

# SAFETY DATA SHEET

according to the OSHA  
Hazard Communication Standard

Version 6.22  
Revision Date 07/13/2026  
Print Date 07/14/2026

## SECTION 1. IDENTIFICATION

### 1.1 Product identifiers

Product name : EPA 525 PAH Mix A

Product Number : 48953-U

Brand : Supelco

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

Identified uses : Laboratory chemicals, Synthesis of substances

Restrictions on use : After February 3, 2025, this chemical substance (as defined in TSCA section 3(2))/product cannot be distributed in commerce to retailers. After January 28, 2026, this chemical substance (as defined in TSCA section 3(2))/product is and can only be distributed in commerce or processed with a concentration of methylene chloride equal to or greater than 0.1% by weight for the following purposes: (1) Processing as a reactant; (2) Processing for incorporation into a formulation, mixture, or reaction product; (3) Processing for repackaging; (4) Processing for recycling; (5) Industrial or commercial use as a laboratory chemical; (6) Industrial or commercial use as a bonding agent for solvent welding; (7) Industrial and commercial use as a paint and coating remover from safety critical, corrosion-sensitive components of aircraft and spacecraft; (8) Industrial and commercial use as a processing aid; (9) Industrial and commercial use for plastic and rubber products manufacturing; (10) Industrial and commercial use as a solvent that becomes part of a formulation or mixture, where that formulation or mixture will be used inside a manufacturing process, and the solvent (methylene chloride) will be reclaimed; (11) Industrial and commercial use in the refinishing for wooden furniture, decorative pieces, and architectural fixtures of artistic, cultural or historic value until May 8, 2029; (12) Industrial and commercial use in adhesives and sealants in aircraft, space vehicle, and turbine applications for structural and safety critical non-structural applications until May 8, 2029; (13) Disposal; and (14) Export. The product is being supplied under the TSCA R&D Exemption (40 CFR Section 720.36). It is the recipient's responsibility to comply with the requirements of the R&D

exemption. The product may not be used for a non-exempt commercial purpose under TSCA unless appropriate consent is granted in writing by MilliporeSigma.

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

Company : Sigma-Aldrich Inc.  
3050 SPRUCE ST  
ST. LOUIS MO 63103  
UNITED STATES

Telephone : +1 314 771-5765  
Fax : +1 800 325-5052

### 1.4 Emergency telephone number

Emergency Phone # : 800-424-9300 CHEMTREC (USA) +1-703-  
527-3887 CHEMTREC (International) 24  
Hours/day; 7 Days/week

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## SECTION 2. HAZARDS IDENTIFICATION

### GHS classification in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200)

#### Hazards for the product as supplied

Skin irritation : Category 2

Eye irritation : Category 2A

Carcinogenicity : Category 1B

Specific target organ toxicity - single exposure : Category 3 (Central nervous system)

Short-term (acute) aquatic hazard : Category 1

Long-term (chronic) aquatic hazard : Category 1

#### Other hazards

None known.

#### GHS label elements

Hazard pictograms : 

Signal word : Danger

Hazard statements : H315 Causes skin irritation.  
H319 Causes serious eye irritation.  
H336 May cause drowsiness or dizziness.

H350 May cause cancer.  
H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements :

**Prevention:**

P201 Obtain special instructions before use.  
P202 Do not handle until all safety precautions have been read and understood.  
P261 Avoid breathing mist or vapours.  
P264 Wash skin thoroughly after handling.  
P271 Use only outdoors or in a well-ventilated area.  
P273 Avoid release to the environment.  
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

**Response:**

P302 + P352 IF ON SKIN: Wash with plenty of soap and water.  
P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor if you feel unwell.  
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P308 + P313 IF exposed or concerned: Get medical advice/ attention.  
P332 + P313 If skin irritation occurs: Get medical advice/ attention.  
P337 + P313 If eye irritation persists: Get medical advice/ attention.  
P362 Take off contaminated clothing and wash before reuse.  
P391 Collect spillage.

**Storage:**

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.  
P405 Store locked up.

**Disposal:**

P501 Dispose of contents/ container to an approved waste disposal plant.

