausea, Diarrhea, gastric pain

Inhalation: No data available

LD50 Dermal - Rat - male and female - > 1.320 mg/kg

Remarks: (ECHA)

Skin corrosion/irritation

Skin - Rabbit

Result: No skin irritation - 24 h

Remarks: (ECHA)

Remarks: Possible damages:

Dermatitis

Serious eye damage/eye irritation

Remarks: Causes serious eye irritation.

Respiratory or skin sensitization

Intracutaneous test - Guinea pig

Result: negative
Remarks: (ECHA)

Germ cell mutagenicity

Test Type: In vitro mammalian cell gene mutation test
Test system: Mouse lymphoma test
Result: negative
Test Type: Ames test
Test system: Salmonella typhimurium
Result: negative
Remarks: (ECHA)
Test Type: Chromosome aberration test in vitro
Test system: rat hepatocytes
Result: negative
Method: OECD Test Guideline 474
Species: Mouse - Bone marrow
Result: negative

Carcinogenicity

No data available

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

Acute oral toxicity - Nausea, Diarrhea, gastric pain

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

Methanol

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

Dichloromethane

Toxicity to fish	flow-through test LC50 - <i>Pimephales promelas</i> (fathead minnow) - 193,00 mg/l - 96 h Remarks: (ECHA)
Toxicity to daphnia and other aquatic invertebrates	static test LC50 - <i>Daphnia magna</i> (Water flea) - 27 mg/l - 48 h (US-EPA)
Toxicity to bacteria	static test EC50 - activated sludge - 2.590 mg/l - 40 min (OECD Test Guideline 209)
Toxicity to fish(Chronic toxicity)	flow-through test LC50 - <i>Pimephales promelas</i> (fathead minnow) - 471 mg/l - 8 d Remarks: (ECHA)

Naphthalene

Toxicity to fish	flow-through test LC50 - <i>Oncorhynchus mykiss</i> (rainbow trout) - 1,6 mg/l - 96 h (OECD Test Guideline 203)
Toxicity to daphnia and other aquatic invertebrates	static test EC50 - <i>Daphnia magna</i> (Water flea) - 2,16 mg/l - 48 h (OECD Test Guideline 202)
Toxicity to algae	static test EC50 - <i>Pseudokirchneriella subcapitata</i> (green algae) - 2,96 mg/l - 4 h (US-EPA) Remarks: (ECHA)

Toxicity to fish(Chronic toxicity) flow-through test LC50 - Oncorhynchus kisutch (coho salmon) - 2,1 mg/l - 96 h
Remarks: (ECHA)

flow-through test NOEC - Oncorhynchus kisutch (coho salmon) - 0,37 mg/l - 40 Days
Remarks: (ECHA)

Toxicity to daphnia and other aquatic invertebrates(Chronic toxicity) static test NOEC - Daphnia pulex (Water flea) - 0,59 mg/l - 125 d
Remarks: (ECHA)

acenaphthene

Toxicity to fish flow-through test LC50 - Salmo trutta - 0,58 mg/l - 96 h
Remarks: (ECOTOX Database)

Toxicity to daphnia and other aquatic invertebrates EC50 - Daphnia magna (Water flea) - 3,45 mg/l - 48 h
Remarks: (IUCLID)

Toxicity to algae EC50 - Pseudokirchneriella subcapitata (green algae) - 0,52 - 0,53 mg/l - 96 h
Remarks: (ECOTOX Database)

Dibenz[a,h]anthracene

No data available

Benzo[ghi]perylene

Toxicity to daphnia and other aquatic invertebrates static test EC50 - Daphnia magna (Water flea) - 0,0002 mg/l - 48 h

Toxicity to algae Growth rate EC10 - Pseudokirchneriella subcapitata (green algae) - > 0,0016 mg/l - 72 h

chrysene

No data available

benzo[a]pyrene

Toxicity to daphnia and other aquatic invertebrates EC50 - Daphnia magna (Water flea) - 0,25 mg/l - 48 h
Remarks: (above the solubility limit in the test medium) (ECOTOX Database)

Toxicity to algae static test ErC50 - Scenedesmus acutus - 0,005 mg/l - 72 h
Remarks: (ECOTOX Database)

Pyrene

Toxicity to fish	LC50 - <i>Oncorhynchus mykiss</i> (rainbow trout) - > 2 mg/l - 96 h Remarks: (External MSDS)
Toxicity to daphnia and other aquatic invertebrates	EC50 - <i>Daphnia magna</i> (Water flea) - 0,002 - 0,003 mg/l - 48 h Remarks: (External MSDS)
Toxicity to algae	static test NOEC - <i>Raphidocelis subcapitata</i> (freshwater green alga) - 0,0012 mg/l - 72 h Remarks: (ECHA)
Toxicity to daphnia and other aquatic invertebrates(Chronic toxicity)	semi-static test EC10 - <i>Ceriodaphnia dubia</i> (water flea) - 0,002 mg/l - 7 d Remarks: (ECHA)

