

SAFETY DATA SHEET

Polynuclear Aromatic Hydrocarbon Standard

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

1.1 Product identifier

Product name : Polynuclear Aromatic Hydrocarbon Standard
Part no. : 8500-6035

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

Identified uses : Reagents and Standards for Analytical Chemistry Laboratory Use
 1 x 1 ml vial
Uses advised against : None known.

1.3 Details of the supplier of the safety data sheet

Agilent Technologies LDA UK Ltd.
 5500 Lakeside Cheadle Royal Business Park,
 Cheadle, Cheshire, SK8 3GR
 United Kingdom
 Tel: +44 (0) 345 712 5292
e-mail address of person responsible for this SDS : pdl-msds_author@agilent.com

1.4 Emergency telephone number

Emergency telephone number (with hours of operation) : CHEMTREC®: +44 20 3807 3798

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Product definition : Mixture

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

H225	FLAMMABLE LIQUIDS	Category 2
H302	ACUTE TOXICITY (oral)	Category 4
H312	ACUTE TOXICITY (dermal)	Category 4
H332	ACUTE TOXICITY (inhalation)	Category 4
H315	SKIN CORROSION/IRRITATION	Category 2
H319	SERIOUS EYE DAMAGE/EYE IRRITATION	Category 2
H350	CARCINOGENICITY	Category 1B
H361d	REPRODUCTIVE TOXICITY	Category 2
H336	SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE (Narcotic effects)	Category 3
H373	SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE	Category 2
H304	ASPIRATION HAZARD	Category 1
H400	SHORT-TERM (ACUTE) AQUATIC HAZARD	Category 1
H410	LONG-TERM (CHRONIC) AQUATIC HAZARD	Category 1

The product is classified as hazardous according to UK CLP Regulation SI 2019/720 as amended.

Ingredients of unknown toxicity : Percentage of the mixture consisting of ingredient(s) of unknown acute oral toxicity: 10 - 30%

See Section 16 for the full text of the H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.

2.2 Label elements

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SECTION 2: Hazards identification

Hazard pictograms :



Signal word : Danger

Hazard statements : H225 - Highly flammable liquid and vapour.
H302 + H312 + H332 - Harmful if swallowed, in contact with skin or if inhaled.
H304 - May be fatal if swallowed and enters airways.
H315 - Causes skin irritation.
H319 - Causes serious eye irritation.
H336 - May cause drowsiness or dizziness.
H350 - May cause cancer.
H361d - Suspected of damaging the unborn child.
H373 - May cause damage to organs through prolonged or repeated exposure.
H410 - Very toxic to aquatic life with long lasting effects.

Precautionary statements

Prevention : P201 - Obtain special instructions before use.
P280 - Wear protective gloves, protective clothing and eye or face protection.
P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Response : P391 - Collect spillage.

Storage : P403 + P233 - Store in a well-ventilated place. Keep container tightly closed.

Disposal : P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.

Hazardous ingredients : acetonitrile; acetone; toluene; benzo[a]pyrene and dibenz[a,h]anthracene

Supplemental label elements : Not applicable.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles : Restricted to professional users.

Special packaging requirements

Containers to be fitted with child-resistant fastenings : Not applicable.

Tactile warning of danger : Not applicable.

2.3 Other hazards

Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII : This mixture contains substances that are assessed to be a PBT or a vPvB, refer to Section 3.2.

Other hazards which do not result in classification : None known.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

: Mixture

Product/ingredient name	Identifiers	%	Classification	Type
acetonitrile	EC: 200-835-2 CAS: 75-05-8 Index: 608-001-00-3	≥50 - ≤75	Flam. Liq. 2, H225 Acute Tox. 4, H302 Acute Tox. 4, H312 Acute Tox. 4, H332 Eye Irrit. 2, H319	[1] [2]
acetone	EC: 200-662-2 CAS: 67-64-1 Index: 606-001-00-8	≥25 - ≤50	Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336 EUH066	[1] [2]
toluene	EC: 203-625-9 CAS: 108-88-3 Index: 601-021-00-3	≥10 - ≤25	Flam. Liq. 2, H225 Skin Irrit. 2, H315 Repr. 2, H361d STOT SE 3, H336 STOT RE 2, H373 (nervous system) (inhalation) Asp. Tox. 1, H304 Aquatic Chronic 3, H412	[1] [2]
Anthracene	EC: 204-371-1 CAS: 120-12-7	<0.1	Skin Irrit. 2, H315 Aquatic Acute 1, H400 (M=100) Aquatic Chronic 1, H410 (M=100) PBT, EUH440	[1] [2] [3]
benz[a]anthracene	EC: 200-280-6 CAS: 56-55-3 Index: 601-033-00-9	<0.1	Carc. 1B, H350 Aquatic Acute 1, H400 (M=100) Aquatic Chronic 1, H410 (M=100)	[1] [2] [3] [4] [5]
benzo[a]pyrene	EC: 200-028-5 CAS: 50-32-8 Index: 601-032-00-3	<0.1	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)	[1] [2] [3] [4] [5]
dibenz[a,h]anthracene	EC: 200-181-8 CAS: 53-70-3 Index: 601-041-00-2	≤0.1	Carc. 1B, H350 Aquatic Acute 1, H400 (M=100) Aquatic Chronic 1, H410 (M=100)	[1] [2]
Fluoranthene	EC: 205-912-4 CAS: 206-44-0	<0.1	Acute Tox. 4, H302 Aquatic Acute 1, H400 (M=10000) Aquatic Chronic 1, H410 (M=10) PBT, EUH440	[1] [2] [3] [4]
Phenanthrene	EC: 201-581-5 CAS: 85-01-8	<0.1	vPvB, EUH441 Acute Tox. 4, H302 Aquatic Acute 1, H400 (M=10) Aquatic Chronic 1, H410 (M=10) PBT, EUH440	[1] [2] [3] [4]
Pyrene	EC: 204-927-3 CAS: 129-00-0	<0.1	vPvB, EUH441 Aquatic Acute 1, H400 (M=1000) Aquatic Chronic 1,	[1] [2] [3] [4]