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### SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture  
CAS-No. : Not Assigned

**Components**

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| Chemical name         | CAS No./Unique ID | Concentration (% w/w) | Trade secret |
|-----------------------|-------------------|-----------------------|--------------|
| Dichloromethane       | 75-09-2*          | $\geq 80 - \leq 100$  | TSC          |
| Pyrene                | 129-00-0*         | $\leq 0.1$            | TSC          |
| chrysene              | 218-01-9*         | $\leq 0.1$            | TSC          |
| Benzo[k]fluoranthene  | 207-08-9*         | $\leq 0.1$            | TSC          |
| benzo[a]pyrene        | 50-32-8*          | $\leq 0.1$            | TSC          |
| Dibenz[a,h]anthracene | 53-70-3*          | $\leq 0.1$            | TSC          |
| anthracene            | 120-12-7*         | $\leq 0.1$            | TSC          |
| Benzo[ghi]perylene    | 191-24-2*         | $\leq 0.1$            | TSC          |
| Benz[a]anthracene     | 56-55-3*          | $\leq 0.1$            | TSC          |

\* Indicates that the identifier is a CAS No.

TSC- the actual concentration or concentration range is withheld as a trade secret

## SECTION 4. FIRST AID MEASURES

|                                                             |                                                                                                                                        |
|-------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|
| General advice                                              | : Show this 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. Consult a physician.         |
| In case of eye contact                                      | : After eye contact: rinse out with plenty of water. Call in ophthalmologist. Remove contact lenses.                                   |
| If swallowed                                                | : After swallowing: immediately make victim drink water (two glasses at most). Consult a physician.                                    |
| Most important symptoms and effects, both acute and delayed | : The most important known symptoms and effects are described in the labelling (see section 2 GHS label elements) and/or in section 11 |
| Protection of first-aiders                                  | : For personal protection see section 8.                                                                                               |
| Notes to physician                                          | : No data available                                                                                                                    |

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## SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

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

Specific hazards during fire fighting : Not combustible.

Ambient fire may liberate hazardous vapours.

Hazardous combustion products : Carbon oxides

Hydrogen chloride gas

Specific extinguishing methods : No data available

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

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

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## SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures : Advice for non-emergency personnel:  
Do not breathe vapours, aerosols.  
Avoid substance contact.  
Ensure adequate ventilation.  
Evacuate the danger area, observe emergency procedures, consult an expert.  
Advice for emergency responders:  
Wear appropriate personal protective equipment, as indicated in Section 8.

- Environmental precautions : Do not let product enter drains.
- 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.

## SECTION 7. HANDLING AND STORAGE

For precautions see section 2 GHS label elements

- Advice on safe handling : Work under hood. Do not inhale substance/mixture. Avoid generation of vapours/aerosols.
- Further information on storage conditions : Tightly closed. Keep in a well-ventilated place. Keep locked up or in an area accessible only to qualified or authorised persons.
- Storage class : 6.1D, Non-combustible, acute toxic Cat.3 / toxic hazardous materials or hazardous materials causing chronic effects
- Recommended storage temperature : 36 - 46 °F / 2 - 8 °C
- /
- Further information on storage stability : Heat sensitive.

## SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Ingredients with workplace control parameters

| Components      | CAS-No. | Value type (Form of exposure) | Control parameters / Permissible concentration | Basis        |
|-----------------|---------|-------------------------------|------------------------------------------------|--------------|
| Dichloromethane | 75-09-2 | TWA                           | 50 ppm                                         | ACGIH        |
|                 |         | PEL                           | 25 ppm                                         | OSHA<br>CARC |
|                 |         | STEL                          | 125 ppm                                        | OSHA<br>CARC |
|                 |         | ECEL-TWA                      | 2 ppm                                          | TSCA ECEL    |

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|                |          |          |                    |           |
|----------------|----------|----------|--------------------|-----------|
|                |          |          | 8 mg/m3            |           |
|                |          | EPA STEL | 16 ppm<br>57 mg/m3 | TSCA ECEL |
| Pyrene         | 129-00-0 | TWA      | 0.2 mg/m3          | OSHA Z-1  |
|                |          | TWA      | 0.1 mg/m3          | NIOSH REL |
| chrysene       | 218-01-9 | TWA      | 0.2 mg/m3          | OSHA Z-1  |
|                |          | TWA      | 0.1 mg/m3          | NIOSH REL |
| benzo[a]pyrene | 50-32-8  | TWA      | 0.2 mg/m3          | OSHA Z-1  |
|                |          | TWA      | 0.1 mg/m3          | NIOSH REL |
| anthracene     | 120-12-7 | TWA      | 0.2 mg/m3          | OSHA Z-1  |
|                |          | TWA      | 0.1 mg/m3          | NIOSH REL |

