



# PAH Surrogate Cocktail 200 µg/mL in CD<sub>2</sub>Cl<sub>2</sub>/CH<sub>3</sub>OD (50:50)

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations  
Issue date: 12/8/2014 Revision date: 3/5/2024 Supersedes: 12/8/2014 Version: 2.0

### SECTION 1: Identification

#### 1.1. Identification

Product form : Mixture  
Product name : PAH Surrogate Cocktail 200 µg/mL in CD<sub>2</sub>Cl<sub>2</sub>/CH<sub>3</sub>OD (50:50)  
Product code : ES-2044

#### 1.2. Recommended use and restrictions on use

No additional information available

#### 1.3. Supplier

Cambridge Isotope Laboratories, Inc.  
50 Frontage Rd  
01810  
ANDOVER, MA, 01810  
USA  
T 1-800-322-1174  
[cilsales@isotope.com](mailto:cilsales@isotope.com) - [www.isotope.com](http://www.isotope.com)

#### 1.4. Emergency telephone number

Emergency number : 1-703-741-5970  
Chemtrec 1-800-424-9300 24 hours

### SECTION 2: Hazard(s) identification

#### 2.1. Classification of the substance or mixture

##### GHS US classification

Flammable liquids Category 2	H225	Highly flammable liquid and vapor
Acute toxicity (oral) Category 3	H301	Toxic if swallowed
Acute toxicity (dermal) Category 3	H311	Toxic in contact with skin
Acute toxicity (inhalation) Category 3	H331	Toxic if inhaled
Skin corrosion/irritation Category 2	H315	Causes skin irritation
Serious eye damage/eye irritation Category 2A	H319	Causes serious eye irritation
Carcinogenicity Category 2	H351	Suspected of causing cancer (Dermal, Inhalation, oral)
Specific target organ toxicity (single exposure) Category 1	H370	Causes damage to organs (blood, central nervous system, heart, kidneys, liver, eyes, pancreas) (Dermal, Inhalation, oral)
Specific target organ toxicity (repeated exposure) Category 2	H373	May cause damage to organs (blood, central nervous system, eyes, heart, kidneys, liver, pancreas) through prolonged or repeated exposure (Dermal, Inhalation, oral)
Specific target organ toxicity – Single exposure, Category 3, Respiratory tract irritation	H335	May cause respiratory irritation

Full text of H statements : see section 16

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### 2.2. GHS Label elements, including precautionary statements

#### GHS US labeling

Hazard pictograms (GHS US)



Signal word (GHS US)

: Danger

Hazard statements (GHS US)

: 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  
H351 - Suspected of causing cancer (Dermal, Inhalation, oral)  
H370 - Causes damage to organs (blood, central nervous system, heart, kidneys, liver, eyes, pancreas) (Dermal, Inhalation, oral)  
H373 - May cause damage to organs (blood, central nervous system, eyes, heart, kidneys, liver, pancreas) through prolonged or repeated exposure (Dermal, Inhalation, oral)

Precautionary statements (GHS US)

: P201 - Obtain special instructions before use.  
P202 - Do not handle until all safety precautions have been read and understood.  
P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. heat, hot surfaces, open flames, sparks  
P233 - Keep container tightly closed.  
P240 - Ground/Bond container and receiving equipment.  
P241 - Use explosion-proof electrical, lighting, ventilating equipment.  
P242 - Use only non-sparking tools.  
P243 - Take precautionary measures against static discharge.  
P260 - Do not breathe fume, mist, spray, vapors.  
P261 - Avoid breathing fume, mist, spray, vapors.  
P264 - Wash Both hands thoroughly after handling.  
P270 - Do not eat, drink or smoke when using this product.  
P271 - Use only outdoors or in a well-ventilated area.  
P280 - Wear eye protection, face protection, protective clothing, protective gloves.  
P301+P310 - If swallowed: Immediately call a poison center or doctor.  
P302+P352 - If on skin: Wash with plenty of water.  
P303+P361+P353 - If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.  
P304+P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing.  
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.  
P311 - Call a poison center or doctor.  
P312 - Call a poison center or doctor if you feel unwell.  
P314 - Get medical advice/attention if you feel unwell.  
P330 - Rinse mouth.  
P332+P313 - If skin irritation occurs: Get medical advice/attention.  
P337+P313 - If eye irritation persists: Get medical advice/attention.  
P361 - Take off immediately all contaminated clothing.  
P362 - Take off contaminated clothing and wash before reuse.  
P363 - Wash contaminated clothing before reuse.  
P370+P378 - In case of fire: Use Alcohol resistant foam, Carbon dioxide, Dry chemical, Water spray to extinguish.  
P403+P233 - Store in a well-ventilated place. Keep container tightly closed.  
P403+P235 - Store in a well-ventilated place. Keep cool.  
P405 - Store locked up.  
P501 - Dispose of contents/container to Comply with applicable regulations.

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### 2.3. Other hazards which do not result in classification

No additional information available

### 2.4. Unknown acute toxicity (GHS US)

Not applicable

## SECTION 3: Composition/Information on ingredients

### 3.1. Substances

Not applicable

### 3.2. Mixtures

Name	Product identifier	%	GHS US classification
METHYLENE CHLORIDE-D2 (D, 99.8%)	CAS-No.: 75-09-2	62.58862	Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Dermal), H312 Skin Irrit. 2, H315 Eye Irrit. 2A, H319 Carc. 2, H351 STOT SE 3, H336 STOT SE 3, H335 STOT RE 2, H373
METHANOL-OD (D, 99%)	CAS-No.: 67-56-1	37.28281	Flam. Liq. 2, H225 Acute Tox. 3 (Oral), H301 Acute Tox. 3 (Dermal), H311 Acute Tox. 3 (Inhalation:vapour), H331 Skin Irrit. 2, H315 Eye Irrit. 2A, H319 STOT SE 1, H370
ACENAPHTHYLENE (D8, 98%)	CAS-No.: 208-96-8	0.01836	Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Eye Irrit. 2A, H319 STOT SE 3, H335
BENZO[A]PYRENE (D12, 98%)	CAS-No.: 50-32-8	0.01836	Skin Sens. 1, H317 Muta. 1B, H340 Carc. 1B, H350 Repr. 1B, H360 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
BENZO[GHI]PERYLENE (D12, 98%)	CAS-No.: 93951-66-7	0.01836	Aquatic Acute 1, H400 Aquatic Chronic 1, H410
FLUORANTHENE (D10, 98%)	CAS-No.: 206-44-0	0.01836	Acute Tox. 4 (Oral), H302 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
NAPHTHALENE (D8, 99%)	CAS-No.: 1146-65-2	0.01836	Flam. Sol. 1, H228 Acute Tox. 4 (Oral), H302 Carc. 2, H351 Aquatic Acute 1, H400 Aquatic Chronic 1, H410

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Name	Product identifier	%	GHS US classification
PHENANTHRENE (D10, 98%)	CAS-No.: 1517-22-2	0.01836	Acute Tox. 4 (Oral), H302 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
PYRENE (D10, 98%)	CAS-No.: 1718-52-1	0.01836	Muta. 2, H341 STOT RE 1, H372 Aquatic Acute 1, H400 Aquatic Chronic 1, H410

Full text of hazard classes and H-statements : see section 16

## SECTION 4: First-aid measures

### 4.1. Description of first aid measures

First-aid measures general	: Call a POISON CENTER or doctor/physician.
First-aid measures after inhalation	: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.
First-aid measures after skin contact	: Remove/Take off immediately all contaminated clothing. Wash with plenty of soap and water. Wash contaminated clothing before reuse.
First-aid measures after eye contact	: Remove contact lenses, if present and easy to do. Continue rinsing. Rinse cautiously with water for several minutes.
First-aid measures after ingestion	: Rinse mouth. Obtain emergency medical attention. Immediately call a poison center or doctor/physician.

