

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

#### 1.1. Product identifier

Product form : Mixture  
Product name : Custom SIM ICV Mix  
Product code : AL0-130180  
Product group : Trade product

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

##### 1.2.1. Relevant identified uses

Main use category : Laboratory use  
Industrial/Professional use spec : Industrial  
For professional use only

##### 1.2.2. Uses advised against

No additional information available

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

Phenova  
6390 Joyce Dr. Suite 100  
80403 Golden, CO - United States  
T 1-866-942-2978 - F 1-866-283-0269  
[info@phenova.com](mailto:info@phenova.com) - [www.phenova.com](http://www.phenova.com)

#### 1.4. Emergency telephone number

Emergency number : ChemTel Assistance (US/Canada) 1-800-255-3924  
ChemTel Assistance (International) +1 813-248-0585

### SECTION 2: Hazards identification

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

##### Classification according to Regulation (EC) No. 1272/2008 [CLP]

Flam. Liq. 2 : H225  
Carc. 2 : H351  
Aquatic Chronic 3 : H412

##### Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]

Carc.Cat.3; R40  
F; R11  
R19  
R52/53

Full text of R-phrases: see section 16

##### Adverse physicochemical, human health and environmental effects

No additional information available

#### 2.2. Label elements

##### Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



GHS02

GHS08

Signal word (CLP) : Danger  
Hazard statements (CLP) : H225 - Highly flammable liquid and vapour  
H351 - Suspected of causing cancer  
H412 - Harmful to aquatic life with long lasting effects  
Precautionary statements (CLP) : P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No

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smoking  
P233 - Keep container tightly closed  
P273 - Avoid release to the environment  
P280 - Wear protective gloves/protective clothing/eye protection/face protection  
P303+P361+P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing.  
Rinse skin with water  
P308+P313 - IF exposed or concerned: Get medical advice/attention  
P370+P378 - In case of fire: Use media other than water to extinguish  
P403+P235 - Store in a well-ventilated place. Keep cool  
P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation

EUH-statements : EUH019 - May form explosive peroxides

No labelling applicable

### 2.3. Other hazards

No additional information available

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

Not applicable

### 3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Methylene Chloride (Component)	(CAS-No.) 75-09-2 (EC-No.) 200-838-9 (EC Index-No.) 602-004-00-3	99.979	Carc. 2, H351
anthracene (Component) substance listed as REACH Candidate	(CAS-No.) 120-12-7 (EC-No.) 204-371-1	0.001	Aquatic Acute 1, H400 (M=100) Aquatic Chronic 1, H410 (M=100)
benzo[a]pyrene (Component) substance listed as REACH Candidate (Benzo[def]chrysene)	(CAS-No.) 50-32-8 (EC-No.) 200-028-5 (EC Index-No.) 601-032-00-3	0.001	Skin Sens. 1, H317 Muta. 1B, H340 Carc. 1B, H350 Repr. 1B, H360FD Aquatic Acute 1, H400 (M=100) Aquatic Chronic 1, H410 (M=100)
benzo[a]anthracene (Component)	(CAS-No.) 56-55-3 (EC-No.) 200-280-6 (EC Index-No.) 601-033-00-9	0.001	Carc. 1B, H350 Aquatic Acute 1, H400 (M=100) Aquatic Chronic 1, H410 (M=100)
benzo[ghi]perylene (Component)	(CAS-No.) 191-24-2 (EC-No.) 205-883-8	0.001	Aquatic Acute 1, H400 (M=1000) Aquatic Chronic 1, H410
fluoranthene (Component)	(CAS-No.) 206-44-0 (EC-No.) 205-912-4	0.001	Acute Tox. 4 (Oral), H302 Aquatic Acute 1, H400 (M=100) Aquatic Chronic 1, H410 (M=100)
chrysene (Component)	(CAS-No.) 218-01-9 (EC-No.) 205-923-4 (EC Index-No.) 601-048-00-0	0.001	Muta. 2, H341 Carc. 1B, H350 Aquatic Acute 1, H400 (M=1000) Aquatic Chronic 1, H410 (M=1000)
benzo[k]fluoranthene (Component)	(CAS-No.) 207-08-9 (EC-No.) 205-916-6 (EC Index-No.) 601-036-00-5	0.001	Carc. 1B, H350 Aquatic Acute 1, H400 (M=100) Aquatic Chronic 1, H410 (M=100)
dibenz(a,h)anthracene (Component)	(CAS-No.) 53-70-3 (EC-No.) 200-181-8 (EC Index-No.) 601-041-00-2	0.001	Carc. 1B, H350 Aquatic Acute 1, H400 (M=1000) Aquatic Chronic 1, H410
1,4-dioxane (Component) substance with a Community workplace exposure limit	(CAS-No.) 123-91-1 (EC-No.) 204-661-8 (EC Index-No.) 603-024-00-5	0.001	Flam. Liq. 2, H225 Carc. 2, H351 Eye Irrit. 2, H319 STOT SE 3, H335
naphthalene (Component) substance with a Community workplace exposure limit	(CAS-No.) 91-20-3 (EC-No.) 202-049-5 (EC Index-No.) 601-052-00-2	0.001	Acute Tox. 4 (Oral), H302 Carc. 2, H351 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
nitrobenzene-D5 (Component) substance listed as REACH Candidate (Nitrobenzene) substance with a Community workplace exposure limit	(CAS-No.) 4165-60-0 (EC-No.) 224-014-3 (EC Index-No.) 609-003-00-7	0.001	Acute Tox. 4 (Oral), H302 Acute Tox. 3 (Dermal), H311 Carc. 2, H351 Repr. 1B, H360F STOT RE 1, H372 Aquatic Chronic 3, H412
pyrene (Component)	(CAS-No.) 129-00-0 (EC-No.) 204-927-3	0.001	Aquatic Acute 1, H400 (M=100) Aquatic Chronic 1, H410 (M=100)
Name	Product identifier	Specific concentration limits	
benzo[a]pyrene (Component)	(CAS-No.) 50-32-8 (EC-No.) 200-028-5 (EC Index-No.) 601-032-00-3	(C >= 0.01) Carc. 1B, H350	