### Biological occupational exposure limits

| Components            | CAS-No.  | Control parameters | Biological specimen | Sampling time                                            | Permissible concentration | Basis     |
|-----------------------|----------|--------------------|---------------------|----------------------------------------------------------|---------------------------|-----------|
| Dichloromethane       | 75-09-2  | Dichloromethane    | Urine               | End of shift (As soon as possible after exposure ceases) | 0.3 mg/l                  | ACGIH BEI |
| Pyrene                | 129-00-0 | 1-Hydroxypyrene    | Urine               | End of shift at end of workweek                          | 2.5 µg/l                  | ACGIH BEI |
| chrysene              | 218-01-9 | 1-Hydroxypyrene    | Urine               | End of shift at end of workweek                          | 2.5 µg/l                  | ACGIH BEI |
| Benzo[k]fluoranthene  | 207-08-9 | 1-Hydroxypyrene    | Urine               | End of shift at end of workweek                          | 2.5 µg/l                  | ACGIH BEI |
| benzo[a]pyrene        | 50-32-8  | 1-Hydroxypyrene    | Urine               | End of shift at end of workweek                          | 2.5 µg/l                  | ACGIH BEI |
| Dibenz[a,h]anthracene | 53-70-3  | 1-Hydroxypyrene    | Urine               | End of shift at end of workweek                          | 2.5 µg/l                  | ACGIH BEI |

|                    |          |                 |       |                                 |          |           |
|--------------------|----------|-----------------|-------|---------------------------------|----------|-----------|
| anthracene         | 120-12-7 | 1-Hydroxypyrene | Urine | End of shift at end of workweek | 2.5 µg/l | ACGIH BEI |
| Benzo[ghi]perylene | 191-24-2 | 1-Hydroxypyrene | Urine | End of shift at end of workweek | 2.5 µg/l | ACGIH BEI |
| Benz[a]anthracene  | 56-55-3  | 1-Hydroxypyrene | Urine | End of shift at end of workweek | 2.5 µg/l | ACGIH BEI |

**Engineering measures** : No data available

### Personal protective equipment

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.

### Hand protection

Remarks : required

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

Skin and body protection : protective clothing

Hygiene measures : Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face

after working with substance.

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## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

|                                                     |                                 |
|-----------------------------------------------------|---------------------------------|
| Appearance                                          | : liquid                        |
| Colour                                              | : No data available             |
| Odour                                               | : No data available             |
| Odour Threshold                                     | : No data available             |
| pH                                                  | : No data available             |
| Melting point                                       | : No data available             |
| Boiling point/boiling range                         | : No data available             |
| Flash point                                         | : Not applicable                |
| Evaporation rate                                    | : No data available             |
| Flammability (solid, gas)                           | : No data available             |
| Flammability (liquids)                              | : The product is not flammable. |
| Burning rate                                        | : No data available             |
| Self-ignition                                       | : Not applicable                |
| Upper explosion limit /<br>Upper flammability limit | : Not applicable                |
| Lower explosion limit /<br>Lower flammability limit | : Not applicable                |
| Vapour pressure                                     | : No data available             |
| Relative vapour density                             | : No data available             |
| Relative density                                    | : No data available             |
| Density                                             | : No data available             |
| Water solubility                                    | : No data available             |
| Partition coefficient: n-<br>octanol/water          | : No data available             |
| Autoignition temperature                            | : Not applicable                |

|                           |                                |
|---------------------------|--------------------------------|
| Decomposition temperature | : No data available            |
| Viscosity, dynamic        | : No data available            |
| Viscosity, kinematic      | : No data available            |
| Flow time                 | : No data available            |
| Explosive properties      | : Not classified as explosive. |
| Oxidizing properties      | : none                         |
| Particle characteristics  |                                |
| Particle size             | : No data available            |

