

# SAFETY DATA SHEET

## APCI-L Low Concentration Tuning Mix

### Section 1. Identification

**GHS product identifier** : APCI-L Low Concentration Tuning Mix  
**Part no.** : G1969-85010

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

**Identified uses** : Reagents and Standards for Analytical Chemistry Laboratory Use  
 100 ml Container

**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
- H311 ACUTE TOXICITY (dermal) - Category 3
- H331 ACUTE TOXICITY (inhalation) - Category 3
- H319 EYE IRRITATION - Category 2A
- H351 CARCINOGENICITY - Category 2
- H361 TOXIC TO REPRODUCTION - Category 2
- H370 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) - Category 1
- H372 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 1

**GHS label elements**

**Hazard pictograms** :



**Signal word** : Danger

**Hazard statements** :

- H225 - Highly flammable liquid and vapor.
- H302 - Harmful if swallowed.
- H311 + H331 - Toxic in contact with skin or if inhaled.
- H319 - Causes serious eye irritation.
- H351 - Suspected of causing cancer.
- H361 - Suspected of damaging fertility or the unborn child.
- H370 - Causes damage to organs.
- H372 - Causes damage to organs through prolonged or repeated exposure.

**Precautionary statements**

## Section 2. Hazards identification

- 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.  
P260 - Do not breathe vapor.  
P270 - Do not eat, drink or smoke when using this product.  
P264 - Wash thoroughly after handling.
- Response** : P308 + P311 - IF exposed or concerned: Call a POISON CENTER or doctor.  
P304 + P340, P311 - IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor.  
P302 + P312, P352 - IF ON SKIN: Call a POISON CENTER or doctor if you feel unwell. Wash with plenty of water.  
P361 + P364 - Take off immediately all 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** : Not applicable.
- 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	Acetonitrile	≥80	CAS: 75-05-8
Methanol	methyl alcohol	≥10 - ≤30	CAS: 67-56-1
Trichloromethane	Trichloromethane	≥0.5 - ≤1.5	CAS: 67-66-3

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.**

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. If necessary, call a poison center or physician.
- 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.

## Section 4. First aid measures

- 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** : 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. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. If necessary, call a poison center or physician. 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** : Toxic if inhaled. Causes damage to organs following a single exposure if inhaled.
- Skin contact** : Toxic in contact with skin. Causes damage to organs following a single exposure in contact with skin.
- Ingestion** : Harmful if swallowed. Causes damage to organs following a single exposure if swallowed.

#### Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:  
pain or irritation  
watering  
redness
- Inhalation** : Adverse symptoms may include the following:  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations
- Skin contact** : Adverse symptoms may include the following:  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations
- Ingestion** : Adverse symptoms may include the following:  
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<sub>2</sub>, 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.

**Hazardous thermal decomposition products** : Decomposition products may include the following materials:  
carbon dioxide  
carbon monoxide  
nitrogen oxides  
halogenated compounds  
carbonyl halides  
cyanides  
Formaldehyde.

**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.

**Remark** : Keep away from heat, sparks and flame.

## 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. Do not breathe vapor. 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).

### 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 ingest. 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	<p><b>NIOSH REL (United States, 10/2020)</b> TWA 10 hours: 20 ppm. TWA 10 hours: 34 mg/m<sup>3</sup>.</p> <p><b>CAL OSHA PEL (United States, 1/2025)</b> Absorbed through skin. STEL 15 minutes: 105 mg/m<sup>3</sup>. STEL 15 minutes: 60 ppm. TWA 8 hours: 70 mg/m<sup>3</sup>. TWA 8 hours: 40 ppm.</p> <p><b>OSHA PEL (United States, 5/2018)</b> TWA 8 hours: 40 ppm. TWA 8 hours: 70 mg/m<sup>3</sup>.</p> <p><b>OSHA PEL 1989 (United States, 3/1989)</b> TWA 8 hours: 40 ppm. TWA 8 hours: 70 mg/m<sup>3</sup>. STEL 15 minutes: 60 ppm. STEL 15 minutes: 105 mg/m<sup>3</sup>.</p> <p><b>ACGIH TLV (United States, 1/2025) A4.</b> Absorbed through skin. TWA 8 hours: 20 ppm.</p>
Methanol	<p><b>NIOSH REL (United States, 10/2020)</b> Absorbed through skin. TWA 10 hours: 200 ppm.</p>