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Name	Product identifier	Specific concentration limits
dibenz(a,h)anthracene (Component)	(CAS-No.) 53-70-3 (EC-No.) 200-181-8 (EC Index-No.) 601-041-00-2	(C >= 0.01) Carc. 1B, H350

### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

- First-aid measures general : Never give anything by mouth to an unconscious person. IF exposed or concerned: Get medical advice/attention.
- First-aid measures after inhalation : Assure fresh air breathing. Allow the victim to rest.
- First-aid measures after skin contact : Rinse skin with water/shower. Remove/Take off immediately all contaminated clothing.
- First-aid measures after eye contact : Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persists.
- First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.

#### 4.2. Most important symptoms and effects, both acute and delayed

No additional information available

#### 4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

- Suitable extinguishing media : Use extinguishing media appropriate for surrounding fire.
- Unsuitable extinguishing media : Do not use a heavy water stream.

#### 5.2. Special hazards arising from the substance or mixture

- Fire hazard : Highly flammable liquid and vapour.
- Explosion hazard : May form flammable/explosive vapour-air mixture. Heat may build pressure, rupturing closed containers, spreading fire and increasing risk of burns and injuries. May form explosive peroxides.

#### 5.3. Advice for firefighters

- Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire fighting water from entering the environment. DO NOT fight fire when fire reaches explosives. Evacuate area.
- 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

##### 6.1.1. For non-emergency personnel

- Emergency procedures : Evacuate unnecessary personnel.

##### 6.1.2. For emergency responders

- Protective equipment : Equip cleanup crew with proper protection.
- Emergency procedures : Ventilate area.

#### 6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters. Avoid release to the environment.

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

- Methods for cleaning up : Take up in absorbent material. Collect spillage.

#### 6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

- Additional hazards when processed : Handle empty containers with care because residual vapours are flammable. Hazardous waste due to potential risk of explosion.
- Precautions for safe handling : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapour. 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. Keep away from sources of ignition - No smoking.
- Hygiene measures : Gently wash with plenty of soap and water. Remove/Take off immediately all contaminated clothing. Wash contaminated clothing before reuse.

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### 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	: Keep in fireproof place. Keep container tightly closed. Keep container tightly closed and in a well-ventilated place. Keep away from any flames or sparking source.
Incompatible products	: Oxidizing agent.
Incompatible materials	: Direct sunlight. Heat sources.