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## SECTION 10. STABILITY AND REACTIVITY

|                                    |                                                                                           |
|------------------------------------|-------------------------------------------------------------------------------------------|
| Reactivity                         | : No data available                                                                       |
| Chemical stability                 | : The product is chemically stable under standard ambient conditions (room temperature) . |
| Possibility of hazardous reactions | : Violent reactions possible with:                                                        |
| Conditions to avoid                | : Heat<br>no information available                                                        |
| Incompatible materials             | : Aluminum                                                                                |
| 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 - 2,500 mg/kg

(Calculation method)

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

Symptoms: Possible symptoms:, mucosal irritations

Acute toxicity estimate Dermal - 2,500 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**

Possible carcinogen.

IARC: 2A - Group 2A: Probably carcinogenic to humans (Dichloromethane)

NTP: RAHC - Reasonably anticipated to be a human carcinogen (Dichloromethane)

OSHA: OSHA specifically regulated carcinogen (Dichloromethane)

**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**

Acts as a simple asphyxiant by displacing air., anesthetic effects, Breathing difficulties, Headache, Dizziness, 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:

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.

Stomach - Irregularities - Based on Human Evidence

**Components**

**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 - vapour

Remarks: (ECHA)

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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

### **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

**chrysene**

**Acute toxicity**

Oral: No data available

Inhalation: No data available

Dermal: No data available

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[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[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

**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

**anthracene****Acute toxicity**

LD50 Oral - Mouse - 4,900 mg/kg

Remarks: (RTECS)

Inhalation: No data available

LD50 Dermal - Rat - male and female - > 1,320 mg/kg

Remarks: (ECHA)

No data available

**Skin corrosion/irritation**

Skin - Rabbit

Result: No skin irritation - 24 h

Remarks: (ECHA)

Remarks: Possible damages:

Dermatitis

**Serious eye damage/eye irritation**

Eyes - Rabbit

Result: No eye irritation - 24 - 72 h

Remarks: (ECHA)

**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**

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

**Benz[a]anthracene****Acute toxicity**

Oral: No data available

Inhalation: No data available

Dermal: No data available

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 has been reported to be probably carcinogenic based on its IARC, OSHA, ACGIH, NTP, or EPA classification.

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

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**SECTION 12. ECOLOGICAL INFORMATION****Ecotoxicity****Components:****Dichloromethane:**

Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)):  
193.00 mg/l  
End point: mortality

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Exposure time: 96 h  
Test Type: flow-through test  
Analytical monitoring: yes  
Remarks: (ECHA)

- Toxicity to daphnia and other aquatic invertebrates : LC50 (*Daphnia magna* (Water flea)): 27 mg/l  
End point: mortality  
Exposure time: 48 h  
Test Type: static test  
Method: US-EPA
- Toxicity to fish (Chronic toxicity) : LC50 (*Pimephales promelas* (fathead minnow)): 471 mg/l  
End point: mortality  
Exposure time: 8 d  
Test Type: flow-through test  
Analytical monitoring: yes  
Remarks: (ECHA)
- Toxicity to microorganisms : EC50 (activated sludge): 2,590 mg/l  
Exposure time: 40 min  
Test Type: static test  
Analytical monitoring: yes  
Method: OECD Test Guideline 209

**Pyrene:**

- Toxicity to fish : LC50 (*Oncorhynchus mykiss* (rainbow trout)): > 2 mg/l  
Exposure time: 96 h  
Remarks: (External MSDS)
- Toxicity to daphnia and other aquatic invertebrates : EC50 (*Daphnia magna* (Water flea)): 0.002 - 0.003 mg/l  
Exposure time: 48 h  
Remarks: (External MSDS)
- Toxicity to algae/aquatic plants : NOEC (*Raphidocelis subcapitata* (freshwater green alga)): 0.0012 mg/l  
Exposure time: 72 h  
Test Type: static test  
Analytical monitoring: yes  
Remarks: (ECHA)
- M-Factor (Acute aquatic toxicity) : 100
- Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : EC10 (*Ceriodaphnia dubia* (water flea)): 0.002 mg/l  
End point: mortality  
Exposure time: 7 d  
Test Type: semi-static test  
Analytical monitoring: yes

Remarks: (ECHA)

M-Factor (Chronic aquatic : 10  
toxicity)

**chrysene:**

Toxicity to fish : LC50 : 0.1 mg/l  
Exposure time: 96 h

M-Factor (Acute aquatic : 10  
toxicity)

M-Factor (Chronic aquatic : 10  
toxicity)

**Ecotoxicology Assessment**

Acute aquatic toxicity : Very toxic to aquatic life.

