

# SAFETY DATA SHEET

APCI/APPI Tuning mix

## Section 1. Identification

### 1.1 Product identifier

**Product name** : APCI/APPI Tuning mix  
**Part No.** : G2432A, G2432-60001  
**Validation date** : 5/19/2016

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

**Material uses** : Analytical chemistry.  
 100 ml

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

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

### 1.4 Emergency telephone number

**In case of emergency** : CHEMTREC®: 1-800-424-9300

## Section 2. Hazards identification

### 2.1 Classification of the substance or mixture

**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  
 H315 SKIN IRRITATION - Category 2  
 H319 EYE IRRITATION - Category 2A  
 H351 CARCINOGENICITY - Category 2  
 H360 TOXIC TO REPRODUCTION (Fertility) - Category 1B  
 H360 TOXIC TO REPRODUCTION (Unborn child) - Category 1B  
 H370 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (central nervous system (CNS)) - Category 1  
 H372 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (blood system, central nervous system (CNS), kidneys and liver) - Category 1

### 2.2 GHS label elements

#### Hazard pictograms



#### Signal word

: Danger

## Section 2. Hazards identification

- Hazard statements** : H225 - Highly flammable liquid and vapor.  
 H311 + H331 - Toxic in contact with skin or if inhaled.  
 H302 - Harmful if swallowed.  
 H319 - Causes serious eye irritation.  
 H315 - Causes skin irritation.  
 H360 - May damage fertility or the unborn child.  
 H351 - Suspected of causing cancer.  
 H370 - Causes damage to organs. (central nervous system (CNS))  
 H372 - Causes damage to organs through prolonged or repeated exposure. (blood system, central nervous system (CNS), kidneys, liver)
- Precautionary statements**
- Prevention** : P201 - Obtain special instructions before use.  
 P202 - Do not handle until all safety precautions have been read and understood.  
 P280 - Wear protective gloves. Wear eye or face protection. Wear protective clothing.  
 P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
 P241 - Use explosion-proof electrical, ventilating, lighting and all material-handling equipment.  
 P242 - Use only non-sparking tools.  
 P243 - Take precautionary measures against static discharge.  
 P233 - Keep container tightly closed.  
 P271 - Use only outdoors or in a well-ventilated area.  
 P260 - Do not breathe vapor.  
 P270 - Do not eat, drink or smoke when using this product.  
 P264 - Wash hands thoroughly after handling.
- Response** : P314 - Get medical attention if you feel unwell.  
 P307 + P311 - IF exposed: Call a POISON CENTER or physician.  
 P304 + P340 + P311 - IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or physician.  
 P301 + P312 + P330 - IF SWALLOWED: Call a POISON CENTER or physician if you feel unwell. Rinse mouth.  
 P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.  
 P302 + P361+P364 + P352 + P312 + P362+P364 - IF ON SKIN: Take off immediately all contaminated clothing and wash it before reuse. Wash with plenty of soap and water. Call a POISON CENTER or physician if you feel unwell. Take off contaminated clothing and wash it before reuse.  
 P332 + P313 - If skin irritation occurs: Get medical attention.  
 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 attention.
- Storage** : P405 - Store locked up.  
 P403 - Store in a well-ventilated place.  
 P235 - Keep cool.
- Disposal** : P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
- 2.3 Other hazards**
- Hazards not otherwise classified** : None known.

## Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Ingredient name	%	CAS number
Acetonitrile	≥50 - ≤75	75-05-8
Methanol	≥10 - ≤15	67-56-1
Acetone	≤5	67-64-1
Trichloromethane	≤1.5	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 as hazardous to health or the environment and hence require reporting in this section.**

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

## Section 4. First aid measures

### 4.1 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.
- 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. Remove victim to fresh air and keep at rest in a position comfortable for breathing. 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.

### 4.2 Most important symptoms/effects, acute and delayed

#### Potential acute health effects

- Eye contact** : Causes serious eye irritation.
- Inhalation** : Toxic if inhaled.
- Skin contact** : Toxic in contact with skin. Causes skin irritation.
- Ingestion** : Harmful if swallowed.