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SECTION 3: Composition/information on ingredients

			H410 (M=1000) PBT, EUH440 vPvB, EUH441 See Section 16 for the full text of the H statements declared above.
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There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, are PBTs, vPvBs or Substances of equivalent concern, or have been assigned a workplace exposure limit and hence require reporting in this section.

Type

- [1] Substance classified with a health or environmental hazard
- [2] Substance with a workplace exposure limit
- [3] Substance meets the criteria for PBT
- [4] Substance meets the criteria for vPvB
- [5] Substance with carcinogenic, mutagenic or reproductive toxicity properties

Occupational exposure limits, if available, are listed in Section 8.

SECTION 4: First aid measures

4.1 Description of first aid measures

- Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.
- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- Skin contact** : Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. If necessary, call a poison center or physician. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Aspiration hazard if swallowed. Can enter lungs and cause damage. Do not induce vomiting. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

4.2 Most important symptoms and effects, both acute and delayed

Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:
 pain or irritation
 watering
 redness

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SECTION 4: First aid measures

- Inhalation** : Adverse symptoms may include the following:
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness
reduced foetal weight
increase in foetal deaths
skeletal malformations
- Skin contact** : Adverse symptoms may include the following:
irritation
redness
reduced foetal weight
increase in foetal deaths
skeletal malformations
- Ingestion** : Adverse symptoms may include the following:
nausea or vomiting
reduced foetal weight
increase in foetal deaths
skeletal malformations

4.3 Indication of any immediate medical attention and special treatment needed

- Notes to physician** : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- Specific treatments** : No specific treatment.

SECTION 5: Firefighting measures

5.1 Extinguishing media

- Suitable extinguishing media** : Use dry chemical, CO₂, water spray (fog) or foam.
- Unsuitable extinguishing media** : Do not use water jet.

5.2 Special hazards arising from the substance or mixture

- Hazards from the substance or mixture** : Highly flammable liquid and vapour. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. The vapour/gas is heavier than air and will spread along the ground. Vapours may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back. This material is very toxic to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.
- Hazardous combustion products** : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides
cyanides

5.3 Advice for firefighters

- Special protective actions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to British standard BS EN 469 will provide a basic level of protection for chemical incidents.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
- For emergency responders** : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

- 6.2 Environmental precautions** : Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities. Collect spillage.

6.3 Methods and material for containment and cleaning up

- Methods for cleaning up** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

- 6.4 Reference to other sections** : See Section 1 for emergency contact information.
See Section 8 for information on appropriate personal protective equipment.
See Section 13 for additional waste treatment information.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Do not get in eyes or on skin or clothing. Avoid breathing vapour or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Avoid release to the environment. Avoid contact with eyes, skin and clothing. Do not ingest. Empty containers retain product residue and can be hazardous. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Do not reuse container. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Do not breathe vapour or mist. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Avoid exposure - obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Avoid exposure during pregnancy. Do not swallow.
- Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

7.2 Conditions for safe storage, including any incompatibilities

- Storage** : Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Eliminate all ignition sources. Separate from oxidising materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

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SECTION 7: Handling and storage

Seveso Directive - Reporting thresholds

Danger criteria

Category	Notification and MAPP threshold	Safety report threshold
5c E1	5000 tonnes 100 tonnes	50000 tonnes 200 tonnes

7.3 Specific end use(s)

Recommendations : Industrial applications, Professional applications.

Industrial sector specific solutions : Not available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits

Product/ingredient name	Exposure limit values
acetonitrile	EH40/2005 WELs (United Kingdom (UK), 1/2020) STEL 15 minutes: 102 mg/m ³ . STEL 15 minutes: 60 ppm. TWA 8 hours: 40 ppm. TWA 8 hours: 68 mg/m ³ .
acetone	EH40/2005 WELs (United Kingdom (UK), 1/2020) STEL 15 minutes: 3620 mg/m ³ . STEL 15 minutes: 1500 ppm. TWA 8 hours: 500 ppm. TWA 8 hours: 1210 mg/m ³ .
toluene	EH40/2005 WELs (United Kingdom (UK), 1/2020) Absorbed through skin. STEL 15 minutes: 384 mg/m ³ . TWA 8 hours: 191 mg/m ³ . TWA 8 hours: 50 ppm. STEL 15 minutes: 100 ppm.
anthracene	EU OEL (Europe, 3/2024) [Polycyclic aromatic hydrocarbons mixtures] Absorbed through skin.
benz[a]anthracene	EU OEL (Europe, 3/2024) [Polycyclic aromatic hydrocarbons mixtures] Absorbed through skin.
benzo[a]pyrene	EU OEL (Europe, 3/2024) [Polycyclic aromatic hydrocarbons mixtures] Absorbed through skin.
dibenz[a,h]anthracene	EU OEL (Europe, 3/2024) [Polycyclic aromatic hydrocarbons mixtures] Absorbed through skin.
fluoranthene	EU OEL (Europe, 3/2024) [Polycyclic aromatic hydrocarbons mixtures] Absorbed through skin.
phenanthrene	EU OEL (Europe, 3/2024) [Polycyclic aromatic hydrocarbons mixtures] Absorbed through skin.
pyrene	EU OEL (Europe, 3/2024) [Polycyclic aromatic hydrocarbons mixtures] Absorbed through skin.

Biological exposure indices

Product/ingredient name	Exposure indices
anthracene	EH40/2005 BMGVs (United Kingdom (UK), 1/2020) [Polycyclic aromatic hydrocarbons] BGV: 4 µmol/mol creatinine, 1-hydroxypyrene [in urine]. Sampling time: post shift.
benz[a]anthracene	EH40/2005 BMGVs (United Kingdom (UK), 1/2020) [Polycyclic aromatic hydrocarbons] BGV: 4 µmol/mol creatinine, 1-hydroxypyrene [in urine]. Sampling

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benzo[a]pyrene	time: post shift. EH40/2005 BMGVs (United Kingdom (UK), 1/2020) [Polycyclic aromatic hydrocarbons] BGV: 4 µmol/mol creatinine, 1-hydroxypyrene [in urine]. Sampling time: post shift.
dibenz[a,h]anthracene	EH40/2005 BMGVs (United Kingdom (UK), 1/2020) [Polycyclic aromatic hydrocarbons] BGV: 4 µmol/mol creatinine, 1-hydroxypyrene [in urine]. Sampling time: post shift.
fluoranthene	EH40/2005 BMGVs (United Kingdom (UK), 1/2020) [Polycyclic aromatic hydrocarbons] BGV: 4 µmol/mol creatinine, 1-hydroxypyrene [in urine]. Sampling time: post shift.
phenanthrene	EH40/2005 BMGVs (United Kingdom (UK), 1/2020) [Polycyclic aromatic hydrocarbons] BGV: 4 µmol/mol creatinine, 1-hydroxypyrene [in urine]. Sampling time: post shift.
pyrene	EH40/2005 BMGVs (United Kingdom (UK), 1/2020) [Polycyclic aromatic hydrocarbons] BGV: 4 µmol/mol creatinine, 1-hydroxypyrene [in urine]. Sampling time: post shift.

Recommended monitoring procedures

: Reference should be made to monitoring standards, such as the following: British Standard BS EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) British Standard BS EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) British Standard BS EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

DNELs/DMELs

Product/ingredient name

Result

acetonitrile	DNEL - General population - Long term - Oral	0.4 mg/kg bw/day	
	DNEL - General population - Short term - Oral	0.6 mg/kg bw/day	
	DNEL - General population - Long term - Dermal	1.2 mg/kg bw/day	
	DNEL - General population - Long term - Inhalation	2.4 mg/m ³	
acetone	DNEL - General population - Long term - Oral	62 mg/kg bw/day	
	DNEL - General population - Long term - Dermal	62 mg/kg bw/day	
	DNEL - Workers - Long term - Dermal	186 mg/kg bw/day	
	DNEL - General population - Long term - Inhalation	200 mg/m ³	
	DNEL - Workers - Long term - Inhalation	1210 mg/m ³	
	DNEL - Workers - Short term - Inhalation	2420 mg/m ³	
	toluene	DNEL - General population - Long term - Oral	8.13 mg/kg bw/day
		DNEL - General population - Long term - Inhalation	56.5 mg/m ³
DNEL - General population - Long term - Inhalation		56.5 mg/m ³	
DNEL - Workers - Long term - Inhalation		192 mg/m ³	

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DNEL - Workers - Long term - Inhalation	192 mg/m ³
DNEL - General population - Long term - Dermal	226 mg/kg bw/day
DNEL - General population - Short term - Inhalation	226 mg/m ³
DNEL - General population - Short term - Inhalation	226 mg/m ³
DNEL - Workers - Long term - Dermal	384 mg/kg bw/day
DNEL - Workers - Short term - Inhalation	384 mg/m ³
DNEL - Workers - Short term - Inhalation	384 mg/m ³

PNECs

Not available.

8.2 Exposure controls

Appropriate engineering controls : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapour or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves. Refer to British Standard BS EN 1149 for further information on material and design requirements and test methods.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

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SECTION 9: Physical and chemical properties

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

9.1 Information on basic physical and chemical propertiesAppearance

- Physical state** : Liquid. [Clear.]
Colour : Clear. / Colourless.
Odour : Ether-like.
Odour threshold : Not available.
Melting point/freezing point : -45°C
Initial boiling point and boiling range : 81.6°C
Flammability : Not applicable.
Lower and upper explosion limit/flammability limit : Not available.
Flash point : Closed cup: -18 to 23°C

Auto-ignition temperature

Ingredient name	°C	Method
acetone	465	-
toluene	480	-

Decomposition temperature : Not available.

pH : Not available.