Chronic aquatic toxicity : Very toxic to aquatic life with long lasting effects.

**Benzo[k]fluoranthene:**

Toxicity to fish : Remarks: No data available

M-Factor (Acute aquatic : 10  
toxicity)

M-Factor (Chronic aquatic : 10  
toxicity)

**benzo[a]pyrene:**

Toxicity to daphnia and : EC50 (Daphnia magna (Water flea)): 0.25 mg/l  
other aquatic : End point: mortality  
invertebrates : Exposure time: 48 h  
Remarks: (above the solubility limit in the test  
medium)  
(ECOTOX Database)

Toxicity to algae/aquatic : ErC50 (Scenedesmus acutus): 0.005 mg/l  
plants : Exposure time: 72 h  
Test Type: static test  
Remarks: (ECOTOX Database)

**Ecotoxicology Assessment**

Acute aquatic toxicity : Very toxic to aquatic life.

Chronic aquatic toxicity : Very toxic to aquatic life with long lasting effects.

**Dibenz[a,h]anthracene:**

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M-Factor (Acute aquatic toxicity) : 100

M-Factor (Chronic aquatic toxicity) : 100

### **Ecotoxicology Assessment**

Acute aquatic toxicity : Very toxic to aquatic life.

Chronic aquatic toxicity : Very toxic to aquatic life with long lasting effects.

#### **anthracene:**

Toxicity to fish : LC50 (*Lepomis macrochirus* (Bluegill)): 0.002 mg/l  
End point: Immobilization  
Exposure time: 96.0 h  
Test Type: flow-through test  
Analytical monitoring: yes  
Remarks: (ECHA)

Toxicity to daphnia and other aquatic invertebrates : LC50 (*Daphnia magna* (Water flea)): 0.036 mg/l  
End point: mortality  
Exposure time: 48 h  
Test Type: static test  
Method: OECD Test Guideline 202

M-Factor (Acute aquatic toxicity) : 100

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : EC10 (*Ceriodaphnia dubia* (water flea)): > 0.0034 mg/l  
End point: mortality  
Exposure time: 7 d  
Test Type: semi-static test  
Analytical monitoring: yes  
Remarks: (ECHA)

M-Factor (Chronic aquatic toxicity) : 100

#### **Benzo[ghi]perylene:**

Toxicity to daphnia and other aquatic invertebrates : EC50 (*Daphnia magna* (Water flea)): 0.0002 mg/l  
Exposure time: 48 h  
Test Type: static test

Toxicity to algae/aquatic plants : EC10 (*Pseudokirchneriella subcapitata* (green algae)): > 0.0016 mg/l  
Exposure time: 72 h  
Test Type: Growth rate

M-Factor (Acute aquatic toxicity) : 1,000

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toxicity)

M-Factor (Chronic aquatic : 1,000  
toxicity)

**Benz[a]anthracene:**

Toxicity to fish : Remarks: No data available

M-Factor (Acute aquatic : 10  
toxicity)

M-Factor (Chronic aquatic : 10  
toxicity)

**Ecotoxicology Assessment**

Acute aquatic toxicity : Very toxic to aquatic life.

Chronic aquatic toxicity : Very toxic to aquatic life with long lasting effects.

**Persistence and degradability**

**Components:**

**Dichloromethane:**

Biodegradability : aerobic  
Inoculum: activated sludge, non-adapted  
Concentration: 5 mg/l  
Result: Readily biodegradable.  
Biodegradation: 68 %  
Exposure time: 28 d  
Method: OECD Test Guideline 301D  
GLP: yes

**Pyrene:**

Biodegradability : Result: Not readily biodegradable.  
Biodegradation: 13 %  
Exposure time: 28 d  
Remarks: (HSDB)

**chrysene:**

Biodegradability : Remarks: No data available

**anthracene:**

Biodegradability : aerobic  
Inoculum: activated sludge, non-adapted  
Concentration: 100 mg/l  
Result: Not readily biodegradable.  
Biodegradation: 3.6 %

