Conforms to US OSHA Hazard Communication 29CFR1910.1200

SAFETY DATA SHEET

Agilent Technologies

Polynuclear Aromatic Hydrocarbon Standard

Section 1. Identification

GHS product identifier : Polynuclear Aromatic Hydrocarbon Standard

Part no. : 8500-6035

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

Supplier/Manufacturer : Agilent Technologies, Inc.
5301 Stevens Creek Blvd
Santa Clara, CA 95051, USA
800-227-9770

Emergency telephone number (with hours of operation) : CHEMTREC®: 1-800-424-9300

Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture

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 IRRITATION - Category 2
H319	EYE IRRITATION - Category 2A
H350	CARCINOGENICITY - Category 1B
H361	TOXIC TO REPRODUCTION - 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	AQUATIC HAZARD (ACUTE) - Category 1
H410	AQUATIC HAZARD (LONG-TERM) - Category 1

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

GHS label elements

Hazard pictograms :

Signal word : Danger

Section 2. Hazards identification

Hazard statements : H225 - Highly flammable liquid and vapor.
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.
H361 - Suspected of damaging fertility or the unborn child.
H373 - May cause damage to organs through prolonged or repeated exposure. (nervous system)
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.
P273 - Avoid release to the environment.
P260 - Do not breathe vapor.
P270 - Do not eat, drink or smoke when using this product.
P264 - Wash thoroughly after handling.

Response : P391 - Collect spillage.
P308 + P313 - IF exposed or concerned: Get medical advice or attention.
P304 + P312 - IF INHALED: Call a POISON CENTER or doctor if you feel unwell.
P301 + P310, P331 - IF SWALLOWED: Immediately call a POISON CENTER or doctor. Do NOT induce vomiting.
P302 + P312, P352 - IF ON SKIN: Call a POISON CENTER or doctor if you feel unwell. Wash with plenty of water.
P362 + P364 - Take off contaminated clothing and wash it before reuse.
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337 + P313 - If eye irritation persists: Get medical advice or attention.

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.

Other hazards

Hazards not otherwise classified : None known.

Hazards identified when used : No known significant effects or critical hazards.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Ingredient name	Synonyms	%	Identifiers
Acetonitrile	-	≥45 - ≤70	CAS: 75-05-8
Acetone	-	≥15 - ≤40	CAS: 67-64-1
Toluene	-	≥7 - ≤13	CAS: 108-88-3
Dibenz[a,h]anthracene	-	≤0.1	CAS: 53-70-3

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified and hence require reporting in this section.

Section 3. Composition/information on ingredients

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

Section 4. First aid measures

Description of necessary 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.

Most important symptoms/effects, acute and delayed

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.

Over-exposure signs/symptoms

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 fetal weight
increase in fetal deaths
skeletal malformations

Section 4. First aid measures

Skin contact : Adverse symptoms may include the following:
irritation
redness
reduced fetal weight
increase in fetal deaths
skeletal malformations

Ingestion : Adverse symptoms may include the following:
nausea or vomiting
reduced fetal weight
increase in fetal deaths
skeletal malformations

Indication of immediate medical attention and special treatment needed, if necessary

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.

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.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media : Use dry chemical, CO_2, water spray (fog) or foam.

Unsuitable extinguishing media : Do not use water jet.

Specific hazards arising from the chemical : Highly flammable liquid and vapor. 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 vapor/gas is heavier than air and will spread along the ground. Vapors 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 thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides
cyanides

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.

Section 6. Accidental release measures

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 spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders : If specialized 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".

Environmental precautions : Avoid dispersal of spilled 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.

Methods and materials 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.

Section 7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not swallow. Avoid release to the environment. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.

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.