### 7.3. Specific end use(s)

No additional information available

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

benzo[a]pyrene (50-32-8)		
Netherlands	Grenswaarde TGG 8H (mg/m <sup>3</sup> )	550 (Benzo(a)pyreen; Netherlands; Time-weighted average exposure limit 8 h; Public occupational exposure limit value)
1,4-dioxane (123-91-1)		
EU	IOELV TWA (mg/m <sup>3</sup> )	73 mg/m <sup>3</sup> (1,4-Dioxane; EU; Time-weighted average exposure limit 8 h; Indicative occupational exposure limit value)
EU	IOELV TWA (ppm)	20 ppm (1,4-Dioxane; EU; Time-weighted average exposure limit 8 h; Indicative occupational exposure limit value)
Belgium	Limit value (mg/m <sup>3</sup> )	73 mg/m <sup>3</sup> (1,4-Dioxane; Belgium; Time-weighted average exposure limit 8 h)
Belgium	Limit value (ppm)	20 ppm (1,4-Dioxane; Belgium; Time-weighted average exposure limit 8 h)
France	VLE (mg/m <sup>3</sup> )	140 mg/m <sup>3</sup> (1,4-Dioxane; France; Short time value; VL: Valeur non réglementaire indicative)
France	VLE (ppm)	40 ppm (1,4-Dioxane; France; Short time value; VL: Valeur non réglementaire indicative)
France	VME (mg/m <sup>3</sup> )	73 mg/m <sup>3</sup> (1,4-Dioxane; France; Time-weighted average exposure limit 8 h; VRC: Valeur réglementaire contraignante)
France	VME (ppm)	20 ppm (1,4-Dioxane; France; Time-weighted average exposure limit 8 h; VRC: Valeur réglementaire contraignante)
Italy - Portugal - USA ACGIH	ACGIH TWA (ppm)	20 ppm (1,4-Dioxane; USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value)
Netherlands	Grenswaarde TGG 8H (mg/m <sup>3</sup> )	20 mg/m <sup>3</sup> (1,4-Dioxaan; Netherlands; Time-weighted average exposure limit 8 h; Public occupational exposure limit value)
Netherlands	Grenswaarde TGG 8H (ppm)	5.46 ppm (1,4-Dioxaan; Netherlands; Time-weighted average exposure limit 8 h; Public occupational exposure limit value)
United Kingdom	WEL TWA (mg/m <sup>3</sup> )	73 mg/m <sup>3</sup> 1,4-Dioxane; United Kingdom; Time-weighted average exposure limit 8 h; Workplace exposure limit (EH40/2005)
United Kingdom	WEL TWA (ppm)	20 ppm 1,4-Dioxane; United Kingdom; Time-weighted average exposure limit 8 h; Workplace exposure limit (EH40/2005)
naphthalene (91-20-3)		
EU	IOELV TWA (mg/m <sup>3</sup> )	50 mg/m <sup>3</sup> (Naphtalene; EU; Time-weighted average exposure limit 8 h; Indicative occupational exposure limit value)
EU	IOELV TWA (ppm)	10 ppm (Naphtalene; EU; Time-weighted average exposure limit 8 h; Indicative occupational exposure limit value)
Belgium	Limit value (mg/m <sup>3</sup> )	53 mg/m <sup>3</sup> (Naphtalène; Belgium; Time-weighted average exposure limit 8 h)
Belgium	Limit value (ppm)	10 ppm (Naphtalène; Belgium; Time-weighted average exposure limit 8 h)
Belgium	Short time value (mg/m <sup>3</sup> )	80 mg/m <sup>3</sup> (Naphtalène; Belgium; Short time value)
Belgium	Short time value (ppm)	15 ppm (Naphtalène; Belgium; Short time value)

