

# PNA Spike Mix

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

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

#### 1.1. Product identifier

Product form : Mixture  
 Product name : PNA Spike Mix  
 Product code : AL0-130544

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

Use of the substance/mixture : Certified reference material for laboratory use only

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

Phenova  
 6390 Joyce Dr. Suite 100  
 Golden, CO 80403 - 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

##### GHS-US classification

Skin Sens. 1	H317
Muta. 1B	H340
Carc. 1A	H350

Full text of H statements : see section 16

#### 2.2. Label elements

##### GHS-US labeling

Hazard pictograms (GHS-US) :



Signal word (GHS-US) :

Danger

Hazard statements (GHS-US) :

H317 - May cause an allergic skin reaction  
 H340 - May cause genetic defects  
 H350 - May cause cancer

Precautionary statements (GHS-US) :

P201 - Obtain special instructions before use.  
 P202 - Do not handle until all safety precautions have been read and understood.  
 P261 - Avoid breathing dust/fume/gas/mist/vapors/spray.  
 P272 - Contaminated work clothing must not be allowed out of the workplace  
 P280 - Wear protective gloves/protective clothing/eye protection/face protection.  
 P302+P352 - If on skin: Wash with plenty of water  
 P308+P313 - If exposed or concerned: Get medical advice/attention.  
 P321 - Specific treatment (see supplemental first aid instruction on this label)  
 P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.  
 P363 - Wash contaminated clothing before reuse.  
 P405 - Store locked up.  
 P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation

#### 2.3. Other hazards

No additional information available

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

No data available

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### SECTION 3: Composition/Information on ingredients

#### 3.1. Substances

Not applicable

#### 3.2. Mixtures

Name	Product identifier	%	GHS-US classification
Methylene Chloride (Component)	(CAS-No.) 75-09-2	96.6	Carc. 1B, H350
benzo[a]anthracene (Component)	(CAS-No.) 56-55-3	0.2	Carc. 1B, H350 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
benzo[a]pyrene (Component)	(CAS-No.) 50-32-8	0.2	Skin Sens. 1, H317 Muta. 1B, H340 Carc. 1A, H350 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
Benzo(b)fluoranthene (Component)	(CAS-No.) 205-99-2	0.2	Carc. 1B, H350 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
benzo[k]fluoranthene (Component)	(CAS-No.) 207-08-9	0.2	Carc. 1B, H350 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
chrysene (Component)	(CAS-No.) 218-01-9	0.2	Carc. 2, H351
dibenz(a,h)anthracene (Component)	(CAS-No.) 53-70-3	0.2	Carc. 1B, H350 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
indeno(1,2,3-cd)pyrene (Component)	(CAS-No.) 193-39-5	0.2	Carc. 1B, H350
naphthalene (Component)	(CAS-No.) 91-20-3	0.2	Acute Tox. 4 (Oral), H302 Carc. 1B, H350 Aquatic Acute 1, H400 Aquatic Chronic 1, H410

### 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 : Allow victim to breathe fresh air. Allow the victim to rest.
- First-aid measures after skin contact : Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse.
- 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

No additional information available

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

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### 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

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 vapor. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Eliminate all ignition sources if safe to do so.

Hygiene measures : Gently wash with plenty of soap and water. Remove/Take off immediately all contaminated clothing. Wash contaminated clothing before reuse.

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

Storage conditions : Keep container closed when not in use. Keep container tightly closed and in a well-ventilated place. Keep away from any flames or sparking source.

Incompatible materials : Direct sunlight.

#### 7.3. Specific end use(s)

No additional information available

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

PNA Spike Mix		
USA ACGIH	ACGIH TWA (ppm)	50 ppm
USA ACGIH	Remark (ACGIH)	COHb-emia; CNS impair
USA OSHA	Remark (OSHA)	(2) See Table Z-2.
naphthalene (91-20-3)		
USA ACGIH	ACGIH TWA (ppm)	10 ppm (Naphthalene; USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value)
USA ACGIH	Remark (ACGIH)	Hematologic eff; URT & eye irr; Skin; A3 (Confirmed Animal Carcinogen with Unknown Relevance to Humans: The agent is carcinogenic in experimental animals at a relatively high dose, by route(s) of administration, at site(s), of histologic type(s), or by mechanism(s) that may not be relevant to worker exposure. Available epidemiologic studies do not confirm an increased risk of cancer in exposed humans. Available evidence does not suggest that the agent is likely to cause cancer in humans except under uncommon or unlikely routes or levels of exposure)
USA OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	50 mg/m <sup>3</sup>
USA OSHA	OSHA PEL (TWA) (ppm)	10 ppm

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Methylene Chloride (75-09-2)		
USA ACGIH	ACGIH TWA (ppm)	50 ppm (Dichloromethane (Methylene chloride); USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value)
USA ACGIH	Remark (ACGIH)	COHb-emia; CNS impair
USA OSHA	Remark (OSHA)	(2) See Table Z-2.