## Section 8. Exposure controls/personal protection

<p>Trichloromethane</p>	<p>TWA 10 hours: 260 mg/m<sup>3</sup>.                      STEL 15 minutes: 250 ppm.                      STEL 15 minutes: 325 mg/m<sup>3</sup>.  <b>CAL OSHA PEL (United States, 1/2025)</b>                      Absorbed through skin.                      STEL 15 minutes: 325 mg/m<sup>3</sup>.                      STEL 15 minutes: 250 ppm.                      C: 1000 ppm.                      TWA 8 hours: 260 mg/m<sup>3</sup>.                      TWA 8 hours: 200 ppm.  <b>OSHA PEL (United States, 5/2018)</b>                      TWA 8 hours: 200 ppm.                      TWA 8 hours: 260 mg/m<sup>3</sup>.  <b>OSHA PEL 1989 (United States, 3/1989)</b>                      Absorbed through skin.                      TWA 8 hours: 200 ppm.                      TWA 8 hours: 260 mg/m<sup>3</sup>.                      STEL 15 minutes: 250 ppm.                      STEL 15 minutes: 325 mg/m<sup>3</sup>.  <b>ACGIH TLV (United States, 1/2025)</b>                      Absorbed through skin.                      TWA 8 hours: 200 ppm.                      TWA 8 hours: 262 mg/m<sup>3</sup>.                      STEL 15 minutes: 250 ppm.                      STEL 15 minutes: 328 mg/m<sup>3</sup>.  <b>NIOSH REL (United States, 10/2020) NIA.</b>                      STEL 60 minutes: 2 ppm.                      STEL 60 minutes: 9.78 mg/m<sup>3</sup>.  <b>CAL OSHA PEL (United States, 1/2025)</b>                      TWA 8 hours: 9.78 mg/m<sup>3</sup>.                      TWA 8 hours: 2 ppm.  <b>OSHA PEL (United States, 5/2018)</b>                      CEIL: 50 ppm.                      CEIL: 240 mg/m<sup>3</sup>.  <b>OSHA PEL 1989 (United States, 3/1989)</b>                      TWA 8 hours: 2 ppm.                      TWA 8 hours: 9.78 mg/m<sup>3</sup>.  <b>ACGIH TLV (United States, 1/2025) A3.</b>                      TWA 8 hours: 10 ppm.                      TWA 8 hours: 49 mg/m<sup>3</sup>.</p>
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**Biological exposure indices**

Ingredient name	Exposure indices
Methanol	<b>ACGIH BEI (United States, 1/2025)</b> BEI: 15 mg/l, methanol [in urine]. Sampling time: end of shift.

**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.

## Section 8. Exposure controls/personal protection

### 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** : When used as intended with Agilent instruments, use of the product is not expected to result in direct contact with the chemical. However, in case of accidental contact with splash wear good quality:  
Glove material: butyl rubber  
Glove thickness:  $\geq 0.2$  mm  
Breakthrough time:  $>30$  minutes
- While not recommended, if typical disposable laboratory nitrile gloves are used, they need to be removed immediately if contacted with the mixture. When contacted with acetonitrile, typical laboratory nitrile gloves have very short breakthrough times, considerably less than 10 minutes.
- 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** : When used as intended with Agilent instruments, the use of the product under normal laboratory conditions and with standard practices does not result in significant airborne exposures, and, therefore, respiratory protection isn't needed. In emergency situations, when a respirator is needed, use a full-face supplied air respirator and components tested and approved under appropriate government standards such as CEN (EU) or NIOSH (US).

## 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.
- Color** : Not available.
- Odor** : Not available.
- Odor threshold** : Not available.
- pH** : Not available.
- Melting point/freezing point** : Not available.
- Boiling point or initial boiling point and boiling range** : Not available.
- Flash point** : Closed cup: 2°C (35.6°F)
- Evaporation rate** : Not available.
- Flammability** : Not applicable.