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<b>naphthalene (91-20-3)</b>		
France	VME (mg/m <sup>3</sup> )	50 mg/m <sup>3</sup> (Naphtalène; France; Time-weighted average exposure limit 8 h; VL: Valeur non réglementaire indicative)
France	VME (ppm)	10 ppm (Naphtalène; France; Time-weighted average exposure limit 8 h; VL: Valeur non réglementaire indicative)
Italy - Portugal - USA ACGIH	ACGIH TWA (ppm)	10 ppm (Naphthalene; USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value)
Netherlands	Grenswaarde TGG 8H (mg/m <sup>3</sup> )	50 mg/m <sup>3</sup> (Naftaleen; Netherlands; Time-weighted average exposure limit 8 h; Public occupational exposure limit value)
Netherlands	Grenswaarde TGG 8H (ppm)	9.4 ppm (Naftaleen; Netherlands; Time-weighted average exposure limit 8 h; Public occupational exposure limit value)
Netherlands	Grenswaarde TGG 15MIN (mg/m <sup>3</sup> )	80 mg/m <sup>3</sup> (Naftaleen; Netherlands; Short time value; Public occupational exposure limit value)
Netherlands	Grenswaarde TGG 15MIN (ppm)	15 ppm (Naftaleen; Netherlands; Short time value; Public occupational exposure limit value)
<b>nitrobenzene-D5 (4165-60-0)</b>		
EU	IOELV TWA (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup> (Nitrobenzene; EU; Time-weighted average exposure limit 8 h; Indicative occupational exposure limit value)
EU	IOELV TWA (ppm)	0.2 ppm (Nitrobenzene; EU; Time-weighted average exposure limit 8 h; Indicative occupational exposure limit value)
Belgium	Limit value (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup> (Nitrobenzène; Belgium; Time-weighted average exposure limit 8 h)
Belgium	Limit value (ppm)	0.2 ppm (Nitrobenzène; Belgium; Time-weighted average exposure limit 8 h)
France	VME (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup> (Nitrobenzène; France; Time-weighted average exposure limit 8 h; VRI: Valeur réglementaire indicative)
France	VME (ppm)	0.2 ppm (Nitrobenzène; France; Time-weighted average exposure limit 8 h; VRI: Valeur réglementaire indicative)
Italy - Portugal - USA ACGIH	ACGIH TWA (ppm)	1 ppm (Nitrobenzene; USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value)
Netherlands	Grenswaarde TGG 8H (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup> (Nitrobenzeen; Netherlands; Time-weighted average exposure limit 8 h; Public occupational exposure limit value)
Netherlands	Grenswaarde TGG 8H (ppm)	0.2 ppm (Nitrobenzeen; Netherlands; Time-weighted average exposure limit 8 h; Public occupational exposure limit value)
United Kingdom	WEL TWA (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup> Nitrobenzene; United Kingdom; Time-weighted average exposure limit 8 h; Workplace exposure limit (EH40/2005)
United Kingdom	WEL TWA (ppm)	0.2 ppm Nitrobenzene; United Kingdom; Time-weighted average exposure limit 8 h; Workplace exposure limit (EH40/2005)
<b>Methylene Chloride (75-09-2)</b>		
Belgium	Limit value (mg/m <sup>3</sup> )	177 mg/m <sup>3</sup> (Chlorure de méthylène; Belgium; Time-weighted average exposure limit 8 h)
Belgium	Limit value (ppm)	50 ppm (Chlorure de méthylène; Belgium; Time-weighted average exposure limit 8 h)
France	VLE (mg/m <sup>3</sup> )	356 mg/m <sup>3</sup> (Dichlorométhane; France; Short time value; VRC: Valeur réglementaire contraignante)
France	VLE (ppm)	100 ppm (Dichlorométhane; France; Short time value; VRC: Valeur réglementaire contraignante)
France	VME (mg/m <sup>3</sup> )	178 mg/m <sup>3</sup> (Dichlorométhane; France; Time-weighted average exposure limit 8 h; VRC: Valeur réglementaire contraignante)
France	VME (ppm)	50 ppm (Dichlorométhane; France; Time-weighted average exposure limit 8 h; VRC: Valeur réglementaire contraignante)
Italy - Portugal - USA ACGIH	ACGIH TWA (ppm)	50 ppm (Dichloromethane (Methylene chloride); USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value)

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Methylene Chloride (75-09-2)		
United Kingdom	WEL TWA (mg/m <sup>3</sup> )	350 mg/m <sup>3</sup> Dichloromethane; United Kingdom; Time-weighted average exposure limit 8 h; Workplace exposure limit (EH40/2005)
United Kingdom	WEL TWA (ppm)	100 ppm Dichloromethane; United Kingdom; Time-weighted average exposure limit 8 h; Workplace exposure limit (EH40/2005)
United Kingdom	WEL STEL (mg/m <sup>3</sup> )	1060 mg/m <sup>3</sup> Dichloromethane; United Kingdom; Short time value; Workplace exposure limit (EH40/2005)
United Kingdom	WEL STEL (ppm)	300 ppm Dichloromethane; United Kingdom; Short time value; Workplace exposure limit (EH40/2005)

### 8.2. Exposure controls

Appropriate engineering controls

: Either local exhaust or general room ventilation is usually required.

Personal protective equipment

: Avoid all unnecessary exposure. Gloves. Protective clothing. Protective goggles. Safety glasses.



Hand protection

: Wear chemically resistant protective gloves. Wear suitable gloves resistant to chemical penetration.

Eye protection

: Chemical goggles or safety glasses. Safety glasses.

Skin and body protection

: Wear chemically protective gloves, lab coat or apron to prevent prolonged or repeated skin contact.

Respiratory protection

: Wear appropriate mask.

Other information

: Do not eat, drink or smoke during use.

## SECTION 9: Physical and chemical properties

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

Physical state	: Liquid
Colour	: Colourless.
Odour	: characteristic.
pH	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: Highly flammable liquid and vapour
Relative density	: No data available
Solubility	: No data available
Explosive properties	: May form explosive peroxides.
Oxidising properties	: No data available
Explosive limits	: No data available

### 9.2. Other information

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

No additional information available

### 10.2. Chemical stability

Highly flammable liquid and vapour. May form flammable/explosive vapour-air mixture.

### 10.3. Possibility of hazardous reactions

Reacts vigorously with strong oxidizers and acids.