### 4.2. Most important symptoms and effects (acute and delayed)

Potential Adverse human health effects and symptoms	: This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product. Toxic if swallowed. Toxic in contact with skin.
Symptoms/effects	: Suspected of causing cancer (in contact with skin, if inhaled, if swallowed). May cause damage to organs through prolonged or repeated exposure. Causes damage to organs through prolonged or repeated exposure.
Symptoms/effects after inhalation	: May cause respiratory irritation. Toxic if inhaled.
Symptoms/effects after skin contact	: Repeated exposure to this material can result in absorption through skin causing significant health hazard. Toxic in contact with skin. Causes skin irritation.
Symptoms/effects after eye contact	: Causes serious eye irritation.
Symptoms/effects after ingestion	: Toxic if swallowed. Swallowing a small quantity of this material will result in serious health hazard.

### 4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

## SECTION 5: Fire-fighting measures

### 5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media	: Use water spray, alcohol-resistant foam, dry chemical, or carbon dioxide.
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### 5.2. Specific hazards arising from the chemical

Fire hazard	: Highly flammable liquid and vapor.
Explosion hazard	: May form flammable/explosive vapor-air mixture.
Hazardous decomposition products in case of fire	: Toxic fumes may be released.

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### 5.3. Special protective equipment and precautions for fire-fighters

- Firefighting instructions : Do not enter fire area without proper protective equipment, including respiratory protection.  
Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

## SECTION 6: Accidental release measures

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

- General measures : Remove ignition sources. Use special care to avoid static electric charges. No open flames. No smoking.

#### 6.1.1. For non-emergency personnel

- Emergency procedures : Use personal protective equipment as required. Ventilate spillage area. Do not breathe dust, fume, gas, mist, spray, vapors. Avoid contact with skin, eyes and clothing.

#### 6.1.2. For emergency responders

- Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

### 6.2. Environmental precautions

Avoid release to the environment. Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

### 6.3. Methods and material for containment and cleaning up

- For containment : For large spills, confine the spill in a dike and charge it with wet sand or earth for subsequent safe disposal. Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal. Small quantities of liquid spill: take up in non-combustible absorbent material and shovel into container for disposal.  
Methods for cleaning up : Take up liquid spill into absorbent material. Notify authorities if product enters sewers or public waters.  
Other information : Dispose of materials or solid residues at an authorized site.

### 6.4. Reference to other sections

For further information refer to section 13.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

- Additional hazards when processed : Handle empty containers with care because residual vapors are flammable.  
Precautions for safe handling : No open flames. No smoking. Use only non-sparking tools. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use only outdoors or in a well-ventilated area.  
Hygiene measures : Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

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

- Technical measures : Proper grounding procedures to avoid static electricity should be followed. Ground/bond container and receiving equipment.  
Storage conditions : Store at room temperature away from light and moisture.  
Incompatible materials : Heat sources.

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### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

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<b>USA - ACGIH - Occupational Exposure Limits</b>	
Local name	Dichloromethane
ACGIH OEL TWA [ppm]	50 ppm Basis: USA. ACGIH Threshold Limit Values (TLV)
Remark (ACGIH)	Central Nervous system impairment. Carboxyhemoglobinemia. Substances for which there is a Biological Exposure Index or Indices (see BEI section). Confirmed animal carcinogen with unknown relevance to humans. Potential Occupational Carcinogen See Appendix A.
<b>ACENAPHTHYLENE (D8, 98%) (208-96-8)</b>	
<b>USA - ACGIH - Occupational Exposure Limits</b>	
ACGIH chemical category	No component of this product present at levels greater than or equal to 0.1% is identifiable as a carcinogen or potential carcinogen by ACGIH.
<b>BENZO[A]PYRENE (D12, 98%) (50-32-8)</b>	
<b>USA - OSHA - Occupational Exposure Limits</b>	
OSHA PEL TWA [1]	0.2 mg/m <sup>3</sup> Exposure should be carefully controlled to levels as low as possible.
<b>BENZO[GHI]PERYLENE (D12, 98%) (93951-66-7)</b>	
<b>USA - ACGIH - Occupational Exposure Limits</b>	
ACGIH OEL STEL	0.2 mg/m <sup>3</sup> California permissible exposure limits for chemical contaminants
Remark (ACGIH)	Benzo[ghi]perylene-CAS-No.- 191-24-2 ;Parameters-1-Hydroxypyrene (1-HP); Biological specimen - Urine; Basis-ACGIH - Biological Exposure Indices (BEI); Remarks - End of shift at end of workweek
ACGIH chemical category	No component of this product present at levels greater than or equal to 0.1% is identifiable as a carcinogen or potential carcinogen by ACGIH.
<b>FLUORANTHENE (D10, 98%) (206-44-0)</b>	
<b>USA - ACGIH - Biological Exposure Indices</b>	
Remark	Component: Fluoranthene CAS-NO.: 206-44-0 Parameters: 1-Hydroxypyrene (1-HP) Biological specimen: Urine Basis: ACGIH - Biological Exposure Indices (BEI) Remarks: End of shift at end of workweek.
<b>USA - OSHA - Occupational Exposure Limits</b>	
OSHA PEL C	0.2 mg/m <sup>3</sup> Basis: California permissible exposure limits for chemical contaminants (Title 8, Article 107)
<b>NAPHTHALENE (D8, 99%) (1146-65-2)</b>	
<b>USA - ACGIH - Occupational Exposure Limits</b>	
ACGIH OEL TWA [ppm]	10 ppm Eye & Upper Respiratory Tract irritation. Hematologic effects. Eye damage.
ACGIH OEL STEL [ppm]	15 ppm Eye & Upper Respiratory Tract irritation. Hematologic effects. Eye damage.
<b>PHENANTHRENE (D10, 98%) (1517-22-2)</b>	
<b>USA - ACGIH - Occupational Exposure Limits</b>	
Remark (ACGIH)	ACGIH - Biological Exposure Indices (BEI)