Viscosity : Dynamic (room temperature): Not available.
 Kinematic (room temperature): Not available.
 Kinematic (40°C): Not available.

Solubility

Media	Result
water	Soluble

Partition coefficient: n-octanol/water : -0.34

Vapour pressure : 11.6 kPa (87 mm Hg)

Relative density : Not available.

Vapour density : 1.42 [Air = 1]

Particle characteristics

Median particle size : Not applicable.

9.2 Other information**9.2.1 Information with regard to physical hazard classes**

Explosive properties : Not available.

Oxidising properties : Not available.

9.2.2 Other safety characteristics

Miscible with water : Yes.

Evaporation rate : 5.79 (butyl acetate = 1)

Physical/chemical properties comments : Not available.

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SECTION 10: Stability and reactivity

- 10.1 Reactivity** : No specific test data related to reactivity available for this product or its ingredients.
- 10.2 Chemical stability** : The product is stable.
- 10.3 Possibility of hazardous reactions** : Under normal conditions of storage and use, hazardous reactions will not occur.
- 10.4 Conditions to avoid** : Avoid all possible sources of ignition (spark or flame). Do not pressurise, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Do not allow vapour to accumulate in low or confined areas.
- 10.5 Incompatible materials** : Reactive or incompatible with the following materials:
oxidising materials
Reactive or incompatible with the following materials: reducing materials, metals, acids and alkalis.
- 10.6 Hazardous decomposition products** : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	
acetonitrile	Rat - Oral - LD50	2460 mg/kg
	Rat - Inhalation - LC50 Vapour	17100 ppm [4 hours]
acetone	Rat - Oral - LD50	5800 mg/kg
toluene	Rat - Dermal - LD50	12000 mg/kg
	Rat - Inhalation - LC50 Vapour	49 g/m ³ [4 hours]
benzo[a]pyrene	Rat - Oral - LD50	110 mg/kg
fluoranthene	Rabbit - Dermal - LD50	3180 mg/kg
	Rat - Oral - LD50	2 g/kg
phenanthrene	Rat - Oral - LD50	1.8 g/kg

Conclusion/Summary : Not available.

[Product]

Acute toxicity estimates

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapours) (mg/l)	Inhalation (dusts and mists) (mg/l)
Polynuclear Aromatic Hydrocarbon Standard	758.1	1871.1	N/A	18.7	N/A
acetonitrile	500	1100	N/A	11	N/A
acetone	5800	20000	N/A	76	N/A
toluene	N/A	12000	N/A	49	N/A
fluoranthene	2000	3180	N/A	N/A	N/A
phenanthrene	1800	N/A	N/A	N/A	N/A

Skin corrosion/irritation

Product/ingredient name	Result	
acetone	Rabbit - Skin - Mild irritant	Duration of treatment/ exposure: 24 hours Amount/concentration applied: 500 mg
	Rabbit - Skin - Mild irritant	Amount/concentration applied: 395 mg
toluene	Rabbit - Skin - Mild irritant	Amount/concentration applied: 435 mg

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	Pig - Skin - Mild irritant	Duration of treatment/ exposure: 24 hours Amount/concentration applied: 250 uL
	Rabbit - Skin - Moderate irritant	Duration of treatment/ exposure: 24 hours Amount/concentration applied: 20 mg
anthracene	Rabbit - Skin - Moderate irritant	Amount/concentration applied: 500 mg
pyrene	Mouse - Skin - Mild irritant	Amount/concentration applied: 118 ug
	Rabbit - Skin - Mild irritant	Duration of treatment/ exposure: 24 hours Amount/concentration applied: 500 mg

Conclusion/Summary : Repeated exposure may cause skin dryness or cracking.

[Product]

Ingredient name

acetone

Conclusion/Summary

Repeated exposure may cause skin dryness or cracking.
Causes mild skin irritation.

Serious eye damage/eye irritation

Product/ingredient name

acetonitrile

Result

Rabbit - Eyes - Moderate irritant

Duration of treatment/
exposure: 24 hours
Amount/concentration
applied: 100 uL

acetone

Rabbit - Eyes - Mild irritant

Amount/concentration
applied: 10 uL

Rabbit - Eyes - Moderate irritant

Duration of treatment/
exposure: 24 hours
Amount/concentration
applied: 20 mg

toluene

Rabbit - Eyes - Mild irritant

Duration of treatment/
exposure: 0.5 minutes
Amount/concentration
applied: 100 mg
Amount/concentration
applied: 870 ug

Rabbit - Eyes - Mild irritant

Conclusion/Summary : Not available.

[Product]

Respiratory corrosion/irritation

Conclusion/Summary : Not available.

[Product]

Ingredient name

acetonitrile

Conclusion/Summary

May cause respiratory irritation.

Respiratory or skin sensitization

Skin

Conclusion/Summary : Not available.

[Product]

Ingredient name

anthracene

Conclusion/Summary

Can cause skin photosensitisation.

