Product name: APCI Chemical Kit
Part no.: G1947-60600

This product is composed of the following:

Kit Components, Reagents

Box/Module Part number	Box/Module Name	Kit Component Part Number	Kit Component Name	Qty Units	HPR
	-	G1946-85004	ES/APCI Positive Ion Performance Standard	1	Yes
-	-	G2432A	APCI/APPI Tuning mix	1	Yes

Article SDSs, if maintained, are available on www.agilent.com. We recommend using the article product code when searching. SDSs are only available for a limited set of countries.

Transport Information for the Kit:

Dangerous Goods classification for: **G1947-60600**

TDG	IMDG	IATA
UN3316, CHEMICAL KIT, 9, II	UN3316, CHEMICAL KIT, 9, II	UN3316, Chemical kit, 9, II

Table of contents

Kit Component Name **Page**

APCI/APPI Tuning mix..... 2
ES/APCI Positive Ion Performance Standard..... 18

SDSs for each individual Kit component follow this cover sheet.

SAFETY DATA SHEET

Agilent Technologies

APCI/APPI Tuning mix

Section 1. Identification

Product identifier : APCI/APPI Tuning mix

Part no. : G2432A

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

Identified uses : Reagents and Standards for Analytical Chemistry Laboratory Use
1 x 100 ml Bottle

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. Hazard identification

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. Hazard 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.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Ingredient name	Synonyms	% (w/w)	Identifiers	
Acetonitrile	Acetonitrile	≥65 - ≤85	CAS: 75-05-8	-
Methanol	methyl alcohol	≥10 - ≤30	CAS: 67-56-1	-
Acetone	Acetone	≥1 - ≤5	CAS: 67-64-1	-
Trichloromethane	Chloroform	≥1 - ≤5	CAS: 67-66-3	-

Ranges if listed above for hazardous ingredient(s) are prescribed ranges. The actual concentration(s) or actual concentration range(s) are being withheld as a trade secret.

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_2, water spray (fog) or foam.

Unsuitable extinguishing media : Do not use water jet.

Specific hazards arising from the chemical : Highly flammable liquid and vapor. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. The vapor/gas is heavier than air and will spread along the ground. Vapors may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back.

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.

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 or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

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	**CA Saskatchewan Provincial (Canada, 4/2021)** Absorbed through skin. STEL 15 minutes: 30 ppm. TWA 8 hours: 20 ppm. **CA British Columbia Provincial (Canada, 9/2024)** Absorbed through skin. TWA 8 hours: 20 ppm. **CA Ontario Provincial (Canada, 6/2019)** Absorbed through skin. TWA 8 hours: 20 ppm. **CA Quebec Provincial (Canada, 2/2024)** Absorbed through skin. TWAEV 8 hours: 20 ppm. **CA Alberta Provincial (Canada, 3/2023)** OEL 8 hours: 34 mg/m³. OEL 8 hours: 20 ppm.
Methanol	**CA Saskatchewan Provincial (Canada, 4/2021)** Absorbed through skin. STEL 15 minutes: 250 ppm. TWA 8 hours: 200 ppm. **CA British Columbia Provincial (Canada, 9/2024)** Absorbed through skin.

