SAFETY DATA SHEET

APCI-L Low Concentration Tuning Mix, Part Number G1969-8501

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

1.1 Product identifier

Product name: APCI-L Low Concentration Tuning Mix, Part Number G1969-8501
Part no.: G1969-85010

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

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

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

1.4 Emergency telephone number

Emergency telephone number (with hours of operation): CHEMTREC®: +(44)-870-8200418

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
H311 ACUTE TOXICITY (dermal) Category 3
H331 ACUTE TOXICITY (inhalation) Category 3
H319 SERIOUS EYE DAMAGE/EYE IRRITATION Category 2
H351 CARCINOGENICITY Category 2
H370 SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE Category 1
H373 SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE Category 2

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

Hazard pictograms:

Signal word: Danger
APCI-L Low Concentration Tuning Mix, Part Number G1969-8501

SECTION 2: Hazards identification

Hazard statements:
- H225 - Highly flammable liquid and vapour.
- H302 - Harmful if swallowed.
- H311 + H331 - Toxic in contact with skin or if inhaled.
- H319 - Causes serious eye irritation.
- H351 - Suspected of causing cancer.
- H370 - Causes damage to organs.
- H373 - May cause damage to organs through prolonged or repeated exposure.

Precautionary statements:

Prevention:
- P201 - Obtain special instructions before use.
- P210 - 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 vapour.

Response:
- P308 + P311 - IF exposed or concerned: Call a POISON CENTER or doctor.

Storage:
- P280 - Wear protective gloves, protective clothing and eye or face protection.
- P260 - Do not breathe vapour.

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

Hazardous ingredients:
- acetonitrile
- methanol
- trichloromethane

Supplemental label elements:
- Tactile warning of danger: Not applicable.

Special packaging requirements:
- Not applicable.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles:
- For use in industrial installations only.

2.3 Other hazards:
- This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

SECTION 3: Composition/information on ingredients

3.2 Mixtures:

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Identifiers</th>
<th>%</th>
<th>Regulation (EC) No. 1272/2008 [CLP]</th>
<th>Type</th>
</tr>
</thead>
</table>

Date of issue/Date of revision: 07/03/2022
Date of previous issue: 21/06/2018
Version: 4

2/16
SECTION 3: Composition/information on ingredients

| CAS: 67-66-3 | Acute Tox. 3, H331  
| Index: 602-006-00-4 | Skin Irrit. 2, H315  
| | Eye Irrit. 2, H319  
| | Carc. 2, H351  
| | Repr. 2, H361d  
| | STOT RE 1, H372  
| | See Section 16 for the full text of the H statements declared above.  

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  
[5] Substance of equivalent concern  
[6] Additional disclosure due to company policy

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. 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.

**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.

**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

**Potential acute health effects**

**Eye contact**  
Causes serious eye irritation.
SECTION 4: First aid measures

### 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**
No specific data.

**Skin contact**
No specific data.

**Ingestion**
No specific data.

### 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.

**Hazardous combustion products**
Decomposition products may include the following materials:
- Carbon dioxide
- Carbon monoxide
- Nitrogen oxides
- Halogenated compounds
- Carbonyl halides
- Cyanides
- Formaldehyde.

#### 5.3 Advice for firefighters

**Special precautions 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 firefighters**
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 European standard EN 469 will provide a basic level of protection for chemical incidents.

**Additional information**
Keep away from heat, sparks and flame.
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. Do not breathe 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).

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). Avoid exposure - obtain special instructions before use. 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 vapour 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.

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.

Seveso Directive - Reporting thresholds
Danger criteria
SECTION 7: Handling and storage