Respiratory

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SECTION 11: Toxicological information

Conclusion/Summary : Not available.
[Product]

Germ cell mutagenicity

Conclusion/Summary : Not available.
[Product]

Carcinogenicity

Conclusion/Summary : Not available.
[Product]

Reproductive toxicity

Conclusion/Summary : Not available.
[Product]

Specific target organ toxicity (single exposure)

Product/ingredient name	Result
acetone	STOT SE 3, H336 (Narcotic effects)
toluene	STOT SE 3, H336 (Narcotic effects)

Specific target organ toxicity (repeated exposure)

Product/ingredient name	Result
toluene	STOT RE 2, H373 (nervous system) (inhalation)

Aspiration hazard

Product/ingredient name	Result
Polynuclear Aromatic Hydrocarbon Standard	ASPIRATION HAZARD - Category 1
toluene	ASPIRATION HAZARD - Category 1

Information on likely routes of exposure : Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes.

Potential acute health effects

- Eye contact** : Causes serious eye irritation.
- Inhalation** : Harmful if inhaled. Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness.
- Skin contact** : Harmful in contact with skin. Causes skin irritation.
- Ingestion** : Harmful if swallowed. Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways.

Symptoms related to the physical, chemical and toxicological characteristics

- Eye contact** : Adverse symptoms may include the following:
 pain or irritation
 watering
 redness
- Inhalation** : Adverse symptoms may include the following:
 nausea or vomiting
 headache
 drowsiness/fatigue
 dizziness/vertigo
 unconsciousness
 reduced foetal weight
 increase in foetal deaths
 skeletal malformations

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SECTION 11: Toxicological information

- Skin contact** : Adverse symptoms may include the following:
 irritation
 redness
 reduced foetal weight
 increase in foetal deaths
 skeletal malformations
- Ingestion** : Adverse symptoms may include the following:
 nausea or vomiting
 reduced foetal weight
 increase in foetal deaths
 skeletal malformations

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Short term exposure

- Potential immediate effects** : Not available.
- Potential delayed effects** : Not available.

Long term exposure

- Potential immediate effects** : Not available.
- Potential delayed effects** : Not available.

Potential chronic health effects

- Conclusion/Summary [Product]** : Not available.
- General** : May cause damage to organs through prolonged or repeated exposure.
- Carcinogenicity** : May cause cancer. Risk of cancer depends on duration and level of exposure.
- Mutagenicity** : No known significant effects or critical hazards.
- Reproductive toxicity** : Suspected of damaging the unborn child.

SECTION 12: Ecological information

12.1 Toxicity

Product/ingredient name	Result
acetonitrile	Acute - LC50 - Fresh water - Daphnia - Water flea - <i>Daphnia magna</i> Age: <24 hours 3600 mg/l [48 hours] Mortality
	Acute - IC50 - Fresh water - Aquatic plants - Duckweed - <i>Lemna minor</i> 3685 mg/l [96 hours] Population
	Chronic - NOEC - Fresh water - Daphnia - Water flea - <i>Daphnia magna</i> Age: <24 hours 160 mg/l [21 days] Reproduction

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SECTION 12: Ecological information

	Chronic - NOEC - Fresh water Aquatic plants - Duckweed - <i>Lemna minor</i> 1000 mg/l [96 hours] Population	-	-
	Acute - LC50 - Fresh water Fish - Fathead minnow - <i>Pimephales promelas</i> Weight: 1.5 g 1000 mg/l [96 hours] Mortality	-	-
acetone	Acute - EC50 - Fresh water Algae - Green algae - <i>Selenastrum sp.</i> 7200 mg/l [96 hours] Population	-	-
	Chronic - NOEC - Marine water Algae - Green algae - <i>Ulva pertusa</i> 4.95 mg/l [96 hours] Reproduction	-	-
	Chronic - NOEC - Fresh water Crustaceans - Daphnia - <i>Daphniidae</i> 0.016 ml/l [21 days] Population	-	-
	Acute - LC50 - Marine water ISO Crustaceans - Calanoid copepod - <i>Acartia tonsa</i> - Copepodid 4.42589 ml/l [48 hours] Mortality	-	-
	Acute - LC50 - Fresh water Fish - Guppy - <i>Poecilia reticulata</i> Age: 4 to 12 months; Size: 2 to 10 cm; Weight: 0.5 to 14 g 5600 ppm [96 hours] Mortality	-	-
toluene	Acute - EC50 - Fresh water Daphnia - Water flea - <i>Daphnia magna</i> - Juvenile (Fledgling, Hatchling, Weanling) 6000 µg/l [48 hours] Intoxication	-	-