Conditions for safe storage, including any incompatibilities : 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 oxidizing 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 unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Acetonitrile	**NIOSH REL (United States, 10/2020)** TWA 10 hours: 20 ppm. TWA 10 hours: 34 mg/m³. **CAL OSHA PEL (United States, 1/2025)** Absorbed through skin. STEL 15 minutes: 105 mg/m³. STEL 15 minutes: 60 ppm. TWA 8 hours: 70 mg/m³. TWA 8 hours: 40 ppm. **OSHA PEL (United States, 5/2018)** TWA 8 hours: 40 ppm. TWA 8 hours: 70 mg/m³. **OSHA PEL 1989 (United States, 3/1989)** TWA 8 hours: 40 ppm. TWA 8 hours: 70 mg/m³. STEL 15 minutes: 60 ppm. STEL 15 minutes: 105 mg/m³. **ACGIH TLV (United States, 1/2024)** A4. Absorbed through skin. TWA 8 hours: 20 ppm.
Acetone	**NIOSH REL (United States, 10/2020)** TWA 10 hours: 250 ppm. TWA 10 hours: 590 mg/m³. **CAL OSHA PEL (United States, 1/2025)** STEL 15 minutes: 1780 mg/m³. STEL 15 minutes: 750 ppm. C: 3000 ppm. TWA 8 hours: 1200 mg/m³. TWA 8 hours: 500 ppm. **OSHA PEL (United States, 5/2018)** TWA 8 hours: 1000 ppm. TWA 8 hours: 2400 mg/m³. **OSHA PEL 1989 (United States, 3/1989)** TWA 8 hours: 750 ppm. TWA 8 hours: 1800 mg/m³. STEL 15 minutes: 1000 ppm. STEL 15 minutes: 2400 mg/m³. **ACGIH TLV (United States, 1/2024)** A4. TWA 8 hours: 250 ppm. STEL 15 minutes: 500 ppm.
Toluene	**NIOSH REL (United States, 10/2020)** TWA 10 hours: 100 ppm. TWA 10 hours: 375 mg/m³. STEL 15 minutes: 150 ppm. STEL 15 minutes: 560 mg/m³. **OSHA PEL Z2 (United States, 2/2013)** TWA 8 hours: 200 ppm. CEIL: 300 ppm. AMP 10 minutes: 500 ppm. **CAL OSHA PEL (United States, 1/2025)** Absorbed through skin. STEL 15 minutes: 560 mg/m³. STEL 15 minutes: 150 ppm. C: 500 ppm.

Section 8. Exposure controls/personal protection

	TWA 8 hours: 37 mg/m³. TWA 8 hours: 10 ppm. **OSHA PEL 1989 (United States, 3/1989)** TWA 8 hours: 100 ppm. TWA 8 hours: 375 mg/m³. STEL 15 minutes: 150 ppm. STEL 15 minutes: 560 mg/m³. **ACGIH TLV (United States, 1/2024)** A4. Ototoxicant. TWA 8 hours: 20 ppm.
Dibenz[a,h]anthracene	None.

Biological exposure indices

Ingredient name	Exposure indices
Acetone	**ACGIH BEI (United States, 1/2024)** BEI: 25 mg/l, acetone [in urine]. Sampling time: end of shift.
Toluene	**ACGIH BEI (United States, 1/2024)** BEI: 0.03 mg/l, toluene [in urine]. Sampling time: end of shift. BEI: 0.3 mg/g creatinine, o-cresol [in urine]. Sampling time: end of shift. BEI: 0.02 mg/l, toluene [in blood]. Sampling time: prior to last shift of workweek.
Dibenz[a,h]anthracene	**ACGIH BEI (United States, 1/2024)** **[polycyclic aromatic hydrocarbons]** BEI: 2.5 µg/l, 1-hydroxypyrene [in urine]. Sampling time: end of shift at end of workweek. BEI: Nonquantitative: Biological monitoring should be considered for this compound based on the review; however, a specific BEI® could not be determined due to insufficient data., 3-hydroxybenzo(a)pyrene [in urine]. Sampling time: end of shift at end of workweek.

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, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

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.

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.

Section 8. Exposure controls/personal protection

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.

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.

Section 9. Physical and chemical properties

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

Appearance

Physical state : Liquid. [Clear.]

Color : Clear. / Colorless.

Odor : Ether-like.

Odor threshold : Not available.

pH : Not available.

Melting point/freezing point : -45°C (-49°F)

Boiling point or initial boiling point and boiling range : 81.6°C (178.9°F)

Flash point : Closed cup: -18 to 23°C (-0.4 to 73.4°F)

Evaporation rate : 5.79 (butyl acetate = 1)

Flammability : Not applicable.

Lower and upper explosion limit/flammability limit : Not available.

Vapor pressure : 11.6 kPa (87 mm Hg)

Relative vapor density : 1.42 [Air = 1]

Relative density : Not available.

Solubility(ies) :

Media	Result
water	Soluble

Miscible with water : Yes.

Partition coefficient: n-octanol/water : -0.34

Section 9. Physical and chemical properties

Auto-ignition temperature :

Ingredient name	°C	°F	Method
Acetone	465	869	-
Toluene	480	896	-

Decomposition temperature : Not available.