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<b>PHENANTHRENE (D10, 98%) (1517-22-2)</b>	
ACGIH chemical category	No component of this product present at levels greater than or equal to 0.1% is identifiable as a carcinogen or potential carcinogen by ACGIH.
<b>USA - OSHA - Occupational Exposure Limits</b>	
OSHA PEL TWA [1]	0.2 mg/m <sup>3</sup> USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants. Remarks: 1910.1002 As used in §1910.1000 (Table Z-1), coal tar pitch volatiles include the fused polycyclic hydrocarbons which volatilize from the distillation residues of coal, petroleum (excluding asphalt), wood, and other organic matter. Asphalt (CAS 8052-42-4, and CAS 64742-93-4) is not covered under the 'coal tar pitch volatiles' standard OSHA specifically regulated carcinogen.
OSHA PEL C	0.2 mg/m <sup>3</sup> California permissible exposure limits for chemical contaminants (Title 8, Article 107)
<b>USA - NIOSH - Occupational Exposure Limits</b>	
NIOSH REL TWA	0.1 mg/m <sup>3</sup> USA. NIOSH Recommended Exposure Limits. Remarks: Potential Occupational Carcinogen. NIOSH considers coal tar, coal tar pitch, and creosote to be coal tar products. cyclohexane-extractable fraction. See Appendix C. See Appendix A.
<b>PYRENE (D10, 98%) (1718-52-1)</b>	
<b>USA - ACGIH - Occupational Exposure Limits</b>	
Remark (ACGIH)	Parameters-1-Hydroxypyrene (1-HP). Biological specimen-Urine. Basis-ACGIH - Biological Exposure Indices (BEI). Remarks- End of shift at end of workweek.
ACGIH chemical category	No component of this product present at levels greater than or equal to 0.1% is identifiable as a carcinogen or potential carcinogen by ACGIH.
<b>USA - OSHA - Occupational Exposure Limits</b>	
OSHA PEL TWA [1]	0.2 mg/m <sup>3</sup> 1910.1002 As used in §1910.1000 (Table Z-1), coal tar pitch volatiles include the fused polycyclic hydrocarbons which volatilize from the distillation residues of coal, petroleum (excluding asphalt), wood, and other organic matter. Asphalt (CAS 8052-42-4, and CAS 64742-93-4) is not covered under the 'coal tar pitch volatiles' standard OSHA specifically regulated carcinogen
<b>USA - NIOSH - Occupational Exposure Limits</b>	
NIOSH REL TWA	0.1 mg/m <sup>3</sup> Potential Occupational Carcinogen NIOSH considers coal tar, coal tar pitch, and creosote to be coal tar products.
<b>METHYLENE CHLORIDE-D2 (D, 99.8%) (75-09-2)</b>	
<b>USA - ACGIH - Occupational Exposure Limits</b>	
Local name	Dichloromethane
ACGIH OEL TWA [ppm]	50 ppm Basis: USA. ACGIH Threshold Limit Values (TLV)
Remark (ACGIH)	Central Nervous system impairment. Carboxyhemoglobinemia. Substances for which there is a Biological Exposure Index or Indices (see BEI section). Confirmed animal carcinogen with unknown relevance to humans. Potential Occupational Carcinogen See Appendix A.
Regulatory reference	ACGIH 2022
<b>USA - ACGIH - Biological Exposure Indices</b>	
Local name	DICHLOROMETHANE
BEI	Component: Methylene chloride CAS-No.: 75-09-2 Parameters: Dichloromethane Value: 0.3000 mg/l Biological specimen: Urine Basis: ACGIH - Biological Exposure Indices (BEI) Remarks: End of shift (As soon as possible after exposure ceases)
Regulatory reference	ACGIH 2022

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<b>METHYLENE CHLORIDE-D2 (D, 99.8%) (75-09-2)</b>	
<b>USA - OSHA - Occupational Exposure Limits</b>	
OSHA PEL STEL [1]	435 mg/m <sup>3</sup> Basis: California permissible exposure limits for chemical contaminants (Title 8, Article 107) see section 5202
OSHA PEL STEL [2]	125 ppm Basis: OSHA Specially Regulated Chemicals/Carcinogens California permissible exposure limits for chemical contaminants (Title 8, Article 107) see section 5202
OSHA PEL C	87 mg/m <sup>3</sup> Basis: California permissible exposure limits for chemical contaminants (Title 8, Article 107) see section 5202
OSHA PEL C [ppm]	25 ppm Basis: OSHA Specially Regulated Chemicals/Carcinogens California permissible exposure limits for chemical contaminants (Title 8, Article 107) see section 5202
Remark (OSHA)	Substance listed; for mor information see OSHA document 1910.1052. See Table Z-2. This section applies to all occupational exposures to methylene chloride (MC). Chemical Abstracts Service Registry Number 75-09-2, in general industry, construction and shipyard employment. Methylene chloride (MC) means an organic compound with chemical formula CH <sub>2</sub> Cl <sub>2</sub> . Its Chemical Abstracts Service Registry Number is 75-09-2. Its molecular weight is 8.9 g/mole. OSHA Specifically regulated carcinogen.
<b>METHANOL-OD (D, 99%) (67-56-1)</b>	
<b>USA - ACGIH - Occupational Exposure Limits</b>	
Local name	Methanol
ACGIH OEL TWA [ppm]	200 ppm Basis: USA. ACGIH Threshold Limit Values (TLV)
ACGIH OEL STEL [ppm]	250 ppm Basis: USA. ACGIH Threshold Limit Values (TLV)
Remark (ACGIH)	Headache. Nausea. Dizziness. Eye damage. Substances for which there is a Biological Exposure Index or Indices (see BEI section). Danger of cutaneous absorption.
ACGIH chemical category	No component of this product present at levels greater than or equal to 0.1% is identifiable as a carcinogen or potential carcinogen by ACGIH.
Regulatory reference	ACGIH 2022
<b>USA - ACGIH - Biological Exposure Indices</b>	
Local name	METHANOL
BEI	15 mg/l Urine Basis: ACGIH - Biological Exposure Indices (BEI)
Remark	End of shift (As soon as possible after exposure ceases)
Regulatory reference	ACGIH 2022
<b>USA - OSHA - Occupational Exposure Limits</b>	
Local name	Methyl alcohol
OSHA PEL TWA [1]	260 mg/m <sup>3</sup> Basis: USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants - 1910.1000. California permissible exposure limits for chemical contaminants (Title 8, Article 107)
OSHA PEL TWA [2]	200 ppm Basis: USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants - 1910.1000. California permissible exposure limits for chemical contaminants (Title 8, Article 107)
OSHA PEL STEL [1]	325 mg/m <sup>3</sup> Basis: USA. OSHA - Table Z-1 Limits for Air Contaminants - 1910.1000. California permissible exposure limits for chemical contaminants (Title 8, Article 107)
OSHA PEL STEL [2]	250 ppm Basis: USA. OSHA - Table Z-1 Limits for Air Contaminants - 1910.1000. California permissible exposure limits for chemical contaminants (Title 8, Article 107)



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<b>METHANOL-OD (D, 99%) (67-56-1)</b>	
OSHA PEL C [ppm]	1000 ppm California permissible exposure limits for chemical contaminants (Title 8, Article 107)
Remark (OSHA)	The value in mg/m <sup>3</sup> is approximate. Skin notation.
Regulatory reference (US-OSHA)	OSHA Annotated Table Z-1
<b>USA - NIOSH - Occupational Exposure Limits</b>	
NIOSH REL TWA	260 mg/m <sup>3</sup> Basis: NIOSH Recommended Exposure Limits
NIOSH REL TWA [ppm]	200 ppm Basis: NIOSH Recommended Exposure Limits
NIOSH REL STEL	325 mg/m <sup>3</sup> Basis: NIOSH Recommended Exposure Limits
NIOSH REL STEL [ppm]	250 ppm Basis: NIOSH Recommended Exposure Limits
Remark (NIOSH)	Potential for dermal absorption.

### 8.2. Appropriate engineering controls

Appropriate engineering controls : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Ensure good ventilation of the work station.  
Environmental exposure controls : Avoid release to the environment.