<table>
<thead>
<tr>
<th>Category</th>
<th>Notification and MAPP threshold</th>
<th>Safety report threshold</th>
</tr>
</thead>
<tbody>
<tr>
<td>H2</td>
<td>50 tonne</td>
<td>200 tonne</td>
</tr>
<tr>
<td>H3</td>
<td>50 tonne</td>
<td>200 tonne</td>
</tr>
<tr>
<td>P5c</td>
<td>5000 tonne</td>
<td>50000 tonne</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Exposure limit values</th>
</tr>
</thead>
</table>
| Acetonitrile            | EH40/2005 WELs (United Kingdom (UK), 1/2020).  
STEL: 102 mg/m³ 15 minutes.  
STEL: 60 ppm 15 minutes.  
TWA: 40 ppm 8 hours.  
TWA: 68 mg/m³ 8 hours.  |
| Methanol                | EH40/2005 WELs (United Kingdom (UK), 1/2020). Absorbed through skin.  
STEL: 333 mg/m³ 15 minutes.  
STEL: 250 ppm 15 minutes.  
TWA: 266 mg/m³ 8 hours.  
TWA: 200 ppm 8 hours.  |
| Trichloromethane        | EH40/2005 WELs (United Kingdom (UK), 1/2020). Absorbed through skin.  
TWA: 2 ppm 8 hours.  
TWA: 9.9 mg/m³ 8 hours.  |

Recommended monitoring procedures: If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard 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

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Type</th>
<th>Exposure</th>
<th>Value</th>
<th>Population</th>
<th>Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetonitrile</td>
<td>DNEL Short term Oral</td>
<td>0.6 mg/kg bw/day</td>
<td>General population</td>
<td>Systemic</td>
<td></td>
</tr>
<tr>
<td></td>
<td>DNEL Long term Inhalation</td>
<td>4.8 mg/m³</td>
<td>General population</td>
<td>Local</td>
<td></td>
</tr>
<tr>
<td></td>
<td>DNEL Long term Inhalation</td>
<td>4.8 mg/m³</td>
<td>General population</td>
<td>Systemic</td>
<td></td>
</tr>
<tr>
<td></td>
<td>DNEL Short term Inhalation</td>
<td>22 mg/m³</td>
<td>General population</td>
<td>Local</td>
<td></td>
</tr>
<tr>
<td></td>
<td>DNEL Long term Dermal</td>
<td>32.2 mg/kg bw/day</td>
<td>Workers</td>
<td>Systemic</td>
<td></td>
</tr>
<tr>
<td></td>
<td>DNEL Short term Inhalation</td>
<td>68 mg/m³</td>
<td>Workers</td>
<td>Local</td>
<td></td>
</tr>
<tr>
<td></td>
<td>DNEL Long term</td>
<td>68 mg/m³</td>
<td>Workers</td>
<td>Local</td>
<td></td>
</tr>
</tbody>
</table>
SECTION 8: Exposure controls/personal protection

<table>
<thead>
<tr>
<th>Substance</th>
<th>Inhalation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Methanol</strong></td>
<td></td>
</tr>
<tr>
<td>DNEL Short term Inhalation</td>
<td>68 mg/m³</td>
</tr>
<tr>
<td>DNEL Long term Inhalation</td>
<td>68 mg/m³</td>
</tr>
<tr>
<td>DNEL Short term Dermal</td>
<td>8 mg/kg bw/day</td>
</tr>
<tr>
<td>DNEL Long term Dermal</td>
<td>8 mg/kg bw/day</td>
</tr>
<tr>
<td>DNEL Short term Dermal</td>
<td>40 mg/kg bw/day</td>
</tr>
<tr>
<td>DNEL Long term Dermal</td>
<td>40 mg/kg bw/day</td>
</tr>
<tr>
<td>DNEL Short term Inhalation</td>
<td>50 mg/m³</td>
</tr>
<tr>
<td>DNEL Long term Inhalation</td>
<td>50 mg/m³</td>
</tr>
<tr>
<td>DNEL Short term Inhalation</td>
<td>50 mg/m³</td>
</tr>
<tr>
<td>DNEL Long term Inhalation</td>
<td>50 mg/m³</td>
</tr>
<tr>
<td>DNEL Short term Inhalation</td>
<td>260 mg/m³</td>
</tr>
<tr>
<td>DNEL Long term Inhalation</td>
<td>260 mg/m³</td>
</tr>
<tr>
<td>DNEL Short term Inhalation</td>
<td>260 mg/m³</td>
</tr>
<tr>
<td>DNEL Long term Inhalation</td>
<td>260 mg/m³</td>
</tr>
<tr>
<td>DNEL Short term Dermal</td>
<td>333 mg/m³</td>
</tr>
</tbody>
</table>