Viscosity : Dynamic (room temperature): Not available.
Kinematic (room temperature): Not available.
Kinematic (40°C (104°F)): Not available.

Particle characteristics

Median particle size : Not applicable.

Section 10. Stability and reactivity

Reactivity : No specific test data related to reactivity available for this product or its ingredients.

Chemical stability : The product is stable.

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid : Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Do not allow vapor to accumulate in low or confined areas.

Incompatible materials : Reactive or incompatible with the following materials:
oxidizing materials
Reactive or incompatible with the following materials: reducing materials, metals, acids and alkalis.

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	
Acetonitrile	Rat - Oral - LD50	2460 mg/kg
	Rat - Inhalation - LC50 Vapor	17100 ppm [4 hours]
Acetone	Rat - Oral - LD50	5800 mg/kg
Toluene	Rat - Dermal - LD50	12000 mg/kg
	Rat - Inhalation - LC50 Vapor	49 g/m³ [4 hours]

Conclusion/Summary [Product] : Not available.

Skin corrosion/irritation

Product/ingredient name **Result**

Section 11. Toxicological information

Acetone	Rabbit - Skin - Mild irritant	Duration of treatment/ exposure: 24 hours
	Rabbit - Skin - Mild irritant	-
Toluene	Rabbit - Skin - Mild irritant	-
	Pig - Skin - Mild irritant	Duration of treatment/ exposure: 24 hours
	Rabbit - Skin - Moderate irritant	Duration of treatment/ exposure: 24 hours
	Rabbit - Skin - Moderate irritant	-

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

Ingredient name	Conclusion/Summary
Acetone	Repeated exposure may cause skin dryness or cracking. Causes mild skin irritation.

Serious eye damage/eye irritation

	Result	
Acetonitrile	Rabbit - Eyes - Moderate irritant	Duration of treatment/ exposure: 24 hours
Acetone	Rabbit - Eyes - Mild irritant	-
	Rabbit - Eyes - Moderate irritant	Duration of treatment/ exposure: 24 hours
Toluene	Rabbit - Eyes - Mild irritant	Duration of treatment/ exposure: 0.5 minutes
	Rabbit - Eyes - Mild irritant	-

Conclusion/Summary [Product] : Not available.

Respiratory corrosion/irritation

Product/ingredient name

Conclusion/Summary [Product] : Not available.

Ingredient name	Conclusion/Summary
Acetonitrile	May cause respiratory irritation.

Respiratory or skin sensitization

Skin

Conclusion/Summary [Product] : Not available.

Respiratory

Conclusion/Summary [Product] : Not available.

Germ cell mutagenicity

Conclusion/Summary [Product] : Not available.

Carcinogenicity

Not available.

Conclusion/Summary [Product] : Not available.

Section 11. Toxicological information

Classification

Product/ingredient name	OSHA	IARC	NTP
Toluene	-	3	-
Dibenz[a,h]anthracene	-	2A	Reasonably anticipated to be a human carcinogen.

Reproductive toxicity

Conclusion/Summary [Product] : Not available.

Specific target organ toxicity (single exposure)

Product/ingredient name	Result
Acetone	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3
Toluene	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3

Specific target organ toxicity (repeated exposure)

Product/ingredient name	Result
Toluene	SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (nervous system) (inhalation) - Category 2

Aspiration hazard

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

Information on the 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 fetal weight
increase in fetal deaths
skeletal malformations

Section 11. Toxicological information

Skin contact : Adverse symptoms may include the following:
irritation
redness
reduced fetal weight
increase in fetal deaths
skeletal malformations

Ingestion : Adverse symptoms may include the following:
nausea or vomiting
reduced fetal weight
increase in fetal deaths
skeletal malformations

Delayed and immediate effects and also 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 fertility or the unborn child.

Numerical measures of toxicity

Acute toxicity estimates

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapors) (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

Section 12. Ecological information

Toxicity

Product/ingredient name **Result**

Section 12. Ecological information

Acetonitrile	Acute - LC50 - Fresh water	3600 mg/l [48 hours]
	Acute - IC50 - Fresh water	3685 mg/l [96 hours]
	Chronic - NOEC - Fresh water	160 mg/l [21 days]
	Chronic - NOEC - Fresh water	1000 mg/l [96 hours]
	Acute - LC50 - Fresh water	1000 mg/l [96 hours]
Acetone	Acute - EC50 - Fresh water	7200 mg/l [96 hours]
	Chronic - NOEC - Marine water	4.95 mg/l [96 hours]
	Chronic - NOEC - Fresh water	0.016 ml/l [21 days]
	Acute - LC50 - Marine water	4.42589 ml/l [48 hours]
	Acute - LC50 - Fresh water	5600 ppm [96 hours]
Toluene	Acute - EC50 - Fresh water	6000 µg/l [48 hours]
	Acute - LC50 - Fresh water	5500 µg/l [96 hours]
	Chronic - NOEC	0.74 mg/l [7 days]
	Acute - EC50 - Fresh water	12.5 mg/l [72 hours]

Conclusion/Summary [Product] : Not available.