### 8.3. Individual protection measures/Personal protective equipment

#### Personal protective equipment:

Gloves. Protective clothing. Protective goggles. Self-contained breathing apparatus.

#### Materials for protective clothing:

Wear suitable protective clothing and gloves

#### Hand protection:

Wear suitable protective clothing and gloves

#### Eye protection:

Wear safety glasses with side shields (or goggles) and a face shield.

#### Skin and body protection:

Wear suitable protective clothing

#### Respiratory protection:

Where exposure through inhalation may occur from use, respiratory protection equipment is recommended

#### Personal protective equipment symbol(s):



## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state : Liquid  
Appearance : Liquid.  
Color : Colorless

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Odor	: There may be no odour warning properties, odour is subjective and inadequate to warn of overexposure. Mixture contains one or more component(s) which have the following odour: No data available Sweet, penetrating, ether-like odor
Odor threshold	: 205 – 307 ppm Source: HSDB
pH	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Relative evaporation rate (butyl acetate=1)	: 71 Source: HSDB
Relative evaporation rate (ether=1)	: 0.71
Flammability (solid, gas)	: Highly flammable liquid and vapor.
Vapor pressure	: No data available
Relative vapor density at 20°C	: No data available
Relative density	: 1.33 Source: ECHA
Density	: 1.33 g/cm <sup>3</sup> Type: 'density' Temp.: 20 °C
Solubility	: Water: 13.2 g/l
Partition coefficient n-octanol/water (Log Pow)	: 1.25 Source: ECHA
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity, kinematic	: 0.316 mm <sup>2</sup> /s
Viscosity, dynamic	: 0.42 mPa.s Temp.: 'other:' Parameter: 'dynamic viscosity (in mPa s)'
Explosion limits	: 12 – 19 % (V)
Explosive properties	: No data available
Oxidizing properties	: No data available

### 9.2. Other information

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Vapor is explosive with air above.

### 10.2. Chemical stability

See storage and expiration date on CoA.

### 10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

### 10.4. Conditions to avoid

Open flame. Direct sunlight.

### 10.5. Incompatible materials

Alkali metals. Aluminum. Strong oxidizing agents. Bases. Magnesium. Strong acids. Strong bases. Vinyl.

### 10.6. Hazardous decomposition products

May release flammable gases.

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### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects

Acute toxicity (oral) : Toxic if swallowed.  
Acute toxicity (dermal) : Toxic in contact with skin.  
Acute toxicity (inhalation) : Toxic if inhaled.

PAH Surrogate Cocktail 200 µg/mL in CD <sub>2</sub> Cl <sub>2</sub> /CH <sub>3</sub> OD (50:50)	
LD50 oral rat	> 2000 mg/kg Source: ECHA
LD50 dermal rat	> 2000 mg/kg Source: ECHA
LC50 Inhalation - Rat	52000 mg/m <sup>3</sup>
ATE US (oral)	100 mg/kg body weight
ATE US (dermal)	300 mg/kg body weight
ATE US (gases)	700 ppmV/4h
ATE US (vapors)	3 mg/l/4h
ATE US (dust, mist)	0.5 mg/l/4h
ACENAPHTHYLENE (D8, 98%) (208-96-8)	
LD50 oral	1760 mg/kg Mouse - Remarks: Autonomic Nervous System: Other (direct) parasympathomimetic. Respiratory disorder. Blood: Hemorrhage.
ATE US (oral)	500 mg/kg body weight
Additional information	LD50 Oral Mouse - 1760 mg/kg
FLUORANTHENE (D10, 98%) (206-44-0)	
LD50 oral rat	2000 mg/kg
LD50 dermal rabbit	3180 mg/kg
ATE US (oral)	2000 mg/kg body weight
ATE US (dermal)	3180 mg/kg body weight
NAPHTHALENE (D8, 99%) (1146-65-2)	
LD50 oral rat	490 mg/kg
LD50 dermal rabbit	20000 mg/kg
LC50 Inhalation - Rat	> 340 mg/m <sup>3</sup> 1 h
ATE US (oral)	490 mg/kg body weight
ATE US (dermal)	20000 mg/kg body weight
PHENANTHRENE (D10, 98%) (1517-22-2)	
ATE US (oral)	500 mg/kg body weight
Additional information	LD50 Oral Mouse - 700 mg/kg
PYRENE (D10, 98%) (1718-52-1)	
LD50 oral rat	2700 mg/kg Remarks: Sense Organs and Special Senses (Nose, Eye, Ear, and Taste):Eye:Conjunctive irritation. Behavioral:Excitement. Behavioral:Muscle contraction or spasticity

# PAH Surrogate Cocktail 200 µg/mL in CD<sub>2</sub>Cl<sub>2</sub>/CH<sub>3</sub>OD (50:50)

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<b>PYRENE (D10, 98%) (1718-52-1)</b>	
LC50 Inhalation - Rat	170 mg/m <sup>3</sup> Remarks: Sense Organs and Special Senses (Nose, Eye, Ear, and Taste):Eye:Conjunctive irritation. Behavioral:Excitement. Behavioral:Muscle contraction or spasticity.
<b>METHYLENE CHLORIDE-D2 (D, 99.8%) (75-09-2)</b>	
LD50 oral rat	> 2000 mg/kg Source: ECHA
LD50 oral	1600 mg/kg
LD50 dermal rat	> 2000 mg/kg Source: ECHA
LC50 Inhalation - Rat	52000 mg/m <sup>3</sup>
LC50 Inhalation - Rat (Vapours)	64.9 mg/l/4h
ATE US (oral)	500 mg/kg body weight
ATE US (dermal)	1100 mg/kg body weight
ATE US (vapors)	52 mg/l/4h
ATE US (dust, mist)	52 mg/l/4h
<b>METHANOL-OD (D, 99%) (67-56-1)</b>	
LD50 oral rat	100 mg/kg Source: National Institute of Environmental Research NCIS
LD50 oral	1400 mg/kg
LD50 dermal rabbit	300 mg/kg Source: ECHA
LC50 Inhalation - Rat	128.2 mg/l/4h ; 87.6 mg/l - 6 h
ATE US (oral)	100 mg/kg body weight
ATE US (dermal)	300 mg/kg body weight
ATE US (vapors)	3 mg/l/4h
ATE US (dust, mist)	128.2 mg/l/4h
LDLO, oral, human	143 mg/kg Remarks: Lungs, Thorax, or Respiration: Dyspnea. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.
Skin corrosion/irritation	: Causes skin irritation.
<b>METHANOL-OD (D, 99%) (67-56-1)</b>	
pH	12.1 Source: Gestis
Serious eye damage/irritation	: Causes serious eye irritation.
<b>METHANOL-OD (D, 99%) (67-56-1)</b>	
pH	12.1 Source: Gestis
Respiratory or skin sensitization	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Suspected of causing cancer (Dermal, Inhalation, oral).
<b>PAH Surrogate Cocktail 200 µg/mL in CD<sub>2</sub>Cl<sub>2</sub>/CH<sub>3</sub>OD (50:50)</b>	
IARC group	2A - Probably carcinogenic to humans
<b>BENZO[A]PYRENE (D12, 98%) (50-32-8)</b>	
IARC group	1 - Carcinogenic to humans
National Toxicology Program (NTP) Status	Reasonably anticipated to be Human Carcinogen