## Section 9. Physical and chemical properties

<b>Lower and upper explosion limit/flammability limit</b>	: Not available.				
<b>Vapor pressure</b>	: 9.5 kPa (70.88853 mm Hg) [Based on solvent.]				
<b>Relative vapor density</b>	: Not available.				
<b>Relative density</b>	: Not available.				
<b>Solubility(ies)</b>	: <table border="1"> <thead> <tr> <th>Media</th> <th>Result</th> </tr> </thead> <tbody> <tr> <td>water</td> <td>Soluble</td> </tr> </tbody> </table>	Media	Result	water	Soluble
Media	Result				
water	Soluble				
<b>Miscible with water</b>	: Yes.				
<b>Partition coefficient: n-octanol/water</b>	: Not applicable.				
<b>Auto-ignition temperature</b>	: 524°C (975.2°F) [Based on solvent.]				
<b>Decomposition temperature</b>	: Not available.				
<b>Viscosity</b>	: 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

<b>Reactivity</b>	: No specific test data related to reactivity available for this product or its ingredients.
<b>Chemical stability</b>	: The product is stable.
<b>Possibility of hazardous reactions</b>	: Under normal conditions of storage and use, hazardous reactions will not occur.
<b>Conditions to avoid</b>	: 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.
<b>Incompatible materials</b>	: Reactive or incompatible with the following materials: oxidizing materials Reactive or incompatible with the following materials: metals and acids.
<b>Hazardous decomposition products</b>	: 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]
Methanol	Rabbit - Dermal - LD50	15800 mg/kg
	Rat - Oral - LD50	5600 mg/kg
	Rat - Inhalation - LC50 Vapor	145000 ppm [1 hours]
	Rat - Inhalation - LC50 Vapor	64000 ppm [4 hours]
	Rat - Inhalation - LC50 Vapor	83.84 mg/l [4 hours]
Trichloromethane	Rat - Inhalation - LC50 Vapor	189.95 mg/l [1 hours]
	Rat - Oral - LD50	695 mg/kg
	Rabbit - Dermal - LD50	>20 g/kg
	Rat - Inhalation - LC50 Vapor	47702 mg/m <sup>3</sup> [4 hours]

## Section 11. Toxicological information

**Conclusion/Summary [Product]** : Not available.

### Skin corrosion/irritation

<b>Product/ingredient name</b>	<b>Result</b>	
Methanol	Rabbit - Skin - Moderate irritant	Duration of treatment/ exposure: 24 hours

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

<b>Ingredient name</b>	<b>Conclusion/Summary</b>
Methanol	Repeated exposure may cause skin dryness or cracking.

### Serious eye damage/eye irritation

	<b>Result</b>	
Acetonitrile	Rabbit - Eyes - Moderate irritant	Duration of treatment/ exposure: 24 hours
Methanol	Rabbit - Eyes - Moderate irritant	Duration of treatment/ exposure: 24 hours
	Rabbit - Eyes - Moderate irritant	-
	Rabbit - Eyes - Severe irritant	-
Trichloromethane	Rabbit - Eyes - Moderate irritant	Duration of treatment/ exposure: 24 hours
	Rabbit - Eyes - Severe irritant	-

**Conclusion/Summary [Product]** : May cause eye irritation.

<b>Ingredient name</b>	<b>Conclusion/Summary</b>
Methanol	May cause eye irritation.

### Respiratory corrosion/irritation

**Product/ingredient name**  
**Conclusion/Summary [Product]** : Not available.

<b>Ingredient name</b>	<b>Conclusion/Summary</b>
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.

## Section 11. Toxicological information

**Conclusion/Summary** : Not available.

### [Product]

#### Classification

Product/ingredient name	OSHA	IARC	NTP
Trichloromethane	-	2B	Reasonably anticipated to be a human carcinogen.

### Reproductive toxicity

**Conclusion/Summary** : Repeated or prolonged exposure to the substance can produce reproductive system damage.

#### Ingredient name

methanol

#### Conclusion/Summary

Repeated or prolonged exposure to the substance can produce reproductive system damage.

chloroform

Detected in maternal milk in humans.

### Specific target organ toxicity (single exposure)

#### Product/ingredient name

Methanol

#### Result

SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) - Category 1

### Specific target organ toxicity (repeated exposure)

#### Product/ingredient name

Trichloromethane

#### Result

SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 1

### Aspiration hazard

Not available.

**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

: Toxic if inhaled. Causes damage to organs following a single exposure if inhaled.

#### Skin contact

: Toxic in contact with skin. Causes damage to organs following a single exposure in contact with skin.

#### Ingestion

: Harmful if swallowed. Causes damage to organs following a single exposure if swallowed.