**Trichloromethane**

<table>
<thead>
<tr>
<th>Substance</th>
<th>Inhalation</th>
</tr>
</thead>
<tbody>
<tr>
<td>DNEL Long term Inhalation</td>
<td>0.18 mg/m³</td>
</tr>
<tr>
<td>DNEL Long term Dermal</td>
<td>0.94 mg/kg bw/day</td>
</tr>
<tr>
<td>DNEL Long term Inhalation</td>
<td>2.5 mg/m³</td>
</tr>
<tr>
<td>DNEL Long term Inhalation</td>
<td>2.5 mg/m³</td>
</tr>
</tbody>
</table>

**PNECs**

No PNECs 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**

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SECTION 8: Exposure controls/personal 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: ≥ 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. Refer to European Standard 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: When used as intended with Agilent instruments, 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).

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 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 properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Appearance</strong></td>
<td></td>
</tr>
<tr>
<td>Physical state</td>
<td>Liquid</td>
</tr>
<tr>
<td>Colour</td>
<td>Not available</td>
</tr>
<tr>
<td>Odour</td>
<td>Not available</td>
</tr>
<tr>
<td>Odour threshold</td>
<td>Not available</td>
</tr>
<tr>
<td>Melting point/freezing point</td>
<td>Not available</td>
</tr>
<tr>
<td>Initial boiling point and boiling range</td>
<td>Not available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Upper/lower flammability or explosive limits</td>
<td>Not available</td>
</tr>
<tr>
<td>Flash point</td>
<td>Closed cup: 2°C (35.6°F)</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td></td>
</tr>
<tr>
<td><strong>Ingredient name</strong></td>
<td><strong>°C</strong></td>
</tr>
<tr>
<td>Methanol</td>
<td>455</td>
</tr>
<tr>
<td>Acetonitrile</td>
<td>524</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>Not available</td>
</tr>
<tr>
<td>pH</td>
<td>Not available</td>
</tr>
<tr>
<td>Viscosity</td>
<td>Not available</td>
</tr>
<tr>
<td>Solubility(ies)</td>
<td>Easily soluble in the following materials: cold water and hot water.</td>
</tr>
</tbody>
</table>
SECTION 9: Physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Miscible with water</td>
<td>Yes</td>
</tr>
<tr>
<td>Partition coefficient: n-octanol/water</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>Not available.</td>
</tr>
<tr>
<td>Relative density</td>
<td>Not available.</td>
</tr>
<tr>
<td>Vapour density</td>
<td>Not available.</td>
</tr>
<tr>
<td>Oxidising properties</td>
<td>Not available.</td>
</tr>
<tr>
<td>Particle characteristics</td>
<td></td>
</tr>
<tr>
<td>Median particle size</td>
<td>Not applicable.</td>
</tr>
</tbody>
</table>

No additional information.

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.

10.5 Incompatible materials : Reactive or incompatible with the following materials:
- oxidising materials
- Reactive or incompatible with the following materials: metals and acids.

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

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Result</th>
<th>Species</th>
<th>Dose</th>
<th>Exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetonitrile</td>
<td>LC50 Inhalation Vapour</td>
<td>Rat</td>
<td>17100 ppm</td>
<td>4 hours</td>
</tr>
<tr>
<td></td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>2460 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td>Methanol</td>
<td>LC50 Inhalation Vapour</td>
<td>Rat</td>
<td>189.95 mg/l</td>
<td>1 hours</td>
</tr>
<tr>
<td></td>
<td>LC50 Oral</td>
<td>Rat</td>
<td>145000 ppm</td>
<td>1 hours</td>
</tr>
<tr>
<td></td>
<td>LC50 Inhalation Vapour</td>
<td>Rat</td>
<td>83.84 mg/l</td>
<td>4 hours</td>
</tr>
<tr>
<td></td>
<td>LD50 Inhalation Vapour</td>
<td>Rat</td>
<td>64000 ppm</td>
<td>4 hours</td>
</tr>
<tr>
<td>Trichloromethane</td>
<td>LD50 Dermal</td>
<td>Rabbit</td>
<td>15800 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>5600 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>LD50 Dermal</td>
<td>Rabbit</td>
<td>&gt;20 g/kg</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>300 mg/kg</td>
<td>-</td>
</tr>
</tbody>
</table>