# PAH Surrogate Cocktail 200 µg/mL in CD<sub>2</sub>Cl<sub>2</sub>/CH<sub>3</sub>OD (50:50)

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<b>FLUORANTHENE (D10, 98%) (206-44-0)</b>	
IARC group	3 - Not classifiable
<b>NAPHTHALENE (D8, 99%) (1146-65-2)</b>	
IARC group	2B - Possibly carcinogenic to humans
National Toxicology Program (NTP) Status	Reasonably anticipated to be Human Carcinogen
<b>PYRENE (D10, 98%) (1718-52-1)</b>	
IARC group	3 - Not classifiable
National Toxicology Program (NTP) Status	Known Human Carcinogens
<b>METHYLENE CHLORIDE-D2 (D, 99.8%) (75-09-2)</b>	
IARC group	2A - Probably carcinogenic to humans
National Toxicology Program (NTP) Status	Reasonably anticipated to be Human Carcinogen
In OSHA Hazard Communication Carcinogen list	Yes
<b>METHANOL-OD (D, 99%) (67-56-1)</b>	
National Toxicology Program (NTP) Status	No component of this product present at levels greater than or equal to 0.1% is identifiable as probable, possible, or confirmed human carcinogen by IARC.
Reproductive toxicity	: Not classified
STOT-single exposure	: Causes damage to organs (blood, central nervous system, heart, kidneys, liver, eyes, pancreas) (Dermal, Inhalation, oral). May cause respiratory irritation.
<b>ACENAPHTHYLENE (D8, 98%) (208-96-8)</b>	
STOT-single exposure	May cause respiratory irritation.
<b>METHYLENE CHLORIDE-D2 (D, 99.8%) (75-09-2)</b>	
STOT-single exposure	May cause drowsiness or dizziness. May cause respiratory irritation.
<b>METHANOL-OD (D, 99%) (67-56-1)</b>	
STOT-single exposure	Causes damage to organs (eyes, kidneys, liver, heart, central nervous system) (Dermal, Inhalation, oral).
STOT-repeated exposure	: May cause damage to organs (blood, central nervous system, eyes, heart, kidneys, liver, pancreas) through prolonged or repeated exposure (Dermal, Inhalation, oral).
<b>PAH Surrogate Cocktail 200 µg/mL in CD<sub>2</sub>Cl<sub>2</sub>/CH<sub>3</sub>OD (50:50)</b>	
NOAEL (oral,rat,90 days)	6 mg/kg body weight Animal: rat, Guideline: OECD Guideline 453 (Combined Chronic Toxicity / Carcinogenicity Studies)
<b>PYRENE (D10, 98%) (1718-52-1)</b>	
STOT-repeated exposure	Causes damage to organs (respiratory tract) through prolonged or repeated exposure (Dermal, Inhalation, oral).
<b>METHYLENE CHLORIDE-D2 (D, 99.8%) (75-09-2)</b>	
NOAEL (oral,rat,90 days)	6 mg/kg body weight Animal: rat, Guideline: OECD Guideline 453 (Combined Chronic Toxicity / Carcinogenicity Studies)
STOT-repeated exposure	May cause damage to organs (blood, central nervous system, liver, respiratory system) through prolonged or repeated exposure (Dermal, Inhalation, oral).
Aspiration hazard	: Not classified
Viscosity, kinematic	: 0.316 mm <sup>2</sup> /s

# PAH Surrogate Cocktail 200 µg/mL in CD<sub>2</sub>Cl<sub>2</sub>/CH<sub>3</sub>OD (50:50)

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FLUORANTHENE (D10, 98%) (206-44-0)	
Viscosity, kinematic	Not applicable
METHYLENE CHLORIDE-D2 (D, 99.8%) (75-09-2)	
Viscosity, kinematic	0.316 mm <sup>2</sup> /s
METHANOL-OD (D, 99%) (67-56-1)	
Viscosity, kinematic	0.688 mm <sup>2</sup> /s

Potential Adverse human health effects and symptoms	: This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product. Toxic if swallowed. Toxic in contact with skin.
Symptoms/effects	: Suspected of causing cancer (in contact with skin, if inhaled, if swallowed). May cause damage to organs through prolonged or repeated exposure. Causes damage to organs through prolonged or repeated exposure.
Symptoms/effects after inhalation	: May cause respiratory irritation. Toxic if inhaled.
Symptoms/effects after skin contact	: Repeated exposure to this material can result in absorption through skin causing significant health hazard. Toxic in contact with skin. Causes skin irritation.
Symptoms/effects after eye contact	: Causes serious eye irritation.
Symptoms/effects after ingestion	: Toxic if swallowed. Swallowing a small quantity of this material will result in serious health hazard.

## SECTION 12: Ecological information

### 12.1. Toxicity

Ecology - general	: The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment.
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PAH Surrogate Cocktail 200 µg/mL in CD <sub>2</sub> Cl <sub>2</sub> /CH <sub>3</sub> OD (50:50)	
LC50 - Fish [1]	193 mg/l Source: ECHA
EC50 - Crustacea [1]	1682 mg/l Daphnia magna (Water flea) - 48 h
NOEC (chronic)	130 mg/l Cyprinodon variegatus (sheepshead minnow) - 96 h

BENZO[A]PYRENE (D12, 98%) (50-32-8)	
EC50 - Crustacea [1]	0.25 mg/l Daphnia magna (Water flea) - 48 h
EC50 - Other aquatic organisms [1]	0.02 mg/l Pseudokirchneriella subcapitata (green algae) - 72 h
ErC50 algae	0.02 mg/l Pseudokirchneriella subcapitata (green algae) - 48 h

FLUORANTHENE (D10, 98%) (206-44-0)	
LC50 - Fish [1]	0.0077 mg/l Oncorhynchus mykiss (rainbow trout) - 96 h
EC50 - Crustacea [1]	0.005 – 0.01 mg/l Immobilization EC50 - Daphnia magna (Water flea) - 3 d
EC50 - Crustacea [2]	0.78 mg/l Immobilization EC50 - Daphnia magna (Water flea) - 20 h
NOEC (acute)	560 mg/l Cyprinodon variegatus (sheepshead minnow) - 96 h
NOEC chronic crustacea	0.085 mg/l Daphnia magna (Water flea) - 48 h

NAPHTHALENE (D8, 99%) (1146-65-2)	
LC50 - Fish [1]	0.9 – 9.8 mg/l Oncorhynchus mykiss (rainbow trout) - 96 h
LC50 - Other aquatic organisms [1]	1 – 6.5 mg/l Pimephales promelas (fathead minnow) - 96 h