Persistence and degradability

Product/ingredient name	Result		
Acetonitrile	OECD [Ready Biodegradability - CO_2 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

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
Dibenz[a,h]anthracene	6.75	-	High

Mobility in soil

Soil/Water partition coefficient : Not available.

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. 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. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered

Section 13. Disposal considerations

when recycling is not feasible. 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. Vapor 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 spilled material and runoff and contact with soil, waterways, drains and sewers.

RCRA Toxic hazardous waste "U" List

Ingredient	CAS #	Status	Reference number
Acetonitrile (I,T)	75-05-8	Listed	U003
Acetone (I)	67-64-1	Listed	U002
Toluene	108-88-3	Listed	U220

Section 14. Transport information

DOT / TDG / Mexico / IMDG / IATA : Not regulated.

Additional information

Remarks: De minimis quantities

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.

Transport in bulk according to IMO instruments : Not available.

Section 15. Regulatory information

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

U.S. Federal regulations : **Clean Water Act (CWA) 307**: Acetonitrile; Toluene; Acenaphthene; Acenaphthylene; Anthracene; Benz[a]anthracene; Benz[e]acephenanthrylene; Benzo[k]fluoranthene; Benzo[ghi]perylene; Benzo[a]pyrene; Chrysene; Dibenz[a,h]anthracene; Fluoranthene; Fluorene; Indeno[1,2,3-cd]pyrene; naphthalene; Phenanthrene; Pyrene

Clean Water Act (CWA) 311: Toluene; naphthalene

TSCA 12(b) - Chemical export notification

Not applicable.

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) : Listed

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 302/304

Composition/information on ingredients

Section 15. Regulatory information

Name	%	EHS	SARA 302 TPQ (lbs)	SARA 302 TPQ (gallons)	SARA 304 RQ (lbs)	SARA 304 RQ (gallons)
Pyrene	≤0.1	Yes.	1000 / 10000	-	5000	-

SARA 304 RQ : 8012820.5 lbs / 3637820.5 kg

SARA 311/312

Classification : FLAMMABLE LIQUIDS - Category 2
ACUTE TOXICITY (oral) - Category 4
ACUTE TOXICITY (dermal) - Category 4
ACUTE TOXICITY (inhalation) - Category 4
SKIN IRRITATION - Category 2
EYE IRRITATION - Category 2A
CARCINOGENICITY - Category 1B
TOXIC TO REPRODUCTION - Category 2
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2
ASPIRATION HAZARD - Category 1

Composition/information on ingredients

Name	%	Classification
Acetonitrile	≥45 - ≤70	FLAMMABLE LIQUIDS - Category 2 ACUTE TOXICITY (oral) - Category 4 ACUTE TOXICITY (dermal) - Category 4 ACUTE TOXICITY (inhalation) - Category 4 EYE IRRITATION - Category 2A
Acetone	≥15 - ≤40	FLAMMABLE LIQUIDS - Category 2 EYE IRRITATION - Category 2A SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 HNOC - Defatting irritant
Toluene	≥7 - ≤13	FLAMMABLE LIQUIDS - Category 2 SKIN IRRITATION - Category 2 TOXIC TO REPRODUCTION - Category 2 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2 ASPIRATION HAZARD - Category 1 HNOC - Static-accumulating flammable liquid
Dibenz[a,h]anthracene	≤0.1	GERM CELL MUTAGENICITY - Category 2 CARCINOGENICITY - Category 1B

SARA 313

	Product name	CAS number	%
Form R - Reporting requirements	Acetonitrile	75-05-8	≥45 - ≤70
	Toluene	108-88-3	≥7 - ≤13
	Benz[a]anthracene	56-55-3	≤0.1
	Benz[e]acephenanthrylene	205-99-2	≤0.1
	Benzo[k]fluoranthene	207-08-9	≤0.1
	Benzo[ghi]perylene	191-24-2	≤0.1
	Benzo[a]pyrene	50-32-8	≤0.1
	Chrysene	218-01-9	≤0.1
	Dibenz[a,h]anthracene	53-70-3	≤0.1
	Fluoranthene	206-44-0	≤0.1
	Indeno[1,2,3-cd]pyrene	193-39-5	≤0.1