### 10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures. Open flame. Heat. Sparks. Overheating.

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### 10.5. Incompatible materials

Oxidizing agent.

### 10.6. Hazardous decomposition products

May release flammable gases. May form explosive peroxides.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity : Not classified

<b>anthracene (120-12-7)</b>	
LD50 oral rat	> 16000 mg/kg (Rat)
<b>1,4-dioxane (123-91-1)</b>	
LD50 oral rat	> 5000 mg/kg (Rat)
LD50 dermal rabbit	7600 mg/kg (Rabbit)
LC50 inhalation rat (mg/l)	51 mg/l/4h (Rat)
LC50 inhalation rat (ppm)	14250 ppm/4h (Rat)
<b>fluoranthene (206-44-0)</b>	
LD50 oral rat	2000 mg/kg (Rat)
LD50 dermal rabbit	3180 mg/kg (Rabbit)
ATE CLP (oral)	2000 mg/kg bodyweight
ATE CLP (dermal)	3180 mg/kg bodyweight
<b>naphthalene (91-20-3)</b>	
LD50 oral rat	> 1100 mg/kg (Rat)
LD50 dermal rat	> 2500 mg/kg (Rat)
LD50 dermal rabbit	> 20000 mg/kg (Rabbit)
ATE CLP (oral)	500 mg/kg bodyweight
<b>nitrobenzene-D5 (4165-60-0)</b>	
LD50 oral rat	855 mg/kg bodyweight (Rat; Experimental value)
LD50 dermal rabbit	760 mg/kg bodyweight (Rabbit; Experimental value)
ATE CLP (oral)	855 mg/kg bodyweight
ATE CLP (dermal)	760 mg/kg bodyweight
<b>pyrene (129-00-0)</b>	
LD50 oral rat	2700 mg/kg (Rat)
ATE CLP (oral)	2700 mg/kg bodyweight
<b>Methylene Chloride (75-09-2)</b>	
LD50 oral rat	> 2000 mg/kg (Rat; Literature study)
LD50 dermal rabbit	> 2000 mg/kg (Rabbit; Literature study)

Skin corrosion/irritation	: Not classified Based on available data, the classification criteria are not met
Serious eye damage/irritation	: Not classified Based on available data, the classification criteria are not met
Respiratory or skin sensitisation	: Not classified Based on available data, the classification criteria are not met
Germ cell mutagenicity	: Not classified Based on available data, the classification criteria are not met
Carcinogenicity	: Suspected of causing cancer. May cause cancer
Reproductive toxicity	: Not classified Based on available data, the classification criteria are not met
STOT-single exposure	: Not classified Based on available data, the classification criteria are not met
STOT-repeated exposure	: Not classified Based on available data, the classification criteria are not met
Aspiration hazard	: Not classified Based on available data, the classification criteria are not met
Potential adverse human health effects and symptoms	: Based on available data, the classification criteria are not met.

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### SECTION 12: Ecological information

#### 12.1. Toxicity

Ecology - water : Harmful to aquatic life with long lasting effects.

<b>anthracene (120-12-7)</b>	
LC50 fish 2	0.00127 mg/l (LC50; 96 h)
EC50 Daphnia 2	0.0012 mg/l (EC50; 24 h)
<b>benzo[a]anthracene (56-55-3)</b>	
LC50 fish 1	0.0018 mg/l (LC50; 65 h)
EC50 Daphnia 1	0.01 mg/l (EC50; 96 h)
<b>benzo[a]pyrene (50-32-8)</b>	
LC50 fish 1	0.0056 mg/l (LC50; 38 h)
EC50 Daphnia 1	0.005 mg/l (LC50; 96 h)
Threshold limit algae 1	0.015 mg/l (EC50; 72 h)
<b>benzo(ghi)perylene (191-24-2)</b>	
EC50 Daphnia 1	0.0002 mg/l (LC50; 14 h)
<b>benzo[k]fluoranthene (207-08-9)</b>	
EC50 Daphnia 1	0.0048 mg/l (LC50; 23 h)
<b>chrysene (218-01-9)</b>	
EC50 Daphnia 1	0.0007 mg/l (LC50; 24 h)
Threshold limit algae 1	0.001 mg/l (EC0)
<b>dibenz(a,h)anthracene (53-70-3)</b>	
EC50 Daphnia 1	0.0004 mg/l (LC50; 3 h)
<b>1,4-dioxane (123-91-1)</b>	
EC50 Daphnia 1	8450 mg/l (EC50; 24 h)
LC50 fish 2	13000 mg/l (LC50; 96 h)
Threshold limit algae 2	5600 mg/l (EC0; 192 h)
<b>fluoranthene (206-44-0)</b>	
LC50 fish 1	0.0077 mg/l (LC50; 96 h)
EC50 Daphnia 1	< 0.1 mg/l (EC50; 72 h)
Threshold limit algae 1	54 mg/l (EC50; 96 h)
<b>naphthalene (91-20-3)</b>	
EC50 Daphnia 1	2.16 mg/l (EC50; 48 h; Daphnia magna)
LC50 fish 2	0.11 mg/l (LC50; 96 h; Oncorhynchus mykiss)
Threshold limit algae 1	0.4 mg/l (EC50; 72 h; Skeletonema costatum)
<b>nitrobenzene-D5 (4165-60-0)</b>	
LC50 fish 2	92 mg/l (LC50; OECD 203: Fish, Acute Toxicity Test; 96 h; Brachydanio rerio; Flow-through system; Fresh water; Experimental value)
<b>pyrene (129-00-0)</b>	
EC50 Daphnia 1	> 0.0057 mg/l (LC50; 3.4 h)
EC50 other aquatic organisms 1	1.6 mg/l (3 h; Chlorella vulgaris)
LC50 fish 2	0.0026 mg/l (LC50; 96 h)
<b>Methylene Chloride (75-09-2)</b>	
LC50 fish 1	193 mg/l (LC50; 96 h; Pimephales promelas)
EC50 Daphnia 1	168.2 mg/l (EC50; 48 h)