### 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
- Color : Colorless.
- Odor : characteristic.
- Odor threshold : No data available
- pH : No data available
- Relative evaporation rate (butyl acetate=1) : 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) : No data available
- Vapor pressure : No data available
- Relative vapor density at 20 °C : No data available
- Relative density : No data available
- Solubility : No data available
- Log Pow : No data available
- Log Kow : No data available
- Viscosity, kinematic : No data available
- Viscosity, dynamic : No data available
- Explosive properties : No data available
- Oxidizing properties : No data available
- Explosion limits : No data available

### 9.2. Other information

No additional information available

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### SECTION 10: Stability and reactivity

#### 10.1. Reactivity

No additional information available

#### 10.2. Chemical stability

Not established.

#### 10.3. Possibility of hazardous reactions

Not established.

#### 10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures.

#### 10.5. Incompatible materials

No additional information available

#### 10.6. Hazardous decomposition products

No additional information available

### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects

Acute toxicity : Not classified

<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 body weight

<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  
Serious eye damage/irritation : Not classified  
Respiratory or skin sensitization : May cause an allergic skin reaction.  
Germ cell mutagenicity : May cause genetic defects.  
Carcinogenicity : May cause cancer.

<b>benzo[a]anthracene (56-55-3)</b>	
IARC group	2B - Possibly carcinogenic to humans
National Toxicology Program (NTP) Status	3 - Reasonably anticipated to be Human Carcinogen

<b>benzo[a]pyrene (50-32-8)</b>	
IARC group	1 - Carcinogenic to humans
National Toxicology Program (NTP) Status	3 - Reasonably anticipated to be Human Carcinogen

<b>Benzo(b)fluoranthene (205-99-2)</b>	
IARC group	2B - Possibly carcinogenic to humans
National Toxicology Program (NTP) Status	3 - Reasonably anticipated to be Human Carcinogen

<b>benzo[k]fluoranthene (207-08-9)</b>	
IARC group	2B - Possibly carcinogenic to humans
National Toxicology Program (NTP) Status	3 - Reasonably anticipated to be Human Carcinogen

<b>chrysene (218-01-9)</b>	
IARC group	2B - Possibly carcinogenic to humans

<b>dibenz(a,h)anthracene (53-70-3)</b>	
IARC group	2A - Probably carcinogenic to humans
National Toxicology Program (NTP) Status	3 - Reasonably anticipated to be Human Carcinogen

<b>indeno(1,2,3-cd)pyrene (193-39-5)</b>	
IARC group	2B - Possibly carcinogenic to humans

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<b>indeno(1,2,3-cd)pyrene (193-39-5)</b>	
National Toxicology Program (NTP) Status	3 - Reasonably anticipated to be Human Carcinogen
<b>naphthalene (91-20-3)</b>	
IARC group	2B - Possibly carcinogenic to humans
National Toxicology Program (NTP) Status	3 - Reasonably anticipated to be Human Carcinogen
<b>Methylene Chloride (75-09-2)</b>	
IARC group	2A - Probably carcinogenic to humans
National Toxicology Program (NTP) Status	3 - Reasonably anticipated to be Human Carcinogen

Reproductive toxicity	: Not classified Based on available data, the classification criteria are not met
Specific target organ toxicity – single exposure	: Not classified
Specific target organ toxicity – 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.

### SECTION 12: Ecological information

#### 12.1. Toxicity

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

<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[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>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>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

<b>PNA Spike Mix</b>	
Persistence and degradability	May cause long-term adverse effects in the environment.
<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(b)fluoranthene (205-99-2)</b>	
Persistence and degradability	Not readily biodegradable in water. Photolysis 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>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>indeno(1,2,3-cd)pyrene (193-39-5)</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>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>Methylene Chloride (75-09-2)</b>	
Persistence and degradability	Not readily biodegradable in water. Biodegradable in the soil.

### 12.3. Bioaccumulative potential

<b>PNA Spike Mix</b>	
Bioaccumulative potential	Not established.
<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
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(b)fluoranthene (205-99-2)</b>	
BCF other aquatic organisms 1	2800 (BCF; 168 h)
Log Pow	6.57
Bioaccumulative potential	High potential for bioaccumulation (Log Kow > 5).
<b>benzo[k]fluoranthene (207-08-9)</b>	
BCF fish 1	8750 (BCF)

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<b>benzo[k]fluoranthene (207-08-9)</b>	
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>indeno(1,2,3-cd)pyrene (193-39-5)</b>	
BCF other aquatic organisms 1	10000 (BCF; 240 h)
Log Pow	6.6 - 7.7
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>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

<b>naphthalene (91-20-3)</b>	
Surface tension	0.03 N/m (100 °C)

<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. Other adverse effects

Other 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.