#### Over-exposure signs/symptoms

## Section 4. First aid measures

- 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:  
irritation  
redness  
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

### 4.3 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

### 5.1 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.

### 5.2 Special hazards arising from the substance or mixture

- Specific hazards arising from the chemical** : Highly flammable liquid and vapor. 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. Runoff to sewer may create fire or explosion hazard.
- Hazardous thermal decomposition products** : Decomposition products may include the following materials:  
carbon dioxide  
carbon monoxide  
nitrogen oxides  
halogenated compounds  
carbonyl halides  
cyanides  
Formaldehyde.

## Section 5. Fire-fighting measures

### 5.3 Advice for firefighters

- Special protective actions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

## 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 spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Do not breathe 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".

- 6.2 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).

### 6.3 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

### 7.1 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.



## Section 8. Exposure controls/personal protection

Trichloromethane

TWA: 250 ppm 8 hours.  
 STEL: 500 ppm 15 minutes.  
**OSHA PEL 1989 (United States, 3/1989).**  
 TWA: 750 ppm 8 hours.  
 TWA: 1800 mg/m<sup>3</sup> 8 hours.  
 STEL: 1000 ppm 15 minutes.  
 STEL: 2400 mg/m<sup>3</sup> 15 minutes.  
**NIOSH REL (United States, 10/2013).**  
 TWA: 250 ppm 10 hours.  
 TWA: 590 mg/m<sup>3</sup> 10 hours.  
**OSHA PEL (United States, 2/2013).**  
 TWA: 1000 ppm 8 hours.  
 TWA: 2400 mg/m<sup>3</sup> 8 hours.  
**ACGIH TLV (United States, 3/2015).**  
 TWA: 10 ppm 8 hours.  
 TWA: 49 mg/m<sup>3</sup> 8 hours.  
**OSHA PEL 1989 (United States, 3/1989).**  
 TWA: 2 ppm 8 hours.  
 TWA: 9.78 mg/m<sup>3</sup> 8 hours.  
**NIOSH REL (United States, 10/2013).**  
 STEL: 2 ppm 60 minutes.  
 STEL: 9.78 mg/m<sup>3</sup> 60 minutes.  
**OSHA PEL (United States, 2/2013).**  
 CEIL: 50 ppm  
 CEIL: 240 mg/m<sup>3</sup>

### 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, 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.

#### 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.

## Section 8. Exposure controls/personal protection

- 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

### 9.1 Information on basic physical and chemical properties

#### Appearance

- Physical state** : Liquid.
- Color** : Ether. [Light]
- Odor** : Not available.
- Odor threshold** : 70 ppm
- pH** : Not available.
- Melting point** : -45°C (-49°F)
- Boiling point** : 81.6°C (178.9°F)
- Flash point** : Closed cup: 12.8°C (55°F)
- Evaporation rate** : 5.79 (butyl acetate = 1)
- Flammability (solid, gas)** : Not applicable.
- Lower and upper explosive (flammable) limits** : Lower: 4.4%  
Upper: 16%
- Vapor pressure** : 11.6 kPa (87 mm Hg) [room temperature]
- Vapor density** : 1.42 [Air = 1]
- Relative density** : Not available.
- Solubility** : Easily soluble in the following materials: cold water and hot water.
- Partition coefficient: n-octanol/water** : -0.34
- Auto-ignition temperature** : 524°C (975.2°F)
- Decomposition temperature** : Not available.
- Viscosity** : Not available.

## 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 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.



## Section 10. Stability and reactivity

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

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

## Section 11. Toxicological information

### 11.1 Information on toxicological effects

#### Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Acetonitrile	LC50 Inhalation Vapor	Rat	17100 ppm	4 hours
	LD50 Oral	Rat	2460 mg/kg	-
Methanol	LC50 Inhalation Vapor	Rat	145000 ppm	1 hours
	LC50 Inhalation Vapor	Rat	64000 ppm	4 hours
	LD50 Dermal	Rabbit	15800 mg/kg	-
	LD50 Oral	Rat	5600 mg/kg	-
Acetone	LD50 Oral	Rat	5800 mg/kg	-
Trichloromethane	LC50 Inhalation Vapor	Rat	47702 mg/m <sup>3</sup>	4 hours
	LD50 Dermal	Rabbit	>20 g/kg	-
	LD50 Oral	Rat	300 mg/kg	-

#### Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Acetonitrile	Eyes - Moderate irritant	Rabbit	-	24 hours 100 microliters	-
	Skin - Mild irritant	Rabbit	-	500 milligrams	-
Methanol	Eyes - Moderate irritant	Rabbit	-	24 hours 100 milligrams	-
	Eyes - Moderate irritant	Rabbit	-	40 milligrams	-
	Skin - Moderate irritant	Rabbit	-	24 hours 20 milligrams	-
Acetone	Eyes - Mild irritant	Rabbit	-	10 microliters	-
	Eyes - Moderate irritant	Rabbit	-	24 hours 20 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Skin - Mild irritant	Rabbit	-	395 milligrams	-
Trichloromethane	Eyes - Moderate irritant	Rabbit	-	24 hours 20 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-

#### Conclusion/Summary

**Skin** : Repeated exposure may cause skin dryness or cracking.

#### Sensitization

Not available.

#### Mutagenicity

Not available.

#### Carcinogenicity

## Section 11. Toxicological information

Not available.

### Classification

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

### Reproductive toxicity

Not available.

### Teratogenicity

Not available.

### Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
Methanol	Category 1	Not determined	central nervous system (CNS)
	Category 3	Not applicable.	Respiratory tract irritation
Acetone	Category 3	Not applicable.	Narcotic effects
Trichloromethane	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects

### Specific target organ toxicity (repeated exposure)

Name	Category	Route of exposure	Target organs
Acetonitrile	Category 2	Not determined	blood system, central nervous system (CNS), kidneys and liver
Acetone	Category 2	Not determined	blood system
Trichloromethane	Category 1	Not determined	kidneys and liver

### Aspiration hazard

Not available.

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

### Potential acute health effects

- Eye contact** : Causes serious eye irritation.
- Inhalation** : Toxic if inhaled.
- Skin contact** : Toxic in contact with skin. Causes skin irritation.
- Ingestion** : Harmful 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

## 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:  
 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

- 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.
- Teratogenicity** : May damage the unborn child.
- Developmental effects** : No known significant effects or critical hazards.
- Fertility effects** : May damage fertility.

### Numerical measures of toxicity

#### Acute toxicity estimates

Route	ATE value
<input checked="" type="checkbox"/> Oral	331.6 mg/kg
Dermal	852.7 mg/kg
Inhalation (vapors)	8.112 mg/l

- Other information** :  Adverse symptoms may include the following: headache , redness , blurred or double vision . Eye contact can result in corneal damage or blindness.

## Section 12. Ecological information

### 12.1 Toxicity

## Section 12. Ecological information

Product/ingredient name	Result	Species	Exposure
Acetonitrile	Acute IC50 3685000 µg/l Fresh water	Aquatic plants - Lemna minor	96 hours
	Acute LC50 3600000 µg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 1000000 µg/l Fresh water	Fish - Pimephales promelas	96 hours
	Chronic NOEC 1000000 µg/l Fresh water	Aquatic plants - Lemna minor	96 hours
	Chronic NOEC 160000 µg/l Fresh water	Daphnia - Daphnia magna	21 days
Methanol	Acute EC50 24500000 µg/l Fresh water	Daphnia - Daphnia magna - Larvae	48 hours
	Acute LC50 2500000 µg/l Marine water	Crustaceans - Crangon crangon - Adult	48 hours
Acetone	Acute LC50 290 mg/l Fresh water	Fish - Danio rerio - Egg	96 hours
	Chronic NOEC 9.96 mg/l Marine water	Algae - Ulva pertusa	96 hours
	Acute EC50 20.565 mg/l Marine water	Algae - Ulva pertusa	96 hours
	Acute LC50 6000000 µg/l Fresh water	Crustaceans - Gammarus pulex	48 hours
	Acute LC50 10000 µg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 5600 ppm Fresh water	Fish - Poecilia reticulata	96 hours
	Chronic NOEC 4.95 mg/l Marine water	Algae - Ulva pertusa	96 hours
	Chronic NOEC 0.016 ml/L Fresh water	Crustaceans - Daphniidae	21 days
	Chronic NOEC 0.1 ml/L Fresh water	Daphnia - Daphnia magna - Neonate	21 days
Trichloromethane	Acute EC50 13.3 mg/l Fresh water	Algae - Chlamydomonas reinhardtii - Exponential growth phase	72 hours
	Acute EC50 2.803 mg/l Fresh water	Crustaceans - Cypris subglobosa	48 hours
	Acute LC50 29 mg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 13.3 ppm Fresh water	Fish - Lepomis macrochirus	96 hours
	Chronic EC10 3.61 mg/l Fresh water	Algae - Chlamydomonas reinhardtii - Exponential growth phase	72 hours
	Chronic NOEC 1.8 mg/l Fresh water	Daphnia - Daphnia magna	21 days