#### 12.2. Persistence and degradability

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Persistence and degradability	May cause long-term adverse effects in the environment.
<b>anthracene (120-12-7)</b>	
Persistence and degradability	Not readily biodegradable in water. Forming sediments in water.
ThOD	3.41 g O <sub>2</sub> /g substance
BOD (% of ThOD)	0.02
<b>benzo[a]anthracene (56-55-3)</b>	
Persistence and degradability	Not readily biodegradable in water. Photolysis in water. Ozonation in water. Forming sediments in water. Biodegradability in soil: no data available. Inhibits biodegradation processes in the soil. Adsorbs into the soil. Photodegradation in the air.
ThOD	2.95 g O <sub>2</sub> /g substance



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<b>benzo[a]pyrene (50-32-8)</b>	
Persistence and degradability	Not readily biodegradable in water. Forming sediments in water. Biodegradable in the soil. Adsorbs into the soil.
Chemical oxygen demand (COD)	2.92 g O <sub>2</sub> /g substance
ThOD	2.92 g O <sub>2</sub> /g substance
<b>benzo(ghi)perylene (191-24-2)</b>	
Persistence and degradability	Not readily biodegradable in water. Forming sediments in water. Non degradable in the soil. Adsorbs into the soil.
ThOD	2.9 g O <sub>2</sub> /g substance
<b>benzo[k]fluoranthene (207-08-9)</b>	
Persistence and degradability	Not readily biodegradable in water. Ozonation in water. Forming sediments in water. Non degradable in the soil. Adsorbs into the soil.
ThOD	2.92 g O <sub>2</sub> /g substance
<b>chrysene (218-01-9)</b>	
Persistence and degradability	Not readily biodegradable in water. Forming sediments in water. Non degradable in the soil. Adsorbs into the soil.
<b>dibenz(a,h)anthracene (53-70-3)</b>	
Persistence and degradability	Not readily biodegradable in water. Ozonation in water. Forming sediments in water. Non degradable in the soil. Adsorbs into the soil.
<b>1,4-dioxane (123-91-1)</b>	
Persistence and degradability	Not readily biodegradable in water. Non degradable in the soil. Photooxidation in the air.
Biochemical oxygen demand (BOD)	0 g O <sub>2</sub> /g substance
ThOD	1.8 g O <sub>2</sub> /g substance
BOD (% of ThOD)	0
<b>fluoranthene (206-44-0)</b>	
Persistence and degradability	Forming sediments in water.
<b>naphthalene (91-20-3)</b>	
Persistence and degradability	Readily biodegradable in water. Forming sediments in water. Biodegradable in the soil. Adsorbs into the soil. Photolysis in the air.
Biochemical oxygen demand (BOD)	0 g O <sub>2</sub> /g substance
Chemical oxygen demand (COD)	0.22 g O <sub>2</sub> /g substance
ThOD	2.99 g O <sub>2</sub> /g substance
<b>nitrobenzene-D5 (4165-60-0)</b>	
Persistence and degradability	Not readily biodegradable in water. Biodegradable in the soil. Low potential for adsorption in soil.
Biochemical oxygen demand (BOD)	0 g O <sub>2</sub> /g substance
ThOD	1.95 g O <sub>2</sub> /g substance
BOD (% of ThOD)	0
<b>pyrene (129-00-0)</b>	
Persistence and degradability	Not readily biodegradable in water. Photolysis in water. Ozonation in water. Forming sediments in water. Non degradable in the soil. Adsorbs into the soil. Photodegradation in the air.
<b>Methylene Chloride (75-09-2)</b>	
Persistence and degradability	Not readily biodegradable in water. Biodegradable in the soil.
<b>12.3. Bioaccumulative potential</b>	
<b>Custom SIM ICV Mix</b>	
Bioaccumulative potential	Not established.
<b>anthracene (120-12-7)</b>	
BCF fish 1	903 - 2820 (BCF)
BCF fish 2	9200 (BCF)
BCF other aquatic organisms 1	7770 (BCF; 24 h; Chlorella sp.)
BCF other aquatic organisms 2	10500 (BCF)
Log Pow	4.5
Bioaccumulative potential	High potential for bioaccumulation (BCF > 5000).
<b>benzo[a]anthracene (56-55-3)</b>	
BCF fish 1	350 (BCF; 72 h)
BCF other aquatic organisms 1	1106 (BCF; 24 h)
BCF other aquatic organisms 2	18000 (BCF; 192 h)
Log Pow	5.61 - 5.79