Benzo[k]fluoranthene

No data available

Benzo[jk]fluorene

Toxicity to fish	flow-through test LC50 - <i>Oncorhynchus mykiss</i> (rainbow trout) - 0,0077 mg/l - 96 h Remarks: (ECOTOX Database)
Toxicity to daphnia and other aquatic invertebrates	EC50 - <i>Daphnia magna</i> (Water flea) - 0,117 mg/l - 48 h Remarks: (ECOTOX Database)
Toxicity to fish(Chronic toxicity)	flow-through test NOEC - <i>Pimephales promelas</i> (fathead minnow) - 0,0014 mg/l - 32 d Remarks: (ECOTOX Database)
Toxicity to daphnia and other aquatic invertebrates(Chronic toxicity)	Reproduction Test NOEC - <i>Daphnia magna</i> (Water flea) - 0,0014 mg/l - 21 d Remarks: (ECOTOX Database)

anthracene

Toxicity to fish	flow-through test LC50 - <i>Lepomis macrochirus</i> (Bluegill) - 0,002 mg/l - 96,0 h Remarks: (ECHA)
Toxicity to daphnia and other aquatic invertebrates	static test LC50 - <i>Daphnia magna</i> (Water flea) - 0,036 mg/l - 48 h (OECD Test Guideline 202)
Toxicity to daphnia and other aquatic invertebrates(Chronic toxicity)	semi-static test EC10 - <i>Ceriodaphnia dubia</i> (water flea) - > 0,0034 mg/l - 7 d Remarks: (ECHA)

SECTION 13: Disposal considerations

13.1 Waste treatment methods

No data available

SECTION 14: Transport information

14.1 UN number

ADR/RID: 1992

IMDG: 1992

IATA: 1992

14.2 UN proper shipping name

ADR/RID: FLAMMABLE LIQUID, TOXIC, N.O.S. (Methanol, Naphthalene)

IMDG: FLAMMABLE LIQUID, TOXIC, N.O.S. (Methanol, Naphthalene)

IATA: Flammable liquid, toxic, n.o.s. (Methanol, Naphthalene)

14.3 Transport hazard class(es)

ADR/RID: 3 (6.1)

IMDG: 3 (6.1)

IATA: 3 (6.1)

14.4 Packaging group

ADR/RID: II

IMDG: II

IATA: II

14.5 Environmental hazards

ADR/RID: yes

IMDG Marine pollutant: yes

IATA: no

14.6 Special precautions for user

Tunnel restriction code : (D/E)

Further information : No data available

14.7 Maritime transport in bulk according to IMO instruments

Not applicable for product as supplied.

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

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

Authorisations and/or restrictions on use

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

: Dibenz[a,h]anthracene
benzo[a]pyrene

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

: Benz[a]anthracene

REACH - Restrictions on the manufacture, placing on the market and use of certain

: benzo[a]pyrene

dangerous substances, mixtures and articles
(Annex XVII)

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

: Benzo[k]fluoranthene

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

: chrysene

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

: Dibenz[a,h]anthracene

Regulation (EU) No 2024/590 on substances that
deplete the ozone layer

: Dichloromethane

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

: Benzo[b]fluoranthene
Benzo[k]fluoranthene

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

: Dichloromethane

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

: Methanol

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

: Benzo[b]fluoranthene
Dibenz[a,h]anthracene
chrysene
Benzo[k]fluoranthene
benzo[a]pyrene
Benz[a]anthracene

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

: Benzo[b]fluoranthene

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

E1 ENVIRONMENTAL HAZARDS

P5c FLAMMABLE LIQUIDS

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

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

H225	Highly flammable liquid and vapor.
H228	Flammable solid.
H301	Toxic if swallowed.
H302	Harmful if swallowed.
H311	Toxic in contact with skin.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H331	Toxic if inhaled.
H336	May cause drowsiness or dizziness.
H340	May cause genetic defects.
H341	Suspected of causing genetic defects.
H350	May cause cancer.
H351	Suspected of causing cancer.
H360FD	May damage fertility. May damage the unborn child.
H370	Causes damage to organs.
H371	May cause damage to organs.
H400	Very toxic to aquatic life.
H410	Very toxic 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 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.3	H331
Acute Tox.3	H311
Skin Irrit.2	H315
Eye Irrit.2	H319
Carc.1B	H350
STOT SE1	H370
STOT SE3	H336
Aquatic Acute1	H400
Aquatic Chronic2	H411

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

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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