### 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:  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations

#### Skin contact

: Adverse symptoms may include the following:  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations

## Section 11. Toxicological information

**Ingestion** : Adverse symptoms may include the following:  
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** : Causes damage to organs through prolonged or repeated exposure.

**Carcinogenicity** : Suspected of causing 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)
APCI-L Low Concentration Tuning Mix	321.1	806.9	N/A	8.0	N/A
Acetonitrile	500	1100	N/A	11	N/A
Methanol	100	300	N/A	3	N/A
Trichloromethane	695	N/A	N/A	7.348	N/A

**Other information** : Adverse symptoms may include the following: blurred or double vision. Eye contact can result in corneal damage or blindness. Repeated or prolonged exposure to the substance can produce liver damage.  
May cause headache, weakness, dizziness, shortness of breath, cyanosis, rapid heart beat, unconsciousness and possible death.

## Section 12. Ecological information

### Toxicity

Product/ingredient name	Result	
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]
Methanol	Acute - LC50 - Fresh water	1000 mg/l [96 hours]
	Acute - LC50 - Marine water	2500 mg/l [48 hours]
	Acute - LC50 - Fresh water	290 mg/l [96 hours]
	Chronic - NOEC - Marine water	9.96 mg/l [96 hours]

## Section 12. Ecological information

Trichloromethane	Acute - EC50 - Marine water	2736 mg/l [96 hours]
	Acute - LC50 - Fresh water	13.3 mg/l [96 hours]
	Acute - EC50 - Fresh water	2.803 mg/l [48 hours]
	Chronic - NOEC - Fresh water	1.8 mg/l [21 days]
	Chronic - EC10	3.61 mg/l [72 hours]
	Acute - EC50	13.3 mg/l [72 hours]

**Conclusion/Summary [Product]** : Not available.

### Persistence and degradability

Product/ingredient name	Result
Acetonitrile	OECD [Ready Biodegradability - CO <sub>2</sub> in Sealed Vessels (Headspace Test)] 70% [21 days] - Readily -

**Conclusion/Summary [Product]** : Not available.

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Acetonitrile	-	-	Readily
Methanol	-	-	Readily
Trichloromethane	-	-	Not readily

### Bioaccumulative potential

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
Acetonitrile	-0.34	3	Low
Methanol	-0.77	<10	Low
Trichloromethane	1.97	690	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 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

## Section 13. Disposal considerations

Ingredient	CAS #	Status	Reference number
Acetonitrile (I,T)	75-05-8	Listed	U003
Methanol (I)	67-56-1	Listed	U154
Chloroform	67-66-3	Listed	U044

## Section 14. Transport information

	DOT Classification	TDG Classification	Mexico Classification	IMDG	IATA
UN number	UN1993	UN1993	UN1993	UN1993	UN1993
UN proper shipping name	Flammable liquids, n.o.s. (Acetonitrile, Methanol)	FLAMMABLE LIQUID, N.O.S. (Acetonitrile, Methanol)	LÍQUIDO INFLAMABLE, N. E.P. (Acetonitrile, Methanol)	FLAMMABLE LIQUID, N.O.S. (Acetonitrile, Methanol)	Flammable liquid, n. o.s. (Acetonitrile, Methanol)
Transport hazard class(es)	3 	3 	3 	3 	3 
Packing group	II	II	II	II	II
Environmental hazards	No.	No.	No.	No.	No.

### Additional information

- DOT Classification** : **Reportable quantity** 1000 lbs / 454 kg. Package sizes shipped in quantities less than the product reportable quantity are not subject to the RQ (reportable quantity) transportation requirements.  
**Limited quantity** Yes.  
**Packaging instruction** Exceptions: 150. Non-bulk: 202. Bulk: 242.  
**Quantity limitation** Passenger aircraft/rail: 5 L. Cargo aircraft: 60 L.  
**Special provisions** IB2, T7, TP1, TP8, TP28
- TDG Classification** : Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.18-2.19 (Class 3).  
**Explosive Limit and Limited Quantity Index** 1  
**Passenger Carrying Road or Rail Index** 5  
**Special provisions** 16, 150
- Mexico Classification** : **Special provisions** 274
- IMDG** : **Emergency schedules** F-E, \_S-E\_  
**Special provisions** 274
- IATA** : **Quantity limitation** Passenger and Cargo Aircraft: 5 L. Packaging instructions: 353. Cargo Aircraft Only: 60 L. Packaging instructions: 364. Limited Quantities - Passenger Aircraft: 1 L. Packaging instructions: Y341.  
**Special provisions** A3