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	Acute - LC50 - Fresh water	-	-
	Fish - Coho salmon, silver salmon - <i>Oncorhynchus kisutch</i> - Fry		
	Weight: 1 g		
	5500 µg/l [96 hours]		
	Mortality		
	Chronic - NOEC	-	-
	EPA 600/4-91-003		
	Daphnia - <i>Ceriodaphnia dubia</i>		
	0.74 mg/l [7 days]		
	Acute - EC50 - Fresh water	-	-
	Algae - Green algae - <i>Raphidocelis subcapitata</i>		
	12.5 mg/l [72 hours]		
	Growth		
anthracene	Acute - LC50 - Marine water	-	-
	Crustaceans - Opossum shrimp - <i>Americamysis bahia</i>		
	Age: 24 to 48 hours		
	3.6 µg/l [48 hours]		
	Mortality		
	Acute - LC50 - Fresh water	-	-
	Fish - Bluegill - <i>Lepomis macrochirus</i> - Juvenile (Fledgling, Hatchling, Weanling)		
	Size: 3.11 cm		
	1.27 µg/l [96 hours]		
	Mortality		
	Chronic - NOEC - Fresh water	-	-
	Fish - Fathead minnow - <i>Pimephales promelas</i> - Sexually mature		
	6.08 µg/l [5 weeks]		
	Growth		
benz[a]anthracene	Acute - LC50 - Fresh water	-	-
	Daphnia - Water flea - <i>Daphnia magna</i> - Neonate		
	Age: <24 hours		
	97.5 µg/l [48 hours]		
	Mortality		
benzo[a]pyrene	Acute - LC50 - Fresh water	-	-
	Daphnia - Water flea - <i>Daphnia magna</i> - Neonate		

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	Age: <48 hours 0.25 mg/l [48 hours] Mortality		
	Acute - EC50 - Fresh water Algae - Green algae - <i>Scenedesmus acutus</i> 5 µg/l [72 hours] Growth	-	-
fluoranthene	Acute - LC50 - Fresh water Daphnia - Water flea - <i>Daphnia magna</i> Age: <1 days 1.6 µg/l [48 hours] Mortality	-	-
	Acute - LC50 - Marine water Fish - Winter flounder - <i>Pleuronectes americanus</i> Age: 28 days 0.1 µg/l [96 hours] Mortality	-	-
	Chronic - NOEC - Fresh water Fish - Fathead minnow - <i>Pimephales promelas</i> Age: 25 to 35 days 1.4 µg/l [32 days] Mortality	-	-
	Chronic - NOEC - Fresh water Daphnia - Water flea - <i>Daphnia magna</i> Age: <1 days 1.4 µg/l [21 days] Reproduction	-	-
	Acute - EC50 - Marine water Algae - Diatom - <i>Phaeodactylum tricorutum</i> 0.103 µg/ml [72 hours] Population	-	-
	Chronic - EC10 - Marine water ISO Algae - Haptophyte - <i>Tisochrysis lutea</i> - Exponential growth phase Age: 5 to 7 days 31 µg/l [72 hours] Population	-	-
phenanthrene	Acute - EC50 - Fresh water	-	-

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SECTION 12: Ecological information

Daphnia - Water flea - <i>Daphnia magna</i> - Adult Weight: 0.004 g 0.117 mg/l [48 hours] Intoxication	-	-
Chronic - NOEC - Fresh water Daphnia - Water flea - <i>Daphnia magna</i> - Neonate Age: <24 hours 48 µg/l [21 days] Mortality	-	-
Chronic - NOEC - Fresh water Fish - Rainbow trout, donaldson trout - <i>Oncorhynchus mykiss</i> - Embryo Age: 3 days 0.005 mg/l [90 days] Population	-	-
Chronic - NOEC - Fresh water Aquatic plants - Duckweed - <i>Lemna minor</i> 0.658 mg/l [96 hours] Population	-	-
Acute - EC50 - Fresh water Fish - Bluegill - <i>Lepomis macrochirus</i> - Juvenile (Fledgling, Hatchling, Weanling) Size: 13 mm 0.049 mg/l [96 hours] Behavior	-	-
Acute - EC50 - Fresh water Algae - Green algae - <i>Raphidocelis subcapitata</i> 324 µg/l [3 days] Population	-	-
pyrene Acute - LC50 - Marine water Crustaceans - Opossum shrimp - <i>Americamysis bahia</i> Age: 24 to 48 hours 0.89 µg/l [48 hours] Mortality	-	-

Conclusion/Summary [Product] : Not available.

12.2 Persistence and degradability

Product/ingredient name	Result
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SECTION 12: Ecological information

acetonitrile OECD [Ready Biodegradability - CO2 in Sealed Vessels (Headspace Test)] 70% [21 days] - Readily -

Conclusion/Summary [Product] : Not available.

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
acetonitrile	-	-	Readily
acetone	-	-	Readily
toluene	-	-	Readily
anthracene	-	-	Not readily
fluoranthene	-	-	Not readily

12.3 Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
Polynuclear Aromatic Hydrocarbon Standard	-0.34	-	Low
acetonitrile	-0.34	3	Low
acetone	-0.23	3	Low
toluene	2.73	90	Low
anthracene	4.65	2615 [OECD 305]	High
benz[a]anthracene	5.76	257.04	Low
benzo[a]pyrene	6.13	-	High
dibenz[a,h]anthracene	6.75	-	High
fluoranthene	5.16	3630.78	High
phenanthrene	4.46	2511.89	High
pyrene	5.43	1513.56	High

12.4 Mobility in soil

Soil/water partition coefficient

Product/ingredient name	logK _{oc}	K _{oc}
acetonitrile	0.42	2.62657
acetone	0.56	3.6548
toluene	2.1	117.115
anthracene	4.3	20375.7
benz[a]anthracene	5.3	200038
benzo[a]pyrene	5.9	889341
dibenz[a,h]anthracene	6.2	1657520
fluoranthene	4.8	63177.5
phenanthrene	4.3	22309.4
pyrene	4.9	79473.2