Ecology - waste materials : Avoid release to the environment.

## SECTION 14: Transport information

In accordance with DOT

Transport document description : UN2810 Toxic, liquids, organic, n.o.s. (benzo[a]pyrene), 6.1, III

UN-No.(DOT) : 2810

DOT NA no. : UN2810

Proper Shipping Name (DOT) : Toxic, liquids, organic, n.o.s.  
benzo[a]pyrene

Class (DOT) : 6.1 - Class 6.1 - Poisonous materials 49 CFR 173.132

Hazard labels (DOT) : 6.1 - Poison



DOT Symbols : G - Identifies PSN requiring a technical name



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Packing group (DOT)	: III - Minor Danger
DOT Special Provisions (49 CFR 172.102)	: IB3 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1 and 31HA2, 31HB2, 31HN2, 31HD2 and 31HH2). 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, except for UN2672 (also see Special Provision IP8 in Table 2 for UN2672). T7 - 4 178.274(d)(2) Normal..... 178.275(d)(3) TP1 - The maximum degree of filling must not exceed the degree of filling determined by the following: Degree of filling = $97 / 1 + a (tr - tf)$ Where: tr is the maximum mean bulk temperature during transport, and tf is the temperature in degrees celsius of the liquid during filling. TP28 - A portable tank having a minimum test pressure of 2.65 bar (265 kPa) may be used provided the calculated test pressure is 2.65 bar or less based on the MAWP of the hazardous material, as defined in 178.275 of this subchapter, where the test pressure is 1.5 times the MAWP.
DOT Packaging Exceptions (49 CFR 173.xxx)	: 153
DOT Packaging Non Bulk (49 CFR 173.xxx)	: 203
DOT Packaging Bulk (49 CFR 173.xxx)	: 241
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27)	: 60 L
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75)	: 220 L
DOT Vessel Stowage Location	: A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel.
DOT Vessel Stowage Other	: 40 - Stow "clear of living quarters"

### Additional information

Emergency Response Guide (ERG) Number	: 153
Other information	: No supplementary information available.

### ADR

Transport document description	:
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### Transport by sea

UN-No. (IMDG)	: 2810
Proper Shipping Name (IMDG)	: TOXIC LIQUID, ORGANIC, N.O.S.
Class (IMDG)	: 6.1 - Toxic substances
Packing group (IMDG)	: III - substances presenting low danger

### Air transport

UN-No. (IATA)	: 2810
Proper Shipping Name (IATA)	: Toxic liquid, organic, n.o.s.
Class (IATA)	: 6.1 - Toxic Substances
Packing group (IATA)	: III - Minor Danger

## SECTION 15: Regulatory information

### 15.1. US Federal regulations

#### benzo[a]anthracene (56-55-3)

Listed on the United States TSCA (Toxic Substances Control Act) inventory  
Subject to reporting requirements of United States SARA Section 313

CERCLA RQ	10 lb
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#### benzo[a]pyrene (50-32-8)

Listed on the United States TSCA (Toxic Substances Control Act) inventory  
Subject to reporting requirements of United States SARA Section 313

CERCLA RQ	1 lb
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#### benzo[e]acephenanthrylene (205-99-2)

Not listed on the United States TSCA (Toxic Substances Control Act) inventory  
Subject to reporting requirements of United States SARA Section 313

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<b>benzo[e]acephenanthrylene (205-99-2)</b>	
CERCLA RQ	1 lb
<b>benzo[k]fluoranthene (207-08-9)</b>	
Not listed on the United States TSCA (Toxic Substances Control Act) inventory Subject to reporting requirements of United States SARA Section 313	
CERCLA RQ	5000 lb
<b>chrysene (218-01-9)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory Subject to reporting requirements of United States SARA Section 313	
CERCLA RQ	100 lb
<b>dibenz(a,h)anthracene (53-70-3)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory Subject to reporting requirements of United States SARA Section 313	
CERCLA RQ	1 lb
<b>indeno(1,2,3-cd)pyrene (193-39-5)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory Subject to reporting requirements of United States SARA Section 313	
CERCLA RQ	100 lb
<b>naphthalene (91-20-3)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory Subject to reporting requirements of United States SARA Section 313	
CERCLA RQ	100 lb
SARA Section 313 - Emission Reporting	1 %
<b>dichloromethane (75-09-2)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory Subject to reporting requirements of United States SARA Section 313	
EPA TSCA Regulatory Flag	R - R - indicates a substance that is the subject of a TSCA section 6 risk management rule.
CERCLA RQ	1000 lb
SARA Section 313 - Emission Reporting	1 %