# PAH Surrogate Cocktail 200 µg/mL in CD<sub>2</sub>Cl<sub>2</sub>/CH<sub>3</sub>OD (50:50)

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<b>NAPHTHALENE (D8, 99%) (1146-65-2)</b>	
EC50 - Crustacea [1]	1 – 3.4 mg/l Daphnia magna (Water flea) - 48 h
ErC50 algae	33 mg/l 24 h
LOEC (acute)	3.2 mg/l 3 d
NOEC (acute)	1.8 mg/l 3 d
<b>PHENANTHRENE (D10, 98%) (1517-22-2)</b>	
LC50 - Fish [1]	3.2 mg/l Oncorhynchus mykiss (rainbow trout) - 96.0 h
EC50 - Crustacea [1]	0.86 mg/l Daphnia pulex (Water flea) - 24 h
<b>PYRENE (D10, 98%) (1718-52-1)</b>	
LC50 - Fish [1]	> 2 mg/l LC50 - Oncorhynchus mykiss (rainbow trout) - 96.0 h.
EC50 - Crustacea [1]	0.002 – 0.003 EC50 - Daphnia magna (Water flea) - 48 h
<b>METHYLENE CHLORIDE-D2 (D, 99.8%) (75-09-2)</b>	
LC50 - Fish [1]	193 mg/l Source: ECHA
EC50 - Crustacea [1]	1682 mg/l Daphnia magna (Water flea) - 48 h
NOEC (chronic)	130 mg/l Cyprinodon variegatus (sheepshead minnow) - 96 h
<b>METHANOL-OD (D, 99%) (67-56-1)</b>	
LC50 - Fish [1]	15400 mg/l Source: ECHA
EC50 - Crustacea [1]	1340 mg/l
EC50 - Crustacea [2]	22000 mg/l Growth inhibition EC50 - Scenedesmus capricornutum (fresh water algae) - 96 h
EC50 96h - Algae [1]	22000 mg/l Source: ECHA
NOEC (acute)	7900 mg/l Oryzias latipes - 200 h
<b>12.2. Persistence and degradability</b>	
<b>PAH Surrogate Cocktail 200 µg/mL in CD<sub>2</sub>Cl<sub>2</sub>/CH<sub>3</sub>OD (50:50)</b>	
Biodegradation	< 26 % - Not readily biodegradable. (OECD Test Guideline 301C)
<b>NAPHTHALENE (D8, 99%) (1146-65-2)</b>	
Persistence and degradability	Biodegradability: Result: - Not readily biodegradable.
<b>METHYLENE CHLORIDE-D2 (D, 99.8%) (75-09-2)</b>	
Biodegradation	< 26 % - Not readily biodegradable. (OECD Test Guideline 301C)
<b>METHANOL-OD (D, 99%) (67-56-1)</b>	
Not rapidly degradable	
Biochemical oxygen demand (BOD)	600 – 1200 mg/g
Chemical oxygen demand (COD)	1420 mg/g
ThOD	1500 mg/g
Biodegradation	72 % - rapidly biodegradable aerobic - Exposure time 5 d

# PAH Surrogate Cocktail 200 µg/mL in CD<sub>2</sub>Cl<sub>2</sub>/CH<sub>3</sub>OD (50:50)

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### 12.3. Bioaccumulative potential

PAH Surrogate Cocktail 200 µg/mL in CD <sub>2</sub> Cl <sub>2</sub> /CH <sub>3</sub> OD (50:50)	
Partition coefficient n-octanol/water (Log Pow)	1.25 Source: ECHA
Bioaccumulative potential	Does not accumulate in organisms.
BENZO[A]PYRENE (D12, 98%) (50-32-8)	
BCF - Fish [1]	0.0005 mg/l Lepomis macrochirus (Bluegill) - 48 h
Bioconcentration factor (BCF REACH)	3,208
Partition coefficient n-octanol/water (Log Pow)	5.97
Bioaccumulative potential	Bioaccumulation: Lepomis macrochirus (Bluegill) - 48h. Bioconcentration factor (BCF): 3,208.
BENZO[GHI]PERYLENE (D12, 98%) (93951-66-7)	
Partition coefficient n-octanol/water (Log Pow)	6.63
NAPHTHALENE (D8, 99%) (1146-65-2)	
Partition coefficient n-octanol/water (Log Pow)	3.3
Bioaccumulative potential	Bioaccumulation: Fish- Bioconcentration factor (BCF): 427 - 1,158.
PHENANTHRENE (D10, 98%) (1517-22-2)	
BCF - Fish [1]	0.00255 mg/l Pimephales promelas (fathead minnow) - 28 d
Bioconcentration factor (BCF REACH)	5100
Partition coefficient n-octanol/water (Log Pow)	4.46
PYRENE (D10, 98%) (1718-52-1)	
BCF - Fish [1]	0.056 mg/l Other fish - 48 h
Bioconcentration factor (BCF REACH)	4810
Partition coefficient n-octanol/water (Log Pow)	4.88
METHYLENE CHLORIDE-D2 (D, 99.8%) (75-09-2)	
Partition coefficient n-octanol/water (Log Pow)	1.25 Source: ECHA
Bioaccumulative potential	Does not accumulate in organisms.
METHANOL-OD (D, 99%) (67-56-1)	
BCF - Fish [1]	5 mg/l Cyprinus carpio (Carp) - 72 d at 20 °C
Bioconcentration factor (BCF REACH)	1
Partition coefficient n-octanol/water (Log Pow)	-0.77 Source: HSDB, CHemIDplus

### 12.4. Mobility in soil

PAH Surrogate Cocktail 200 µg/mL in CD <sub>2</sub> Cl <sub>2</sub> /CH <sub>3</sub> OD (50:50)	
Ecology - soil	Not available.
METHYLENE CHLORIDE-D2 (D, 99.8%) (75-09-2)	
Ecology - soil	Not available.
METHANOL-OD (D, 99%) (67-56-1)	
Mobility in soil	2.75 Source: HSDB



# PAH Surrogate Cocktail 200 µg/mL in CD<sub>2</sub>Cl<sub>2</sub>/CH<sub>3</sub>OD (50:50)

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### METHANOL-OD (D, 99%) (67-56-1)

Ecology - soil

Not degradable in the soil.

### 12.5. Other adverse effects

Other adverse effects : Avoid release to the environment. Disposal must be done according to official regulations.

## SECTION 13: Disposal considerations

### 13.1. Disposal methods

Regional legislation (waste) : Waste materials should be disposed of under conditions which meet Federal, State, and local environmental control regulations.

Product/Packaging disposal recommendations : Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

Ecology - waste materials : Dispose of as unused product.

## SECTION 14: Transport information

In accordance with DOT / TDG / IMDG / IATA

### 14.1. UN number

DOT NA No : UN1230  
UN-No. (TDG) : UN1230  
UN-No. (IMDG) : 1230  
UN-No. (IATA) : 1230

### 14.2. UN proper shipping name

Proper Shipping Name (DOT) : Methanol  
Proper Shipping Name (TDG) : METHANOL  
Proper Shipping Name (IMDG) : METHANOL  
Proper Shipping Name (IATA) : Methanol

### 14.3. Transport hazard class(es)

#### DOT

Transport hazard class(es) (DOT) : 3 (6.1)  
Hazard labels (DOT) : 3, 6.1



#### TDG

Transport hazard class(es) (TDG) : 3 (6.1)  
Hazard labels (TDG) : 3, 6.1



#### IMDG

Transport hazard class(es) (IMDG) : 3 (6.1)  
Hazard labels (IMDG) : 3, 6.1

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### IATA

Transport hazard class(es) (IATA) : 3 (6.1)  
Hazard labels (IATA) : 3, 6.1



### 14.4. Packing group

Packing group (DOT) : II  
Packing group (TDG) : II  
Packing group (IMDG) : II  
Packing group (IATA) : II

### 14.5. Environmental hazards

Other information : No supplementary information available.