Results of PMT and vPvM assessment

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Product/ingredient name	PMT	P	M	T	vPvM	vP	vM
acetonitrile	No	N/A	Yes	No	N/A	N/A	Yes
acetone	No	No	Yes	No	No	No	Yes
toluene	N/A	N/A	Yes	Yes	No	N/A	No
anthracene	No	Yes	No	Yes	No	N/A	No
benz[a]anthracene	No	No	No	No	No	No	No
benzo[a]pyrene	No	No	No	No	No	No	No
dibenz[a,h]anthracene	No	No	No	No	No	No	No
fluoranthene	No	Yes	No	Yes	No	Yes	No
phenanthrene	No	Yes	No	Yes	No	Yes	No
pyrene	No	Yes	No	Yes	No	Yes	No

Mobility : Not available.

Conclusion/Summary : The product does not meet the criteria to be considered as a PMT or vPvM.

12.5 Results of PBT and vPvB assessment

Regulation (EC) No. 1907/2006 [REACH]

Product/ingredient name	PBT	P	B	T	vPvB	vP	vB
acetonitrile	No	N/A	No	No	No	N/A	No
acetone	No	No	No	No	No	No	No
toluene	No	N/A	No	Yes	No	N/A	No
anthracene	Yes	Yes	Yes	Yes	No	N/A	No
benz[a]anthracene	Yes	Yes	Yes	Yes	Yes	Yes	Yes
benzo[a]pyrene	Yes	Yes	Yes	Yes	Yes	Yes	Yes
dibenz[a,h]anthracene	N/A	N/A	N/A	Yes	N/A	N/A	N/A
fluoranthene	Yes	Yes	Yes	Yes	Yes	Yes	Yes
phenanthrene	Yes	Yes	Yes	Yes	Yes	Yes	Yes
pyrene	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Regulation (EC) No. 1272/2008 [CLP]

Product/ingredient name	PBT	P	B	T	vPvB	vP	vB
acetonitrile	No	N/A	No	No	No	N/A	No
acetone	No	No	No	No	No	No	No
toluene	No	N/A	No	Yes	No	N/A	No
anthracene	Yes	Yes	Yes	Yes	No	N/A	No
benz[a]anthracene	No	No	No	No	No	No	No
benzo[a]pyrene	No	No	No	No	No	No	No
dibenz[a,h]anthracene	No	No	No	No	No	No	No
fluoranthene	Yes	Yes	Yes	Yes	Yes	Yes	Yes
phenanthrene	Yes	Yes	Yes	Yes	Yes	Yes	Yes
pyrene	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Conclusion/Summary : The product does not meet the criteria to be considered as a PBT or vPvB.

Regulation (EC) No. 1272/2008 [CLP]

12.6 Endocrine disrupting properties

Not available.

Conclusion/Summary [Product] : The product does not meet the criteria to be considered as having endocrine disrupting properties according to the criteria set out in either Regulation (EC) No. 1907/2006 or Regulation (EC) No 1272/2008.

12.7 Other adverse effects

No known significant effects or critical hazards.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product

Methods of disposal : Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. The generation of waste should be avoided or minimised wherever possible. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.




Hazardous waste : The classification of the product may meet the criteria for a hazardous waste.

Packaging

Methods of disposal : The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

Special precautions : This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapour from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: Transport information

	ADR/RID	IMDG	IATA
14.1 UN number	UN1992	UN1992	UN1992
14.2 UN proper shipping name	FLAMMABLE LIQUID, TOXIC, N.O.S. (Acetonitrile, Acetone)	FLAMMABLE LIQUID, TOXIC, N.O.S. (Acetonitrile, Acetone)	Flammable liquid, toxic, n.o.s. (Acetonitrile, Acetone)
14.3 Transport hazard class(es)	3 (6.1) 	3 (6.1) 	3 (6.1) 
14.4 Packing group	II	II	II
14.5 Environmental hazards	Yes.	Yes.	Yes. The environmentally hazardous substance mark is not required.

Additional information

Remarks: De minimis quantities

ADR/RID : The environmentally hazardous substance mark is not required when transported in sizes of ≤5 L or ≤5 kg.

Hazard identification number 336

Limited quantity 1 L

Special provisions 274

Tunnel code (D/E)

IMDG : The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg.

Emergency schedules F-E, S-D

Special provisions 274

IATA : The environmentally hazardous substance mark may appear if required by other transportation regulations.

Quantity limitation Passenger and Cargo Aircraft: 1 L. Packaging instructions: 352.

Cargo Aircraft Only: 60 L. Packaging instructions: 364. Limited Quantities - Passenger Aircraft: 1 L. Packaging instructions: Y341.

Special provisions A3

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SECTION 14: Transport information

14.6 Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

14.7 Transport in bulk according to IMO instruments : Not available.

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture UK (GB)/REACH

Annex XIV - List of substances subject to authorisation

Annex XIV

None of the components are listed.