### 12.2 Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
Acetone	OECD 301B Ready Biodegradability - CO <sub>2</sub> Evolution Test	95 % - Readily - 28 days	-	-

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Acetonitrile	-	-	Readily
Acetone	-	-	Readily

### 12.3 Bioaccumulative potential

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
APCI/APPI Tuning mix	-0.34	-	low
Acetonitrile	-0.34	-	low
Methanol	-0.77	<10	low
Acetone	-0.23	3	low
Trichloromethane	1.97	690	high

### 12.4 Mobility in soil

## Section 12. Ecological information

**Soil/water partition coefficient (K<sub>oc</sub>)** : Not available.

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

## Section 13. Disposal considerations

### 13.1 Waste treatment methods

**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.

#### United States - RCRA Toxic hazardous waste "U" List

Ingredient	CAS #	Status	Reference number
Acetonitrile (l,T)	75-05-8	Listed	U003
Chloroform; Methane, trichloro-	67-66-3	Listed	U044
Acetone (l); 2-Propanone (l)	67-64-1	Listed	U002
Methanol (l); Methyl alcohol (l)	67-56-1	Listed	U154

Disposal should be in accordance with applicable regional, national and local laws and regulations. Local regulations may be more stringent than regional or national requirements.

The information presented below only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations.





Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.

## Section 14. Transport information


**Additional information** : Special provisions  
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Regulatory information	UN number	Proper shipping name	Classes	PG*	Label	Additional information

## Section 14. Transport information

<b>DOT</b>	UN1993	Flammable liquids, n. o.s. (Acetonitrile, Methanol) RQ (Trichloromethane, Acetonitrile)		II		<p><b>Reportable quantity</b> 555.56 lbs / 252.22 kg Package sizes shipped in quantities less than the product reportable quantity are not subject to the RQ (reportable quantity) transportation requirements.</p> <p><b>Limited quantity</b> Yes.</p> <p><b>Packaging instruction</b> <b>Passenger aircraft</b> Quantity limitation: 5 L</p> <p><b>Cargo aircraft</b> Quantity limitation: 60 L</p> <p><b>Special provisions</b> IB2, T7, TP1, TP8, TP28</p>
<b>TDG</b>	UN1993	FLAMMABLE LIQUID, N.O.S. (Acetonitrile, Methanol)		II		<p>Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.18-2.19 (Class 3).</p> <p><b>Explosive Limit and Limited Quantity Index</b> 1</p> <p><b>Passenger Carrying Road or Rail Index</b> 5</p> <p><b>Special provisions</b> 16, 150</p>
<b>Mexico</b>	UN1993	LIQUIDO INFLAMABLE, N.E.P. (Acetonitrile, Methanol)		II		<p><b>Special provisions</b> 274</p>
<b>IMDG</b>	UN1993	FLAMMABLE LIQUID, N.O.S. (Acetonitrile, Methanol)		II		<p><b>Emergency schedules (EmS)</b> F-E, _S-E_</p> <p><b>Special provisions</b> 274</p>

## Section 14. Transport information

IATA	UN1993	Flammable liquid, n.o.s. (Acetonitrile, Methanol)	II		<p><b>Passenger and Cargo Aircraft</b> Quantity limitation: 5 L Packaging instructions: 353</p> <p><b>Cargo Aircraft Only</b> Quantity limitation: 60 L Packaging instructions: 364</p> <p><b>Limited Quantities - Passenger Aircraft</b> Quantity limitation: 1 L Packaging instructions: Y341</p> <p><b>Special provisions</b> A3</p> <p><b>Remarks</b> A44 Requires Shipper's Declaration of Dangerous Goods</p>
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PG\* : Packing group