### 14.6. Special precautions for user

#### DOT

UN-No.(DOT) : UN1230  
DOT Special Provisions (49 CFR 172.102) : IB2 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized.  
T7 - 4 178.274(d)(2) Normal..... 178.275(d)(3)  
TP2 - a. The maximum degree of filling must not exceed the degree of filling determined by the following: (image) Where: tr is the maximum mean bulk temperature during transport, tf is the temperature in degrees celsius of the liquid during filling, and a is the mean coefficient of cubical expansion of the liquid between the mean temperature of the liquid during filling (tf) and the maximum mean bulk temperature during transportation (tr) both in degrees celsius. b. For liquids transported under ambient conditions may be calculated using the formula: (image) Where: d15 and d50 are the densities (in units of mass per unit volume) of the liquid at 15 C (59 F) and 50 C (122 F), respectively.  
DOT Packaging Exceptions (49 CFR 173.xxx) : 150  
DOT Packaging Non Bulk (49 CFR 173.xxx) : 202  
DOT Packaging Bulk (49 CFR 173.xxx) : 242  
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : 1 L  
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) : 60 L  
DOT Vessel Stowage Location : B - (i) The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel carrying a number of passengers limited to not more than the larger of 25 passengers, or one passenger per each 3 m of overall vessel length; and (ii) "On deck only" on passenger vessels in which the number of passengers specified in paragraph (k)(2)(i) of this section is exceeded.  
DOT Vessel Stowage Other : 40 - Stow "clear of living quarters"

#### TDG

UN-No. (TDG) : UN1230  
TDG Special Provisions : 43 - Despite section 2.1 of Part 2 (Classification), these dangerous goods are assigned to this classification based on human experience.  
Explosive Limit and Limited Quantity Index : 1 L

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Excepted quantities (TDG) : E2  
Passenger Carrying Road Vehicle or Passenger Carrying Railway Vehicle Index : 1 L  
Emergency Response Guide (ERG) Number : 131

**IMDG**  
Special provision (IMDG) : 279  
Limited quantities (IMDG) : 1 L  
Excepted quantities (IMDG) : E2  
Packing instructions (IMDG) : P001  
IBC packing instructions (IMDG) : IBC02  
Tank instructions (IMDG) : T7  
Tank special provisions (IMDG) : TP2  
EmS-No. (Fire) : F-E - FIRE SCHEDULE Echo - NON-WATER-REACTIVE FLAMMABLE LIQUIDS  
EmS-No. (Spillage) : S-D - SPILLAGE SCHEDULE Delta - FLAMMABLE LIQUIDS  
Stowage category (IMDG) : B  
Stowage and handling (IMDG) : SW2  
Flash point (IMDG) : 12°C c.c.  
Properties and observations (IMDG) : Colourless, volatile liquid. Flashpoint: 12°C c.c. Explosive limits: 6% to 36.5% Miscible with water. Toxic if swallowed; may cause blindness. Avoid skin contact.  
MFAG-No : 131

**IATA**  
PCA Excepted quantities (IATA) : E2  
PCA Limited quantities (IATA) : Y341  
PCA limited quantity max net quantity (IATA) : 1L  
PCA packing instructions (IATA) : 352  
PCA max net quantity (IATA) : 1L  
CAO packing instructions (IATA) : 364  
CAO max net quantity (IATA) : 60L  
Special provision (IATA) : A113  
ERG code (IATA) : 3L

### 14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

## SECTION 15: Regulatory information

### 15.1. US Federal regulations

#### PAH Surrogate Cocktail 200 µg/mL in CD<sub>2</sub>Cl<sub>2</sub>/CH<sub>3</sub>OD (50:50)

Subject to reporting requirements of United States SARA Section 313  
Listed on EPA Hazardous Air Pollutant (HAPS)

CERCLA RQ	1000 lb
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard Delayed (chronic) health hazard

Commercial status of components according to the United States Environmental Protection Agency's Toxic Substances Control Act (TSCA):

Name	CAS-No.	Listing	Commercial status	Flags
ACENAPHTHYLENE (D8, 98%)	208-96-8	Not present	-	
BENZO[A]PYRENE (D12, 98%)	50-32-8	Not present	-	
BENZO[GHI]PERYLENE (D12, 98%)	93951-66-7	Not present	-	

# PAH Surrogate Cocktail 200 µg/mL in CD<sub>2</sub>Cl<sub>2</sub>/CH<sub>3</sub>OD (50:50)

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Name	CAS-No.	Listing	Commercial status	Flags
FLUORANTHENE (D10, 98%)	206-44-0	Not present	-	
NAPHTHALENE (D8, 99%)	1146-65-2	Not present	-	
PHENANTHRENE (D10, 98%)	1517-22-2	Not present	-	
PYRENE (D10, 98%)	1718-52-1	Not present	-	
METHYLENE CHLORIDE-D2 (D, 99.8%)	75-09-2	Present	Active	R
METHANOL-OD (D, 99%)	67-56-1	Present	Active	

### ACENAPHTHYLENE (D8, 98%) (208-96-8)

Not subject to reporting requirements of the United States SARA Section 313

CERCLA RQ

5000 lb

SARA Section 311/312 Hazard Classes

Immediate (acute) health hazard

### BENZO[A]PYRENE (D12, 98%) (50-32-8)

Subject to reporting requirements of United States SARA Section 313

CERCLA RQ

1 lb

SARA Section 311/312 Hazard Classes

Immediate (acute) health hazard  
Delayed (chronic) health hazard

### BENZO[GHI]PERYLENE (D12, 98%) (93951-66-7)

SARA Section 302 Threshold Planning Quantity (TPQ)

Not subject to reporting requirements of the United States SARA Section 302.

SARA Section 311/312 Hazard Classes

Delayed (chronic) health hazard

### FLUORANTHENE (D10, 98%) (206-44-0)

Subject to reporting requirements of United States SARA Section 313

CERCLA RQ

100 lb

SARA Section 311/312 Hazard Classes

Immediate (acute) health hazard  
Delayed (chronic) health hazard

### NAPHTHALENE (D8, 99%) (1146-65-2)

SARA Section 302 Threshold Planning Quantity (TPQ)

Not subject to reporting requirements of the United States SARA Section 302

SARA Section 311/312 Hazard Classes

Fire hazard  
Immediate (acute) health hazard  
Delayed (chronic) health hazard

### PHENANTHRENE (D10, 98%) (1517-22-2)

SARA Section 302 Threshold Planning Quantity (TPQ)

SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302

# PAH Surrogate Cocktail 200 µg/mL in CD<sub>2</sub>Cl<sub>2</sub>/CH<sub>3</sub>OD (50:50)

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<b>PYRENE (D10, 98%) (1718-52-1)</b>	
SARA Section 302 Threshold Planning Quantity (TPQ)	Listed on the United States SARA Section 302;
SARA Section 311/312 Hazard Classes	Delayed (chronic) health hazard

<b>METHYLENE CHLORIDE-D2 (D, 99.8%) (75-09-2)</b>	
Subject to reporting requirements of United States SARA Section 313 Listed on EPA Hazardous Air Pollutant (HAPS)	
CERCLA RQ	1000 lb
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard Delayed (chronic) health hazard

<b>METHANOL-OD (D, 99%) (67-56-1)</b>	
CERCLA RQ	5000 lb
SARA Section 311/312 Hazard Classes	Fire hazard Immediate (acute) health hazard Delayed (chronic) health hazard