Section 8. Exposure controls/personal protection

	TWA 8 hours: 200 ppm. STEL 15 minutes: 250 ppm. **CA Ontario Provincial (Canada, 6/2019)** Absorbed through skin. TWA 8 hours: 200 ppm. STEL 15 minutes: 250 ppm. **CA Quebec Provincial (Canada, 2/2024)** Absorbed through skin. TWAEV 8 hours: 200 ppm. TWAEV 8 hours: 262 mg/m³. STEV 15 minutes: 250 ppm. STEV 15 minutes: 328 mg/m³. **CA Alberta Provincial (Canada, 3/2023)** Absorbed through skin. OEL 8 hours: 262 mg/m³. OEL 8 hours: 200 ppm. OEL 15 minutes: 250 ppm. OEL 15 minutes: 328 mg/m³.
Acetone	**CA Saskatchewan Provincial (Canada, 4/2021)** STEL 15 minutes: 750 ppm. TWA 8 hours: 500 ppm. **CA British Columbia Provincial (Canada, 9/2024)** TWA 8 hours: 250 ppm. STEL 15 minutes: 500 ppm. **CA Ontario Provincial (Canada, 6/2019)** TWA 8 hours: 250 ppm. STEL 15 minutes: 500 ppm. **CA Quebec Provincial (Canada, 2/2024)** TWAEV 8 hours: 250 ppm. STEV 15 minutes: 500 ppm. **CA Alberta Provincial (Canada, 3/2023)** OEL 8 hours: 1200 mg/m³. OEL 15 minutes: 1800 mg/m³. OEL 8 hours: 500 ppm. OEL 15 minutes: 750 ppm.
Trichloromethane	**CA British Columbia Provincial (Canada, 9/2024)** Carc 2B, Repr. TWA 8 hours: 2 ppm. **CA Ontario Provincial (Canada, 6/2019)** TWA 8 hours: 10 ppm. **CA Quebec Provincial (Canada, 2/2024)** C2. TWAEV 8 hours: 5 ppm. TWAEV 8 hours: 24.4 mg/m³. **CA Alberta Provincial (Canada, 3/2023)** OEL 8 hours: 49 mg/m³. OEL 8 hours: 10 ppm.

Biological exposure indices

No exposure indices known.

Section 8. Exposure controls/personal protection

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.

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.

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

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

Section 9. Physical and chemical properties

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

Appearance

Physical state : Liquid.

Color : Ether. [Light]

Odor : Not available.

Odor threshold : 70 ppm

pH : Not available.

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

Section 9. Physical and chemical properties

Initial boiling point and boiling range : 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.

Upper/lower flammability or explosive limits : Lower: 4.4%
Upper: 16%

Vapor pressure : 11.6 kPa (87 mm Hg)

Vapor density : 1.42 [Air = 1]

Relative density : Not available.

Solubility :

Media	Result
water	Soluble

Miscible with water : Yes.

Partition coefficient: n-octanol/water : -0.34

Auto-ignition temperature : 524°C (975.2°F)

Decomposition temperature : Not available.

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

Particle characteristics

Median particle size : Not applicable.

Section 10. Stability and reactivity

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

Chemical stability : The product is stable.

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

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

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

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

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name **Result**

Section 11. Toxicological information

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]
	Rat - Inhalation - LC50 Vapor	189.95 mg/l [1 hours]
Acetone	Rat - Oral - LD50	5800 mg/kg
Trichloromethane	Rat - Oral - LD50	695 mg/kg
	Rabbit - Dermal - LD50	>20 g/kg
	Rat - Inhalation - LC50 Vapor	47702 mg/m³ [4 hours]

Conclusion/Summary [Product] : Not available.

Skin corrosion/irritation

Product/ingredient name	Result	
Methanol	Rabbit - Skin - Moderate irritant	Duration of treatment/ exposure: 24 hours Amount/concentration applied: 20 mg
Acetone	Rabbit - Skin - Mild irritant	Duration of treatment/ exposure: 24 hours Amount/concentration applied: 500 mg
	Rabbit - Skin - Mild irritant	Amount/concentration applied: 395 mg

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

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

Serious eye damage/eye irritation

Product/ingredient name	Result	
Acetonitrile	Rabbit - Eyes - Moderate irritant	Duration of treatment/ exposure: 24 hours Amount/concentration applied: 100 uL
Methanol	Rabbit - Eyes - Moderate irritant	Duration of treatment/ exposure: 24 hours Amount/concentration applied: 100 mg
	Rabbit - Eyes - Moderate irritant	Amount/concentration applied: 40 mg
	Rabbit - Eyes - Severe irritant	Amount/concentration applied: 0.1 Ml
Acetone	Rabbit - Eyes - Mild irritant	Amount/concentration applied: 10 uL
	Rabbit - Eyes - Moderate irritant	Duration of treatment/ exposure: 24 hours Amount/concentration applied: 20 mg
Trichloromethane	Rabbit - Eyes - Moderate irritant	Duration of treatment/ exposure: 24 hours Amount/concentration