Section 15. Regulatory information

Supplier notification	Acetonitrile	75-05-8	≥45 - ≤70
	Toluene	108-88-3	≥7 - ≤13
	Benz[a]anthracene	56-55-3	≤0.1
	Benz[e]acephenanthrylene	205-99-2	≤0.1
	Benzo[k]fluoranthene	207-08-9	≤0.1
	Benzo[ghi]perylene	191-24-2	≤0.1
	Benzo[a]pyrene	50-32-8	≤0.1
	Chrysene	218-01-9	≤0.1
	Dibenz[a,h]anthracene	53-70-3	≤0.1
	Fluoranthene	206-44-0	≤0.1
	Indeno[1,2,3-cd]pyrene	193-39-5	≤0.1

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

State regulations

Massachusetts : The following components are listed: ACETONITRILE; ACETONE; TOLUENE

New York : The following components are listed: Acetonitrile; Acetone; Toluene

New Jersey : The following components are listed: ACETONITRILE; ACETONE; TOLUENE

Pennsylvania : The following components are listed: ACETONITRILE; 2-PROPANONE; BENZENE, METHYL-

California Prop. 65

⚠ **WARNING**: This product can expose you to chemicals including Carbon-black extracts, anthracene, Benz[a] anthracene, Benzo[b]fluoranthene, Benzo[k]fluoranthene, Carbon-black extracts, Benzo[a]pyrene, Chrysene, Dibenz [a,h]anthracene, Carbon-black extracts, Indeno[1,2,3-cd]pyrene, Naphthalene, Carbon-black extracts and Carbon-black extracts, which are known to the State of California to cause cancer, and Toluene, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

Ingredient name	No significant risk level	Maximum acceptable dosage level
Toluene	-	Yes.
Carbon-black extracts	-	-
anthracene	-	-
Benz[a]anthracene	Yes.	-
Benzo[b]fluoranthene	Yes.	-
Benzo[k]fluoranthene	-	-
Carbon-black extracts	-	-
Benzo[a]pyrene	Yes.	-
Chrysene	Yes.	-
Dibenz[a,h]anthracene	Yes.	-
Carbon-black extracts	-	-
Indeno[1,2,3-cd]pyrene	-	-
Naphthalene	Yes.	-
Carbon-black extracts	-	-
Carbon-black extracts	-	-

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)

Section 15. Regulatory information

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Inventory list

Australia : Not determined.

Canada : Not determined.

China : Not determined.

Japan : **Japan inventory (CSCL)**: Not determined.
Japan inventory (ISHL): Not determined.

New Zealand : All components are listed or exempted.

Philippines : Not determined.

Republic of Korea : Not determined.

Taiwan : All components are listed or exempted.

Thailand : Not determined.

Turkey : Not determined.

United States : Not determined.

Viet Nam : All components are listed or exempted.

Section 16. Other information

Procedure used to derive the classification

Classification	Justification
FLAMMABLE LIQUIDS - Category 2	On basis of test data
ACUTE TOXICITY (oral) - Category 4	Calculation method
ACUTE TOXICITY (dermal) - Category 4	Calculation method
ACUTE TOXICITY (inhalation) - Category 4	Calculation method
SKIN IRRITATION - Category 2	Calculation method
EYE IRRITATION - Category 2A	Calculation method
CARCINOGENICITY - Category 1B	Calculation method
TOXIC TO REPRODUCTION - Category 2	Calculation method
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3	Calculation method
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2	Calculation method
ASPIRATION HAZARD - Category 1	Expert judgment
AQUATIC HAZARD (ACUTE) - Category 1	Calculation method
AQUATIC HAZARD (LONG-TERM) - Category 1	Calculation method

History

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Date of previous issue : 10/30/2024

Version : 11

Key to abbreviations : ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
DOT = Department of Transportation
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
IMO = International Maritime Organization
LogPow = logarithm of the octanol/water partition coefficient
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)

Section 16. Other information

N/A = Not available
SGG = Segregation Group
TDG = Transportation of Dangerous Goods
UN = United Nations

Indicates information that has changed from previously issued version.

Notice to reader

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