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<b>benzo[a]anthracene (56-55-3)</b>	
Bioaccumulative potential	High potential for bioaccumulation (BCF > 5000).
<b>benzo[a]pyrene (50-32-8)</b>	
BCF fish 1	480 (BCF; 72 h)
BCF fish 2	70.7 (BCF; 168 h; Salmo salar)
BCF other aquatic organisms 1	3000 (BCF; 192 h)
BCF other aquatic organisms 2	1.5 (BCF; 24 h)
Log Pow	5.97 - 6.06
Bioaccumulative potential	High potential for bioaccumulation (Log Kow > 5).
<b>benzo(ghi)perylene (191-24-2)</b>	
Log Pow	6.51 - 7.23 (Calculated)
Bioaccumulative potential	Bioaccumable.
<b>benzo[k]fluoranthene (207-08-9)</b>	
BCF fish 1	8750 (BCF)
BCF other aquatic organisms 1	0.0013 mg/kg (BCF)
BCF other aquatic organisms 2	37000 (BCF)
Log Pow	6.84
Bioaccumulative potential	High potential for bioaccumulation (BCF > 5000).
<b>chrysene (218-01-9)</b>	
BCF other aquatic organisms 1	4440 (BCF)
Log Pow	5.81 - 5.86 (Experimental value)
Bioaccumulative potential	High potential for bioaccumulation (Log Kow > 5).
<b>dibenz(a,h)anthracene (53-70-3)</b>	
Log Pow	5.97 - 6.84
<b>1,4-dioxane (123-91-1)</b>	
BCF fish 1	0.2 - 0.7 (BCF)
Log Pow	-0.27 (Experimental value)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).
<b>fluoranthene (206-44-0)</b>	
BCF fish 1	3981 (BCF)
BCF fish 2	6110 (BCF)
BCF other aquatic organisms 1	10000 (BCF; 192 h)
BCF other aquatic organisms 2	695 (BCF; 48 h)
Log Pow	5.33
Bioaccumulative potential	High potential for bioaccumulation (BCF > 5000).
<b>naphthalene (91-20-3)</b>	
BCF fish 1	23 - 168 (BCF; 8 weeks; Cyprinus carpio)
Log Pow	3.3 (Experimental value)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).
<b>nitrobenzene-D5 (4165-60-0)</b>	
BCF fish 1	15 (BCF; 672 h; Pimephales promelas)
BCF fish 2	1.6 - 7.7 (BCF; OECD 305: Bioconcentration: Flow-Through Fish Test; 42 days; Cyprinus carpio; Flow-through system; Fresh water; Experimental value; Non deuterium form)
BCF other aquatic organisms 1	24 (BCF)
Log Pow	1.85 (Calculated; 1.86; Experimental value; EU Method A.8: Partition Coefficient)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).
<b>pyrene (129-00-0)</b>	
BCF fish 1	600 - 970 (BCF)
BCF fish 2	4810 (BCF)
BCF other aquatic organisms 1	2692 (BCF)
Log Pow	4.88 - 5.32
Bioaccumulative potential	High potential for bioaccumulation (Log Kow > 5).
<b>Methylene Chloride (75-09-2)</b>	
BCF fish 1	2 - 40 (BCF)
Log Pow	1.25 (Experimental value)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

### 12.4. Mobility in soil

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<b>1,4-dioxane (123-91-1)</b>	
Surface tension	0.037 N/m (20 °C)
<b>naphthalene (91-20-3)</b>	
Surface tension	0.03 N/m (100 °C)
<b>nitrobenzene-D5 (4165-60-0)</b>	
Log Koc	Koc,Other; 118; Calculated value; log Koc; Other; 2.07; Calculated value
<b>Methylene Chloride (75-09-2)</b>	
Surface tension	0.028 N/m (20 °C)
Ecology - soil	May be harmful to plant growth, blooming and fruit formation.