Exposure time: 28 d  
Method: OECD Test Guideline 302C

## Bioaccumulative potential

### Components:

#### Dichloromethane:

Bioaccumulation : Species: Cyprinus carpio (Carp)  
Bioconcentration factor (BCF): 2 - 5.4  
Exposure time: 6 Weeks  
Concentration: 250 µg/l  
Method: OECD Test Guideline 305  
GLP: yes

Species: Cyprinus carpio (Carp)  
Bioconcentration factor (BCF): 6 - 40  
Exposure time: 6 Weeks  
Concentration: 25 µg/l  
Method: OECD Test Guideline 305  
GLP: yes

Partition coefficient: n-octanol/water : log Pow: 1.25 (68 °F / 20 °C)  
pH: 7  
Method: (experimental)  
Remarks: Bioaccumulation is not expected.

#### Pyrene:

Bioaccumulation : Species: Fish  
Bioconcentration factor (BCF): 4,810  
Exposure time: 2 d  
Concentration: 0.056 mg/l  
Remarks: (External MSDS)

Partition coefficient: n-octanol/water : log Pow: ca. 5.43 (86 °F / 30 °C)  
pH: 5 - 8  
Method: OECD Test Guideline 117  
Remarks: Potential bioaccumulation

#### chrysene:

Partition coefficient: n-octanol/water : log Pow: 5.73  
Remarks: Potential bioaccumulation (HSDB)

#### Benzo[k]fluoranthene:

Partition coefficient: n-octanol/water : log Pow: 6.188 (77 °F / 25 °C)  
Remarks: Potential bioaccumulation

#### benzo[a]pyrene:

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Bioaccumulation : Species: *Lepomis macrochirus* (Bluegill)  
Bioconcentration factor (BCF): 3,208  
Exposure time: 48 h  
Concentration: 0.0005 mg/l

**anthracene:**

Bioaccumulation : Species: *Cyprinus carpio* (Carp)  
Bioconcentration factor (BCF): 2,615  
Exposure time: 42 d  
Temperature: 77 °F / 25 °C  
Concentration: 0.015 mg/l  
Method: OECD Test Guideline 305

Partition coefficient: n-octanol/water : log Pow: ca. 4.65 (68 °F / 20 °C)  
pH: 7  
Method: OECD Test Guideline 117  
Remarks: Potential bioaccumulation

**Benzo[ghi]perylene:**

Partition coefficient: n-octanol/water : log Pow: 6.22 (77 °F / 25 °C)  
Remarks: Potential bioaccumulation

**Mobility in soil**

No data available

**Other adverse effects**

**Product:**

Ozone-Depletion Potential : Regulation: 40 CFR Protection of Environment; Part 82 Protection of Stratospheric Ozone - CAA Section 602 Class I Substances  
Remarks: This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

**Components:**

**Dichloromethane:**

Results of PBT and vPvB assessment : Not persistent, bioaccumulative, and toxic (PBT). Not very persistent and very bioaccumulative (vPvB).  
: Substance does not meet the criteria for PBT or vPvB according to Regulation (EC) No 1907/2006, Annex XIII.

**chrysene:**

Additional ecological information : Discharge into the environment must be avoided.

**Dibenz[a,h]anthracene:**

Additional ecological information : Discharge into the environment must be avoided.

**anthracene:**

Additional ecological information : Discharge into the environment must be avoided.

**Benz[a]anthracene:**

Additional ecological information : Discharge into the environment must be avoided.

**Endocrine disrupting properties**

No data available

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**SECTION 13. DISPOSAL CONSIDERATIONS****Disposal methods**

Waste from residues : Waste material must be disposed of in accordance with the national and local regulations. Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself.

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**SECTION 14. TRANSPORT INFORMATION****International Regulations****IATA-DGR**

UN/ID No. : UN 1593  
Proper shipping name : Dichloromethane solution  
Class : 6.1  
Packing group : III  
Labels : Division 6.1 - Toxic substances  
Packing instruction (cargo aircraft) : 663  
Packing instruction (passenger aircraft) : 655

**IMDG-Code**

UN number : UN 1593  
Proper shipping name : DICHLOROMETHANE SOLUTION  
  
Class : 6.1  
Packing group : III  
Labels : 6.1  
EmS Code : F-A, S-A  
Marine pollutant : no

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## Transport in bulk according to IMO instruments

Not applicable for product as supplied.