Section 11. Toxicological information

	Rabbit - Eyes - Severe irritant	applied: 20 mg Amount/concentration applied: 0.1 Ml

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

Ingredient name	Conclusion/Summary
Methanol	May cause eye irritation.

Respiratory corrosion/irritation

Conclusion/Summary [Product] : Not available.

Ingredient name	Conclusion/Summary
Acetonitrile	May cause respiratory irritation.

Respiratory corrosion/irritation

Not available.

Conclusion/Summary [Product] : Not available.

Ingredient name	Conclusion/Summary
acetonitrile	May cause respiratory irritation.

Respiratory or skin sensitization

Skin

Conclusion/Summary [Product] : Not available.

Respiratory

Conclusion/Summary [Product] : Not available.

Germ cell mutagenicity

Conclusion/Summary [Product] : Not available.

Carcinogenicity

Conclusion/Summary [Product] : Not available.

Classification

Product/ingredient name	IARC	NTP	ACGIH
Acetonitrile	-	-	A4
Acetone	-	-	A4
Trichloromethane	2B	Reasonably anticipated to be a human carcinogen.	A3

Reproductive toxicity

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

Section 11. Toxicological information

Ingredient name	Conclusion/Summary
Methanol	Repeated or prolonged exposure to the substance can produce reproductive system damage.
Trichloromethane	Detected in maternal milk in humans.

Specific target organ toxicity (single exposure)

Product/ingredient name	Result
Methanol	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) - Category 1
Acetone	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3

Specific target organ toxicity (repeated exposure)

Product/ingredient name	Result
Trichloromethane	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

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

Section 11. Toxicological information

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/APPI Tuning mix	332.7	852.7	N/A	8.4	N/A
Acetonitrile	500	1100	N/A	11	N/A
Methanol	100	300	N/A	3	N/A
Acetone	5800	20000	N/A	76	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. Narcotic effect. May cause nervous system disturbances.

Section 12. Ecological information

Toxicity

Product/ingredient name	Result		
Acetonitrile	Acute - LC50 - Fresh water	3600 mg/l [48 hours]	Daphnia - Water flea - *Daphnia magna*
	Acute - IC50 - Fresh water	3685 mg/l [96 hours]	Aquatic plants - Duckweed - *Lemna minor*
	Chronic - NOEC - Fresh water	160 mg/l [21 days]	Daphnia - Water flea - *Daphnia magna*
	Chronic - NOEC - Fresh water	1000 mg/l [96 hours]	Aquatic plants - Duckweed - *Lemna minor*
	Acute - LC50 - Fresh water	1000 mg/l [96 hours]	Fish - Fathead minnow - *Pimephales promelas*
Methanol	Acute - LC50 - Marine water	2500 mg/l [48 hours]	Crustaceans - Common shrimp, sand shrimp - *Crangon crangon* - Adult
	Acute - LC50 - Fresh	290 mg/l [96 hours]	Fish - Zebra danio -