### 12.5. Results of PBT and vPvB assessment

No additional information available

### 12.6. Other adverse effects

Additional information : Avoid release to the environment

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Product/Packaging disposal recommendations : Dispose in a safe manner in accordance with local/national regulations.  
Additional information : Handle empty containers with care because residual vapours are flammable. Hazardous waste due to potential risk of explosion.  
Ecology - waste materials : Avoid release to the environment.

## SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

### 14.1. UN number

UN-No. (ADR) : 2810  
UN-No. (IATA) : 2810  
UN-No. (IMDG) : 2810  
UN-No. (ADN) : 2810

### 14.2. UN proper shipping name

Proper Shipping Name (ADR) : TOXIC LIQUID, ORGANIC, N.O.S.  
Proper Shipping Name (IATA) : Toxic liquid, organic, n.o.s.  
Proper Shipping Name (IMDG) : TOXIC LIQUID, ORGANIC, N.O.S.  
Proper Shipping Name (ADN) : TOXIC LIQUID, ORGANIC, N.O.S.  
Transport document description (ADR) : UN 2810 TOXIC LIQUID, ORGANIC, N.O.S., 6.1, III, (E)

### 14.3. Packing group

Class (ADR) : 6.1  
Classification code (ADR) : T1  
Class (IATA) : 6.1  
Class (IMDG) : 6.1  
Class (ADN) : 6.1  
Classification code (ADN) : T1  
Danger labels (ADR) : 6.1



Division (IATA) : 6.1  
Hazard labels (IATA) : 6.1



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Danger labels (IMDG) : 6.1



Danger labels (ADN) : 6.1



### 14.4. Packing group

Packing group (ADR) : III  
Packing group (IATA) : III  
Packing group (IMDG) : III  
Packing group (ADN) : III

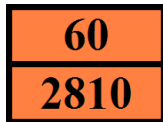
### 14.5. Environmental hazards

Other information : No supplementary information available.

### 14.6. Special precautions for user

#### 14.6.1. Overland transport

Hazard identification number (Kemler No.) : 60  
Classification code (ADR) : T1  
Orange plates :



Special provisions (ADR) : 274, 614  
Transport category (ADR) : 2  
Tunnel restriction code (ADR) : E  
Limited quantities (ADR) : 5l  
Excepted quantities (ADR) : E1  
EAC code : 2X  
APP code : B

#### 14.6.2. Transport by sea

Special provisions (IMDG) : 223, 274  
Limited quantities (IMDG) : 5 L  
Excepted quantities (IMDG) : E1  
Packing instructions (IMDG) : P001, LP01  
IBC packing instructions (IMDG) : IBC03  
Tank instructions (IMDG) : T7  
Tank special provisions (IMDG) : TP1, TP28  
EmS-No. (Fire) : F-A  
EmS-No. (Spillage) : S-A  
Stowage category (IMDG) : A  
Properties and observations (IMDG) : Toxic if swallowed, by skin contact or by inhalation.

#### 14.6.3. Air transport

CAO packing instructions (IATA) : 663  
CAO max net quantity (IATA) : 220L  
PCA packing instructions (IATA) : 655  
PCA Limited quantities (IATA) : Y642  
PCA limited quantity max net quantity (IATA) : 2L  
PCA max net quantity (IATA) : 60L  
PCA Excepted quantities (IATA) : E1  
Special provisions (IATA) : A3, A4, A137  
ERG code (IATA) : 6L

#### 14.6.4. Inland waterway transport

Special provisions (ADN) : 274, 614, 802

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Limited quantities (ADN)	: 5 L
Excepted quantities (ADN)	: E1
Carriage permitted (ADN)	: T
Equipment required (ADN)	: PP, EP, TOX, A
Ventilation (ADN)	: VE02
Number of blue cones/lights (ADN)	: 0
Carriage prohibited (ADN)	: No

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

#### 15.1.1. EU-Regulations

Contains no REACH substances with Annex XVII restrictions

Contains no substance on the REACH candidate list  $\geq 0,1$  % / SCL

Contains no REACH Annex XIV substances

#### 15.1.2. National regulations

##### Germany

Water hazard class (WGK) : 2 - hazard to waters

### 15.2. Chemical safety assessment

No chemical safety assessment has been carried out

## SECTION 16: Other information

Data sources : REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.

Other information : None.

PHV SDS EU

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