## National Regulations

### 49 CFR

UN/ID/NA number : UN 1593  
Proper shipping name : Dichloromethane SOLUTION

Class : 6.1

Packing group : III  
Labels : Division 6.1 - Toxic substances  
ERG Code : 160  
Marine pollutant : no  
Poison Inhalation Hazard : No

### Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

## SECTION 15. REGULATORY INFORMATION

### CERCLA Reportable Quantity

| Components      | CAS-No. | Component RQ (lbs) | Calculated product RQ (lbs) |
|-----------------|---------|--------------------|-----------------------------|
| Dichloromethane | 75-09-2 | 1000               | 1000                        |

### SARA 304 Extremely Hazardous Substances Reportable Quantity

Listed substances in the product are at low enough levels to not be expected to exceed the RQ

### SARA 302 Extremely Hazardous Substances Threshold Planning Quantity

This material does not contain any components with a section 302 EHS TPQ.

**SARA 311/312 Hazards** : Acute Health Hazard  
Chronic Health Hazard

**SARA 313** : The following components are subject to reporting levels established by SARA Title III, Section 313:

|                      |          |                  |
|----------------------|----------|------------------|
| Dichloromethane      | 75-09-2  | >= 90 - <= 100 % |
| Benzo[b]fluoranthene | 205-99-2 | < 0.1 %          |
| Benzo[k]fluoranthene | 207-08-9 | < 0.1 %          |

|                       |          |         |
|-----------------------|----------|---------|
| benzo[a]pyrene        | 50-32-8  | < 0.1 % |
| Dibenz[a,h]anthracene | 53-70-3  | < 0.1 % |
| Benz[a]anthracene     | 56-55-3  | < 0.1 % |
| Benzo[ghi]perylene    | 191-24-2 | < 0.1 % |

### Clean Air Act

This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App. A + B).

The following chemical(s) are listed as HAP under the U.S. Clean Air Act, Section 112 (40 CFR 61):

|                 |         |                  |
|-----------------|---------|------------------|
| Dichloromethane | 75-09-2 | >= 90 - <= 100 % |
|-----------------|---------|------------------|

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

The following chemical(s) are listed under the U.S. Clean Air Act Section 111 SOCM Intermediate or Final VOC's (40 CFR 60.489):

|                 |         |                  |
|-----------------|---------|------------------|
| Dichloromethane | 75-09-2 | >= 90 - <= 100 % |
|-----------------|---------|------------------|

### Clean Water Act

This product does not contain any Hazardous Substances listed under the U.S. Clean Water Act, Section 311, Table 116.4A.

This product does not contain any Hazardous Chemicals listed under the U.S. Clean Water Act, Section 311, Table 117.3.

This product contains the following toxic pollutants listed under the U.S. Clean Water Act Section 307

|                 |         |                  |
|-----------------|---------|------------------|
| Dichloromethane | 75-09-2 | >= 90 - <= 100 % |
|-----------------|---------|------------------|

This product contains the following priority pollutants related to the U.S. Clean Water Act:

|                 |         |                  |
|-----------------|---------|------------------|
| Dichloromethane | 75-09-2 | >= 90 - <= 100 % |
|-----------------|---------|------------------|

### US State Regulations

#### Massachusetts Right To Know

|                       |          |
|-----------------------|----------|
| Dichloromethane       | 75-09-2  |
| Pyrene                | 129-00-0 |
| Benzo[b]fluoranthene  | 205-99-2 |
| chrysene              | 218-01-9 |
| Benzo[k]fluoranthene  | 207-08-9 |
| benzo[a]pyrene        | 50-32-8  |
| Dibenz[a,h]anthracene | 53-70-3  |
| Benz[a]anthracene     | 56-55-3  |