**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; Trichloromethane  
**Clean Water Act (CWA) 311**: Trichloromethane

**Clean Air Act (CAA) 112 regulated toxic substances**: Trichloromethane

### 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

Name	%	EHS	SARA 302 TPQ		SARA 304 RQ	
			(lbs)	(gallons)	(lbs)	(gallons)
Trichloromethane	≥0.5 - ≤1.5	Yes.	10000	803.8	10	0.8

**SARA 304 RQ** : 1000 lbs / 454 kg

### SARA 311/312

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

### Composition/information on ingredients

Name	%	Classification
Acetonitrile	≥80	FLAMMABLE LIQUIDS - Category 2 ACUTE TOXICITY (oral) - Category 4 ACUTE TOXICITY (dermal) - Category 4 ACUTE TOXICITY (inhalation) - Category 4 EYE IRRITATION - Category 2A
Methanol	≥10 - ≤30	FLAMMABLE LIQUIDS - Category 2 ACUTE TOXICITY (oral) - Category 3 ACUTE TOXICITY (dermal) - Category 3 ACUTE TOXICITY (inhalation) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) - Category 1
Trichloromethane	≥0.5 - ≤1.5	ACUTE TOXICITY (oral) - Category 4 ACUTE TOXICITY (inhalation) - Category 3 SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A CARCINOGENICITY - Category 2 TOXIC TO REPRODUCTION - Category 2 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 1

## Section 15. Regulatory information

### SARA 313


	Product name	CAS number	%
Form R - Reporting requirements	Acetonitrile	75-05-8	≥80
	Methanol	67-56-1	≥10 - ≤30
	Trichloromethane	67-66-3	≥0.5 - ≤1.5
Supplier notification	Acetonitrile	75-05-8	≥80
	Methanol	67-56-1	≥10 - ≤30
	Trichloromethane	67-66-3	≥0.5 - ≤1.5

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; METHANOL; CHLOROFORM
- New York** : The following components are listed: Acetonitrile; Methanol; Chloroform
- New Jersey** : The following components are listed: ACETONITRILE; METHYL ALCOHOL; CHLOROFORM
- Pennsylvania** : The following components are listed: ACETONITRILE; METHANOL; METHANE, TRICHLORO-

### California Prop. 65

 **WARNING:** This product can expose you to chemicals including Chloroform, which is known to the State of California to cause cancer and birth defects or other reproductive harm. Methanol, 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](http://www.P65Warnings.ca.gov).

Ingredient name	No significant risk level	Maximum acceptable dosage level
Methanol Chloroform	- Yes	Yes -

### 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

- Australia** : Not determined.
- Canada** : Not determined.
- China** : Not determined.
- Japan** : **Japan inventory (CSCL):** Not determined.  
**Japan inventory (ISHL):** Not determined.
- New Zealand** : Not determined.
- Philippines** : Not determined.
- Republic of Korea** : Not determined.

## Section 15. Regulatory information

<b>Taiwan</b>	: Not determined.
<b>Thailand</b>	: Not determined.
<b>Turkey</b>	: Not determined.
<b>United States</b>	: Not determined.
<b>Viet Nam</b>	: Not determined.

## Section 16. Other information

### Procedure used to derive the classification

Classification	Justification
FLAMMABLE LIQUIDS - Category 2 ACUTE TOXICITY (oral) - Category 4 ACUTE TOXICITY (dermal) - Category 3 ACUTE TOXICITY (inhalation) - Category 3 EYE IRRITATION - Category 2A CARCINOGENICITY - Category 2 TOXIC TO REPRODUCTION - Category 2 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) - Category 1 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 1	On basis of test data Calculation method Calculation method Calculation method Calculation method Calculation method Calculation method Calculation method Calculation method

### History

<b>Date of issue/Date of revision</b>	: 05/25/2026
<b>Date of previous issue</b>	: 10/24/2025
<b>Version</b>	: 12

<b>Key to abbreviations</b>	: 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) N/A = Not available SGG = Segregation Group TDG = Transportation of Dangerous Goods UN = United Nations
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Indicates information that has changed from previously issued version.

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