Substances of very high concern

Intrinsic property	Ingredient name	Status	Reference number	Date of revision	
☑ Carcinogen	benz[a]anthracene	Candidate	-	1/15/2018	
	benzo[def]chrysene	Candidate	-	6/20/2016	
Mutagen	benzo[def]chrysene	Candidate	-	6/20/2016	
	benzo[def]chrysene	Candidate	-	6/20/2016	
Toxic to reproduction	benzo[def]chrysene	Candidate	-	6/20/2016	
	anthracene	Candidate	-	10/28/2008	
PBT	benz[a]anthracene	Candidate	-	1/15/2018	
	benzo[def]chrysene	Candidate	-	6/20/2016	
	fluoranthene	Candidate	-	1/15/2019	
	pyrene	Candidate	-	1/15/2019	
	vPvB	benz[a]anthracene	Candidate	-	1/15/2018
		benzo[def]chrysene	Candidate	-	6/20/2016
		fluoranthene	Candidate	-	1/15/2019
		phenanthrene	Candidate	-	1/15/2019
		pyrene	Candidate	-	1/15/2019

Ozone depleting substances

Not listed.

Prior Informed Consent (PIC)

Not listed.

Persistent Organic Pollutants

Not listed.

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

☑ None of the components are listed / The components are not impacted by a restriction

Labelling : Restricted to professional users.

Seveso Directive

This product is controlled under the Seveso Directive.

Danger criteria

Category
☑ P5c E1

EU regulations

Polynuclear Aromatic Hydrocarbon Standard

SECTION 15: Regulatory information

Industrial emissions (integrated pollution prevention and control) - Air : Listed

Industrial emissions (integrated pollution prevention and control) - Water : Listed

15.2 Chemical safety assessment : This product contains substances for which Chemical Safety Assessments might still be required.

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Inventory list

United States : Not determined.

SECTION 16: Other information

🔍 Indicates information that has changed from previously issued version.

Abbreviations and acronyms : ADN = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway
ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE = Acute Toxicity Estimate
GB CLP = UK CLP (EC No 1272/2008) on the Classification, Labelling and Packaging of Substances and Mixtures as amended by (EU Exit) Regulations 2019 No. 720 and amendments
DMEL = Derived Minimal Effect Level
DNEL = Derived No Effect Level
EUH statement = GB CLP-specific Hazard statement
IATA = International Air Transport Association
IMDG = International Maritime Dangerous Goods
IMO = International Maritime Organization
N/A = Not available
PBT = Persistent, Bioaccumulative and Toxic
PNEC = Predicted No Effect Concentration
RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail
RRN = REACH Registration Number
SGG = Segregation Group
vPvB = Very Persistent and Very Bioaccumulative

Procedure used to derive the classification

Polynuclear Aromatic Hydrocarbon Standard

SECTION 16: Other information

Classification	Justification
Flam. Liq. 2, H225 Acute Tox. 4, H302 Acute Tox. 4, H312 Acute Tox. 4, H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Carc. 1B, H350 Repr. 2, H361d STOT SE 3, H336 STOT RE 2, H373 Asp. Tox. 1, H304 Aquatic Acute 1, H400 Aquatic Chronic 1, H410	On basis of test data Calculation method Calculation method Calculation method Calculation method Calculation method Calculation method Calculation method Calculation method Calculation method Calculation method Expert judgment Calculation method Calculation method

Full text of abbreviated H statements

H225 H302 H304 H312 H315 H317 H319 H332 H336 H340 H350 H360FD H361d H373 H400 H410 H412 EUH440 EUH441 EUH066	Highly flammable liquid and vapour. Harmful if swallowed. May be fatal if swallowed and enters airways. Harmful in contact with skin. Causes skin irritation. May cause an allergic skin reaction. Causes serious eye irritation. Harmful if inhaled. May cause drowsiness or dizziness. May cause genetic defects. May cause cancer. May damage fertility. May damage the unborn child. Suspected of damaging the unborn child. May cause damage to organs through prolonged or repeated exposure. Very toxic to aquatic life. Very toxic to aquatic life with long lasting effects. Harmful to aquatic life with long lasting effects. Accumulates in the environment and living organisms including in humans. Strongly accumulates in the environment and living organisms including in humans. Repeated exposure may cause skin dryness or cracking.
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Full text of classifications

Acute Tox. 4 Aquatic Acute 1 Aquatic Chronic 1 Aquatic Chronic 3 Asp. Tox. 1 Carc. 1B Eye Irrit. 2 Flam. Liq. 2 Muta. 1B PBT Repr. 1B Repr. 2 Skin Irrit. 2 Skin Sens. 1 STOT RE 2 STOT SE 3 vPvB	ACUTE TOXICITY - Category 4 SHORT-TERM (ACUTE) AQUATIC HAZARD - Category 1 LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 1 LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 3 ASPIRATION HAZARD - Category 1 CARCINOGENICITY - Category 1B SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2 FLAMMABLE LIQUIDS - Category 2 GERM CELL MUTAGENICITY - Category 1B PERSISTENT, BIOACCUMULATIVE AND TOXIC REPRODUCTIVE TOXICITY - Category 1B REPRODUCTIVE TOXICITY - Category 2 SKIN CORROSION/IRRITATION - Category 2 SKIN SENSITISATION - Category 1 SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE - Category 2 SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE - Category 3 VERY PERSISTENT AND VERY BIOACCUMULATIVE
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Version : 6

Notice to reader

SECTION 16: Other information

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