Acute toxicity estimates
### SECTION 11: Toxicological information

#### Irritation/Corrosion

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Result</th>
<th>Species</th>
<th>Score</th>
<th>Exposure</th>
<th>Observation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetonitrile</td>
<td>Eyes - Moderate irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>24 hours 100 uL</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Skin - Mild irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>500 mg</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Eyes - Moderate irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>24 hours 100 mg</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Skin - Moderate irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>40 mg</td>
<td>-</td>
</tr>
<tr>
<td>Methanol</td>
<td>Eyes - Moderate irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>24 hours 20 mg</td>
<td>-</td>
</tr>
<tr>
<td>Trichloromethane</td>
<td>Eyes - Moderate irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>24 hours 20 mg</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Skin - Mild irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>24 hours 500 mg</td>
<td>-</td>
</tr>
</tbody>
</table>

Skin: Repeated exposure may cause skin dryness or cracking.

**Sensitiser**

Conclusion/Summary: Not available.

**Mutagenicity**

Conclusion/Summary: Not available.

**Carcinogenicity**

Conclusion/Summary: Not available.

**Reproductive toxicity**

Conclusion/Summary: Not available.

**Teratogenicity**

Conclusion/Summary: Not available.

**Specific target organ toxicity (single exposure)**

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Category</th>
<th>Route of exposure</th>
<th>Target organs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methanol</td>
<td>Category 1</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

**Specific target organ toxicity (repeated exposure)**

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Category</th>
<th>Route of exposure</th>
<th>Target organs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trichloromethane</td>
<td>Category 1</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

**Aspiration hazard**

Not available.

**Information on likely routes of exposure**

**Potential acute health effects**

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

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

**Skin contact**: Toxic in contact with skin. Causes damage to organs following a single exposure in contact with skin.
SECTION 11: Toxicological information

Eye contact : Causes serious eye irritation.

Symptoms related to the physical, chemical and toxicological characteristics

Inhalation : No specific data.
Ingestion : No specific data.
Skin contact : No specific data.
Eye contact : Adverse symptoms may include the following:
pain or irritation
watering
redness

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

General : May cause 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 : No known significant effects or critical hazards.
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

12.1 Toxicity

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Result</th>
<th>Species</th>
<th>Exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetonitrile</td>
<td>Acute LC50 3685000 µg/l Fresh water</td>
<td>Aquatic plants - Lemna minor</td>
<td>96 hours</td>
</tr>
<tr>
<td></td>
<td>Acute LC50 3600000 µg/l Fresh water</td>
<td>Daphnia - Daphnia magna</td>
<td>96 hours</td>
</tr>
<tr>
<td></td>
<td>Acute LC50 1000000 µg/l Fresh water</td>
<td>Fish - Pimephales promelas</td>
<td>96 hours</td>
</tr>
<tr>
<td></td>
<td>Chronic NOEC 1000000 µg/l Fresh water</td>
<td>Aquatic plants - Lemna minor</td>
<td>96 hours</td>
</tr>
<tr>
<td></td>
<td>Chronic NOEC 160000 µg/l Fresh water</td>
<td>Daphnia - Daphnia magna</td>
<td>21 days</td>
</tr>
<tr>
<td></td>
<td>Acute EC50 2736 mg/l Marine water</td>
<td>Algae - Ulva pertusa</td>
<td>96 hours</td>
</tr>
<tr>
<td></td>
<td>Acute LC50 2500000 µg/l Marine water</td>
<td>Crustaceans - Crangon crangon - Adult</td>
<td>48 hours</td>
</tr>
<tr>
<td>Methanol</td>
<td>Acute LC50 3289 mg/l Fresh water</td>
<td>Daphnia - Daphnia magna - Neonate</td>
<td>48 hours</td>
</tr>
<tr>
<td></td>
<td>Acute LC50 290 mg/l Fresh water</td>
<td>Fish - Danio rerio - Egg</td>
<td>96 hours</td>
</tr>
<tr>
<td></td>
<td>Chronic NOEC 9.96 mg/l Marine water</td>
<td>Algae - Ulva pertusa</td>
<td>96 hours</td>
</tr>
<tr>
<td></td>
<td>Acute EC50 13.3 mg/l Fresh water</td>
<td>Algae - Chlamydomonas reinhardtii - Exponential growth phase</td>
<td>72 hours</td>
</tr>
<tr>
<td>Trichloromethane</td>
<td>Acute EC50 2.803 mg/l Fresh water</td>
<td>Crustaceans - Cypris subglobosa</td>
<td>48 hours</td>
</tr>
<tr>
<td></td>
<td>Acute LC50 29000 µg/l Fresh water</td>
<td>Daphnia - Daphnia magna</td>
<td>48 hours</td>
</tr>
<tr>
<td></td>
<td>Acute LC50 13.3 ppm Fresh water</td>
<td>Fish - Lepomis macrochirus</td>
<td>96 hours</td>
</tr>
<tr>
<td></td>
<td>Chronic EC10 3.61 mg/l Fresh water</td>
<td>Algae - Chlamydomonas</td>
<td>72 hours</td>
</tr>
</tbody>
</table>