## Section 15. Regulatory information

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

- U.S. Federal regulations** : TSCA 8(a) PAIR: Acetonitrile  
 United States inventory (TSCA 8b): Not determined.  
 Clean Water Act (CWA) 307: Acetonitrile; Trichloromethane  
 Clean Water Act (CWA) 311: Trichloromethane
- Clean Air Act (CAA) 112 regulated toxic substances: Trichloromethane
- 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) : Listed

### SARA 302/304

#### Composition/information on ingredients

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

## Section 15. Regulatory information

**SARA 304 RQ** : 555.6 lbs / 252.2 kg

### SARA 311/312

**Classification** : Fire hazard  
 Immediate (acute) health hazard  
 Delayed (chronic) health hazard

### Composition/information on ingredients

Name	%	Fire hazard	Sudden release of pressure	Reactive	Immediate (acute) health hazard	Delayed (chronic) health hazard
Acetonitrile	≥50 - ≤75	Yes.	No.	No.	Yes.	Yes.
Methanol	≥10 - ≤15	Yes.	No.	No.	Yes.	Yes.
Acetone	≤5	Yes.	No.	No.	Yes.	Yes.
Trichloromethane	≤1.5	No.	No.	No.	Yes.	Yes.

### SARA 313

	Product name	CAS number	%
<b>Form R - Reporting requirements</b>	Acetonitrile	75-05-8	≥50 - ≤75
	Methanol	67-56-1	≥10 - ≤15
	Trichloromethane	67-66-3	≤1.5
<b>Supplier notification</b>	Acetonitrile	75-05-8	≥50 - ≤75
	Methanol	67-56-1	≥10 - ≤15
	Trichloromethane	67-66-3	≤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; CHLOROFORM; ACETONE; METHANOL
- New York** : The following components are listed: Acetonitrile; Ethanenitrile; Chloroform; Methane, trichloro-; Acetone; 2-Propanone; Methanol
- New Jersey** : The following components are listed: ACETONITRILE; CYANOMETHANE; CHLOROFORM; METHANE, TRICHLORO-; ACETONE; 2-PROPANONE; METHYL ALCOHOL; METHANOL
- Pennsylvania** : The following components are listed: ACETONITRILE; METHANE, TRICHLORO-; 2-PROPANONE; METHANOL

### California Prop. 65

**WARNING:** This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm.

Ingredient name	Cancer	Reproductive	No significant risk level	Maximum acceptable dosage level
Methanol	No.	Yes.	No.	23000 µg/day (ingestion) 47000 µg/day (inhalation)
Trichloromethane	Yes.	Yes.	20 µg/day (ingestion) 40 µg/day (inhalation)	No.

**Canada inventory** : Not determined.

### International regulations



## Section 15. Regulatory information

<b>International lists</b>	: <input checked="" type="checkbox"/> <b>Australia inventory (AICS)</b> : Not determined. <b>China inventory (IECSC)</b> : Not determined. <b>Japan inventory (ENCS)</b> : Not determined. <b>Japan inventory (ISHL)</b> : Not determined. <b>Korea inventory</b> : Not determined. <b>Malaysia Inventory (EHS Register)</b> : Not determined. <b>New Zealand Inventory of Chemicals (NZIoC)</b> : Not determined. <b>Philippines inventory (PICCS)</b> : Not determined. <b>Taiwan Chemical Substances Inventory (TCSI)</b> : Not determined. <b>Turkey inventory</b> : Not determined.
<b>Chemical Weapons Convention List Schedule I Chemicals</b>	: Not listed
<b>Chemical Weapons Convention List Schedule II Chemicals</b>	: Not listed
<b>Chemical Weapons Convention List Schedule III Chemicals</b>	: Not listed

## Section 16. Other information

### History

<b>Date of issue</b>	: 05/19/2016
<b>Date of previous issue</b>	: 11/19/2014.
<b>Version</b>	: 6

Indicates information that has changed from previously issued version.

### Notice to reader

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