### 15.2. International regulations

#### CANADA

<b>PAH Surrogate Cocktail 200 µg/mL in CD<sub>2</sub>Cl<sub>2</sub>/CH<sub>3</sub>OD (50:50)</b>
Listed on the Canadian DSL (Domestic Substances List)

<b>ACENAPHTHYLENE (D8, 98%) (208-96-8)</b>
Listed on the Canadian NDSL (Non-Domestic Substances List)

<b>BENZO[A]PYRENE (D12, 98%) (50-32-8)</b>
Listed on the Canadian DSL (Domestic Substances List)

<b>BENZO[GHI]PERYLENE (D12, 98%) (93951-66-7)</b>
Not listed on the Canadian DSL (Domestic Substances List)/NDSL (Non-Domestic Substances List)

<b>FLUORANTHENE (D10, 98%) (206-44-0)</b>
Listed on the Canadian NDSL (Non-Domestic Substances List)

<b>NAPHTHALENE (D8, 99%) (1146-65-2)</b>
Not listed on the Canadian DSL (Domestic Substances List)/NDSL (Non-Domestic Substances List)

<b>PHENANTHRENE (D10, 98%) (1517-22-2)</b>
Not listed on the Canadian DSL (Domestic Substances List)/NDSL (Non-Domestic Substances List)

<b>PYRENE (D10, 98%) (1718-52-1)</b>
Not listed on the Canadian DSL (Domestic Substances List)/NDSL (Non-Domestic Substances List)

# PAH Surrogate Cocktail 200 µg/mL in CD<sub>2</sub>Cl<sub>2</sub>/CH<sub>3</sub>OD (50:50)

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### METHYLENE CHLORIDE-D2 (D, 99.8%) (75-09-2)

Listed on the Canadian DSL (Domestic Substances List)

### METHANOL-OD (D, 99%) (67-56-1)

Listed on the Canadian DSL (Domestic Substances List)

### EU-Regulations

No additional information available

### National regulations

#### PAH Surrogate Cocktail 200 µg/mL in CD<sub>2</sub>Cl<sub>2</sub>/CH<sub>3</sub>OD (50:50)

Listed on IARC (International Agency for Research on Cancer)  
Listed as carcinogen on NTP (National Toxicology Program)  
Listed on INSQ (Mexican National Inventory of Chemical Substances)  
Listed on TECI (Thailand Existing Chemicals Inventory)

### ACENAPHTHYLENE (D8, 98%) (208-96-8)

CAUTION: This material is supplied for research and development purposes subject to the R&D exemption under TSCA, 40 CFR 720.36, and must meet the requirements of the exemption, including supervision by a "technically qualified individual" as defined by 40 CFR 720.3(ee). The use of this material for "commercial purposes" as defined by 40 CFR 720.3(r) is not permitted in the United States.  
Listed on INSQ (Mexican National Inventory of Chemical Substances)

### BENZO[A]PYRENE (D12, 98%) (50-32-8)

Listed on IARC (International Agency for Research on Cancer)  
Listed as carcinogen on NTP (National Toxicology Program)  
CAUTION: This material is supplied for research and development purposes subject to the R&D exemption under TSCA, 40 CFR 720.36, and must meet the requirements of the exemption, including supervision by a "technically qualified individual" as defined by 40 CFR 720.3(ee). The use of this material for "commercial purposes" as defined by 40 CFR 720.3(r) is not permitted in the United States.  
Listed on INSQ (Mexican National Inventory of Chemical Substances)

### FLUORANTHENE (D10, 98%) (206-44-0)

Listed on TECI (Thailand Existing Chemicals Inventory)

### METHYLENE CHLORIDE-D2 (D, 99.8%) (75-09-2)

Listed on IARC (International Agency for Research on Cancer)  
Listed as carcinogen on NTP (National Toxicology Program)  
Listed on INSQ (Mexican National Inventory of Chemical Substances)  
Listed on TECI (Thailand Existing Chemicals Inventory)

### 15.3. US State regulations

#### PAH Surrogate Cocktail 200 µg/mL in CD<sub>2</sub>Cl<sub>2</sub>/CH<sub>3</sub>OD (50:50)

U.S. - California - Proposition 65 - Carcinogens List	Yes
U.S. - California - Proposition 65 - Developmental Toxicity	No
U.S. - California - Proposition 65 - Reproductive Toxicity - Female	No

# PAH Surrogate Cocktail 200 µg/mL in CD<sub>2</sub>Cl<sub>2</sub>/CH<sub>3</sub>OD (50:50)

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U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No
No significant risk level (NSRL)	50 µg/day ; 200 µg/day (inhalation)

BENZO[A]PYRENE (D12, 98%) (50-32-8)					
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)	Maximum allowable dose level (MADL)
Yes	No	No	No	0.06 µg/day	

NAPHTHALENE (D8, 99%) (1146-65-2)					
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)	Maximum allowable dose level (MADL)
Yes	No	No	No		

PYRENE (D10, 98%) (1718-52-1)					
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)	Maximum allowable dose level (MADL)
Yes	No	No	No		

METHYLENE CHLORIDE-D2 (D, 99.8%) (75-09-2)					
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)	Maximum allowable dose level (MADL)
Yes	No	No	No	50 µg/day ; 200 µg/day (inhalation)	

METHANOL-OD (D, 99%) (67-56-1)					
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)	Maximum allowable dose level (MADL)
No	Yes	No	No		47000 µg/day (inhalation); 23,000 µg/day (oral)

Component	State or local regulations
ACENAPHTHYLENE (D8, 98%)(208-96-8)	U.S. - Massachusetts - Right To Know List; U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - Pennsylvania - RTK (Right to Know) List

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Component	State or local regulations
BENZO[A]PYRENE (D12, 98%)(50-32-8)	U.S. - Massachusetts - Right To Know List; U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - Pennsylvania - RTK (Right to Know) List
FLUORANTHENE (D10, 98%)(206-44-0)	U.S. - Massachusetts - Right To Know List; U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - Pennsylvania - RTK (Right to Know) List
METHYLENE CHLORIDE-D2 (D, 99.8%)(75-09-2)	U.S. - Massachusetts - Right To Know List; U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - Pennsylvania - RTK (Right to Know) List
METHANOL-OD (D, 99%) (67-56-1)	U.S. - Massachusetts - Right To Know List; U.S. - New Jersey - Right to Know Hazardous Substance List

### SECTION 16: Other information

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Revision date

: 03/05/2024

Other information

: This product is not radioactive. The data given for this product are those of the corresponding unlabeled compound, unless specifically indicated otherwise. Health and safety data for labeled compounds are generally not available, but are assumed to be similar or identical to the corresponding unlabeled compound.

Full text of H-phrases	
H225	Highly flammable liquid and vapor
H228	Flammable solid
H301	Toxic if swallowed
H302	Harmful if swallowed
H311	Toxic in contact with skin
H312	Harmful in contact with skin
H315	Causes skin irritation
H317	May cause an allergic skin reaction
H319	Causes serious eye irritation
H331	Toxic if inhaled
H335	May cause respiratory irritation
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
H360	May damage fertility or the unborn child
H370	Causes damage to organs
H372	Causes damage to organs through prolonged or repeated exposure
H373	May cause damage to organs through prolonged or repeated exposure
H400	Very toxic to aquatic life



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Full text of H-phrases	
H410	Very toxic to aquatic life with long lasting effects

Safety Data Sheet (SDS), USA

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.