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SECTION 12: Ecological information

12.2 Persistence and degradability

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Test</th>
<th>Result</th>
<th>Dose</th>
<th>Inoculum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetonitrile</td>
<td>OECD 310 Ready Biodegradability - CO2 in Sealed Vessels (Headspace Test)</td>
<td>70 % - Readily - 21 days</td>
<td>-</td>
<td>Activated sludge</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Aquatic half-life</th>
<th>Photolysis</th>
<th>Biodegradability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetonitrile</td>
<td>-</td>
<td>-</td>
<td>Readily</td>
</tr>
<tr>
<td>Methanol</td>
<td>-</td>
<td>-</td>
<td>Readily</td>
</tr>
<tr>
<td>Trichloromethane</td>
<td>-</td>
<td>-</td>
<td>Not readily</td>
</tr>
</tbody>
</table>

12.3 Bioaccumulative potential

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>LogP&lt;sub&gt;ow&lt;/sub&gt;</th>
<th>BCF</th>
<th>Potential</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetonitrile</td>
<td>-0.34</td>
<td>3</td>
<td>low</td>
</tr>
<tr>
<td>Methanol</td>
<td>-0.77</td>
<td>&lt;10</td>
<td>low</td>
</tr>
<tr>
<td>Trichloromethane</td>
<td>1.97</td>
<td>690</td>
<td>high</td>
</tr>
</tbody>
</table>

12.4 Mobility in soil

<table>
<thead>
<tr>
<th>Soil/water partition coefficient (K&lt;sub&gt;OC&lt;/sub&gt;)</th>
<th>Mobility</th>
</tr>
</thead>
<tbody>
<tr>
<td>:</td>
<td>Not available.</td>
</tr>
</tbody>
</table>

12.5 Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

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

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product

Methods of disposal : The generation of waste should be avoided or minimised 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.

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.
APCI-L Low Concentration Tuning Mix, Part Number G1969-8501

SECTION 13: Disposal considerations

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 spill material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: Transport information

<table>
<thead>
<tr>
<th>ADR/RID</th>
<th>IMDG</th>
<th>IATA</th>
</tr>
</thead>
<tbody>
<tr>
<td>14.1 UN number</td>
<td>UN1993</td>
<td>UN1993</td>
</tr>
<tr>
<td>14.2 UN proper shipping name</td>
<td>FLAMMABLE LIQUID, N.O.S. (Acetonitrile, Methanol)</td>
<td>FLAMMABLE LIQUID, N.O.S. (Acetonitrile, Methanol)</td>
</tr>
<tr>
<td>14.3 Transport hazard class(es)</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>14.4 Packing group</td>
<td>I</td>
<td>I</td>
</tr>
<tr>
<td>14.5 Environmental hazards</td>
<td>No.</td>
<td>No.</td>
</tr>
</tbody>
</table>

Additional information

ADR/RID: Hazard identification number 33
Limited quantity 1 L
Special provisions 601, 274, 640D
Tunnel code (D/E)

IMDG: Emergency schedules F-E, _S-E_
Special provisions 274

Special provisions A3

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

EU Regulation (EC) No. 1907/2006 (REACH)
Annex XIV - List of substances subject to authorisation

Annex XIV
None of the components are listed.