### 15.2. International regulations

#### CANADA

<b>benzo[a]anthracene (56-55-3)</b>	
Listed on the Canadian NDSL (Non-Domestic Substances List)	
<b>benzo[a]pyrene (50-32-8)</b>	
Listed on the Canadian DSL (Domestic Substances List)	
<b>benzo[e]acephenanthrylene (205-99-2)</b>	
<b>benzo[k]fluoranthene (207-08-9)</b>	
<b>chrysene (218-01-9)</b>	
Listed on the Canadian DSL (Domestic Substances List)	
<b>dibenz(a,h)anthracene (53-70-3)</b>	
Listed on the Canadian NDSL (Non-Domestic Substances List)	
<b>indeno(1,2,3-cd)pyrene (193-39-5)</b>	
Listed on the Canadian NDSL (Non-Domestic Substances List)	
<b>naphthalene (91-20-3)</b>	
Listed on the Canadian DSL (Domestic Substances List)	
<b>dichloromethane (75-09-2)</b>	
Listed on the Canadian DSL (Domestic Substances List)	

#### EU-Regulations

<b>benzo[a]pyrene (50-32-8)</b>
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**benzo[e]acephenanthrylene (205-99-2)**

**benzo[k]fluoranthene (207-08-9)**

**chrysene (218-01-9)**

**dibenz(a,h)anthracene (53-70-3)**

**indeno(1,2,3-cd)pyrene (193-39-5)**

**naphthalene (91-20-3)**

**dichloromethane (75-09-2)**

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

Muta. 1B	H340
Carc. 1B	H350
Aquatic Acute 1	H400
Aquatic Chronic 1	H410

Full text of H statements : see section 16

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

Not classified

#### 15.2.2. National regulations

**benzo[a]anthracene (56-55-3)**

Listed on IARC (International Agency for Research on Cancer)  
Listed as carcinogen on NTP (National Toxicology Program)

**benzo[a]pyrene (50-32-8)**

Listed on IARC (International Agency for Research on Cancer)  
Listed as carcinogen on NTP (National Toxicology Program)

**benzo[e]acephenanthrylene (205-99-2)**

Listed on IARC (International Agency for Research on Cancer)  
Listed as carcinogen on NTP (National Toxicology Program)  
Not listed on the Canadian DSL (Domestic Substances List)/NDSL (Non-Domestic Substances List)

**benzo[k]fluoranthene (207-08-9)**

Listed on IARC (International Agency for Research on Cancer)  
Listed as carcinogen on NTP (National Toxicology Program)  
Not listed on the Canadian DSL (Domestic Substances List)/NDSL (Non-Domestic Substances List)

**chrysene (218-01-9)**

Listed on IARC (International Agency for Research on Cancer)

**dibenz(a,h)anthracene (53-70-3)**

Listed on IARC (International Agency for Research on Cancer)  
Listed as carcinogen on NTP (National Toxicology Program)

**indeno(1,2,3-cd)pyrene (193-39-5)**

Listed on IARC (International Agency for Research on Cancer)  
Listed as carcinogen on NTP (National Toxicology Program)

**naphthalene (91-20-3)**

Listed on IARC (International Agency for Research on Cancer)  
Listed as carcinogen on NTP (National Toxicology Program)  
Listed on EPA Hazardous Air Pollutant (HAPS)

**dichloromethane (75-09-2)**

Listed on IARC (International Agency for Research on Cancer)  
Listed as carcinogen on NTP (National Toxicology Program)  
Listed on EPA Hazardous Air Pollutant (HAPS)

#### 15.3. US State regulations

**PNA Spike Mix()**

U.S. - California - Proposition 65 - Carcinogens List	No
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<b>PNA Spike Mix()</b>				
U.S. - California - Proposition 65 - Developmental Toxicity		No		
U.S. - California - Proposition 65 - Reproductive Toxicity - Female		No		
U.S. - California - Proposition 65 - Reproductive Toxicity - Male		No		
<b>benzo[a]anthracene (56-55-3)</b>				
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)
Yes	No	No	No	
<b>benzo[a]pyrene (50-32-8)</b>				
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)
Yes	No	No	No	
<b>benzo[e]acephenanthrylene (205-99-2)</b>				
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)
Yes	No	No	No	
<b>benzo[k]fluoranthene (207-08-9)</b>				
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)
Yes	No	No	No	
<b>chrysene (218-01-9)</b>				
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)
Yes	No	No	No	
<b>dibenz(a,h)anthracene (53-70-3)</b>				
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)
Yes	No	No	No	
<b>indeno(1,2,3-cd)pyrene (193-39-5)</b>				
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)
Yes	No	No	No	
<b>naphthalene (91-20-3)</b>				
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)
Yes	No	No	No	

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dichloromethane (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)
Yes	No	No	No	

### 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, labeling 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.

### Hazard Rating

PHV SDS US

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