#### Pennsylvania Right To Know

|                      |          |
|----------------------|----------|
| Dichloromethane      | 75-09-2  |
| Pyrene               | 129-00-0 |
| Benzo[b]fluoranthene | 205-99-2 |
| chrysene             | 218-01-9 |

|                       |          |
|-----------------------|----------|
| Benzo[k]fluoranthene  | 207-08-9 |
| benzo[a]pyrene        | 50-32-8  |
| Dibenz[a,h]anthracene | 53-70-3  |
| anthracene            | 120-12-7 |
| Acenaphthylene        | 208-96-8 |
| Benzo[ghi]perylene    | 191-24-2 |
| phenanthrene          | 85-01-8  |
| Benz[a]anthracene     | 56-55-3  |
| Fluorene              | 86-73-7  |

### Maine Chemicals of High Concern

Product does not contain any listed chemicals

### Vermont Chemicals of High Concern

Dichloromethane 75-09-2

### Washington Chemicals of High Concern

Dichloromethane 75-09-2

### California Prop. 65

WARNING: This product can expose you to chemicals including Dichloromethane, Pyrene, Benzo[b]fluoranthene, chrysene, Benzo[k]fluoranthene, benzo[a]pyrene, Dibenz[a,h]anthracene, anthracene, Acenaphthylene, Benzo[ghi]perylene, phenanthrene, Benz[a]anthracene, Fluorene, which is/are known to the State of California to cause cancer. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov). **The components of this product are reported in the following inventories:**

US TSCA : Product contains substance(s) not listed on TSCA inventory.

### TSCA list

No substances are subject to a Significant New Use Rule.

After February 3, 2025, this chemical substance (as defined in TSCA section 3(2))/product cannot be distributed in commerce to retailers. After January 28, 2026, this chemical substance (as defined in TSCA section 3(2))/product is and can only be distributed in commerce or processed with a concentration of methylene chloride equal to or greater than 0.1% by weight for the following purposes: (1) Processing as a reactant; (2) Processing for incorporation into a formulation, mixture, or reaction product; (3) Processing for repackaging; (4) Processing for recycling; (5) Industrial or commercial use as a laboratory chemical; (6) Industrial or commercial use as a bonding agent for solvent welding; (7) Industrial and commercial use as a paint and coating remover from safety critical, corrosion-sensitive components of aircraft and spacecraft; (8) Industrial and commercial use as a processing aid; (9) Industrial and commercial use for plastic and rubber products manufacturing; (10) Industrial and commercial use as a solvent that becomes part of a formulation or mixture, where that formulation or mixture will be used inside a manufacturing process, and the solvent (methylene chloride) will be reclaimed; (11) Industrial and commercial use in the refinishing for wooden furniture, decorative pieces, and architectural fixtures of artistic, cultural or historic value until May 8, 2029; (12) Industrial and commercial use in adhesives and sealants in aircraft, space vehicle, and turbine applications for structural and safety critical non-structural applications until May 8, 2029; (13) Disposal; and (14) Export.

The following substance(s) is/are subject to TSCA 12(b) export notification requirements:  
Dichloromethane 75-09-2

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## SECTION 16. OTHER INFORMATION

### Full text of other abbreviations

|                      |                                                                                             |
|----------------------|---------------------------------------------------------------------------------------------|
| ACGIH                | : USA. ACGIH Threshold Limit Values (TLV)                                                   |
| ACGIH BEI            | : ACGIH - Biological Exposure Indices (BEI)                                                 |
| NIOSH REL            | : USA. NIOSH Recommended Exposure Limits                                                    |
| OSHA CARC            | : OSHA Specifically Regulated Chemicals/Carcinogens                                         |
| OSHA Z-1             | : USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants          |
| TSCA ECEL            | : TSCA Existing Chemical Exposure Limit                                                     |
| ACGIH / TWA          | : 8-hour, time-weighted average                                                             |
| NIOSH REL / TWA      | : Time-weighted average concentration for up to a 10-hour workday during a 40-hour workweek |
| OSHA CARC / PEL      | : Permissible exposure limit (PEL)                                                          |
| OSHA CARC / STEL     | : Excursion limit                                                                           |
| OSHA Z-1 / TWA       | : 8-hour time weighted average                                                              |
| TSCA ECEL / ECEL-TWA | : Existing Chemical Exposure List (TWA)                                                     |
| TSCA ECEL / EPA STEL | : EPA STEL                                                                                  |

AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; 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; ERG - Emergency Response Guide; GHS - Globally Harmonised System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organisation; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardisation; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organisation for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation,

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Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; 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

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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