Substances of very high concern
None of the components are listed.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles
SECTION 15: Regulatory information

### Ingredient name | EC number | CAS number | Restriction
--- | --- | --- | ---
Methanol | 200-659-6 | 67-56-1 | 69
Chloroform | 200-663-8 | 67-66-3 | 32

**Label**: For use in industrial installations only.

**Other EU regulations**

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

**Ozone depleting substances (1005/2009/EU)**
Not listed.

**Prior Informed Consent (PIC) (649/2012/EU)**

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>Annex</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chloroform</td>
<td>Annex I - Part 1</td>
<td>Listed</td>
</tr>
</tbody>
</table>

**Persistent Organic Pollutants**
Not listed.

**Seveso Directive**
This product is controlled under the Seveso Directive.

**Danger criteria**

- H2
- H3
- P5c

**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.
- **Europe**: Not determined.
- **Japan**: Not determined.
  - Japan inventory (CSCL): Not determined.
  - Japan inventory (ISHL): Not determined.
- **New Zealand**: Not determined.
- **Philippines**: Not determined.
SECTION 15: Regulatory information

Republic of Korea: Not determined.
Taiwan: Not determined.
Thailand: Not determined.
Turkey: Not determined.
United States: Not determined.
Viet Nam: Not determined.

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

SECTION 16: Other information

Indicates information that has changed from previously issued version.

Abbreviations and acronyms:
ATE = Acute Toxicity Estimate
CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
DNEL = Derived No Effect Level
EUH statement = CLP-specific Hazard statement
PNEC = Predicted No Effect Concentration
RRN = REACH Registration Number

Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

<table>
<thead>
<tr>
<th>Classification</th>
<th>Justification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flam. Liq. 2, H225</td>
<td>On basis of test data</td>
</tr>
<tr>
<td>Acute Tox. 4, H302</td>
<td>Calculation method</td>
</tr>
<tr>
<td>Acute Tox. 3, H311</td>
<td>Calculation method</td>
</tr>
<tr>
<td>Acute Tox. 3, H331</td>
<td>Calculation method</td>
</tr>
<tr>
<td>Eye Irrit. 2, H319</td>
<td>Calculation method</td>
</tr>
<tr>
<td>Carc. 2, H351</td>
<td>Calculation method</td>
</tr>
<tr>
<td>STOT SE 1, H370</td>
<td>Calculation method</td>
</tr>
<tr>
<td>STOT RE 2, H373</td>
<td>Calculation method</td>
</tr>
</tbody>
</table>

Full text of abbreviated H statements

H225: Highly flammable liquid and vapour.
H301: Toxic if swallowed.
H302: Harmful if swallowed.
H311: Toxic in contact with skin.
H312: Harmful in contact with skin.
H315: Causes skin irritation.
H319: Causes serious eye irritation.
H331: Toxic if inhaled.
H332: Harmful if inhaled.
H351: Suspected of causing cancer.
H361d: Suspected of damaging the unborn child.
H370: Causes damage to organs.
H372: Causes damage to organs through prolonged or repeated exposure.
H373: May cause damage to organs through prolonged or repeated exposure.

Full text of classifications [CLP/GHS]

Acute Tox. 3: ACUTE TOXICITY - Category 3
Acute Tox. 4: ACUTE TOXICITY - Category 4
Carc. 2: CARCINOGENICITY - Category 2
Eye Irrit. 2: SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2
Flam. Liq. 2: FLAMMABLE LIQUIDS - Category 2
Repr. 2: REPRODUCTIVE TOXICITY - Category 2
Skin Irrit. 2: SKIN CORROSION/IRRITATION - Category 2
STOT RE 1: SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE - Category 1
STOT RE 2: SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE - Category 2
STOT SE 1

SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE - Category 1

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