Section 12. Ecological information

	water		*Danio rerio* - Egg
	Chronic - NOEC - Marine water	9.96 mg/l [96 hours]	Algae - Green algae - *Ulva pertusa*
	Acute - EC50 - Marine water	2736 mg/l [96 hours]	Algae - Green algae - *Ulva pertusa*
Acetone	Acute - EC50 - Fresh water	7200 mg/l [96 hours]	Algae - Green algae - *Selenastrum sp.*
	Chronic - NOEC - Marine water	4.95 mg/l [96 hours]	Algae - Green algae - *Ulva pertusa*
	Chronic - NOEC - Fresh water	0.016 ml/l [21 days]	Crustaceans - Daphnia - *Daphniidae*
	Acute - LC50 - Marine water	4.42589 ml/l [48 hours]	Crustaceans - Calanoid copepod - *Acartia tonsa* - Copepodid
	Acute - LC50 - Fresh water	5600 ppm [96 hours]	Fish - Guppy - *Poecilia reticulata*
Trichloromethane	Acute - LC50 - Fresh water	13.3 mg/l [96 hours]	Fish - Bluegill - *Lepomis macrochirus*
	Acute - EC50 - Fresh water	2.803 mg/l [48 hours]	Crustaceans - Ostracod - *Cypris subglobosa*
	Chronic - NOEC - Fresh water	1.8 mg/l [21 days]	Daphnia - Water flea - *Daphnia magna*
	Chronic - EC10	3.61 mg/l [72 hours]	Algae - Green algae - *Chlamydomonas reinhardtii* - Exponential growth phase
	Acute - EC50	13.3 mg/l [72 hours]	Algae - Green algae - *Chlamydomonas reinhardtii* - Exponential growth phase

Conclusion/Summary [Product] : Not available.

Persistence and degradability

Product/ingredient name	Result		
Acetonitrile	OECD [Ready Biodegradability - CO_2 in Sealed Vessels (Headspace Test)]	70% [21 days] - Readily	-

Conclusion/Summary [Product] : Not available.

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

Bioaccumulative potential

Section 12. Ecological information

Product/ingredient name	$LogP_{ow}$	BCF	Potential
APCI/APPI Tuning mix	-0.34	-	Low
Acetonitrile	-0.34	3	Low
Methanol	-0.77	<10	Low
Acetone	-0.23	3	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.

Section 14. Transport information

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

Proof of classification statement : Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.18-2.19 (Class 3).

Additional information

Section 14. Transport information

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

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.

Section 15. Regulatory information

Canadian lists

Canadian NPRI : The following components are listed: acetonitrile; methanol; chloroform

CEPA Toxic substances : The following components are listed: chlorinated alkanes

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

Canada : Not determined.

United States : Not determined.

Section 16. Other information

History

Date of issue/Date of revision : 12/19/2025

Date of previous issue : No previous validation

Version : 1

Key to abbreviations : ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
DOT = Department of Transportation
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
HPR = Hazardous Products Regulations
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods

Section 16. Other information

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

Procedure used to derive the classification

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

Indicates information that has changed from previously issued version.

Notice to reader

Disclaimer: The information contained in this document is based on Agilent's state of knowledge at the time of preparation. No warranty as to its accurateness, completeness or suitability for a particular purpose is expressed or implied.

Conforms to HPR 2023

SAFETY DATA SHEET

Agilent Technologies

ES/APCI Positive Ion Performance Standard

Section 1. Identification

Product identifier : ES/APCI Positive Ion Performance Standard

Part no. : G1946-85004

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

Identified uses : Reagents and Standards for Analytical Chemistry Laboratory Use
5 x 1 ml ampoule

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. Hazard identification

Classification of the substance or mixture

H226	FLAMMABLE LIQUIDS - Category 3
H319	EYE IRRITATION - Category 2A
H336	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3

GHS label elements

Hazard pictograms :

Signal word : Warning

Hazard statements : H226 - Flammable liquid and vapor.
H319 - Causes serious eye irritation.
H336 - May cause drowsiness or dizziness.

Precautionary statements

Prevention : P280 - Wear eye or face protection.
P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P261 - Avoid breathing vapor.

Response : P304 + P312 - IF INHALED: Call a POISON CENTER or doctor if you feel unwell.
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337 + P313 - If eye irritation persists: Get medical advice or attention.

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

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

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Ingredient name	Synonyms	% (w/w)	Identifiers	
Propan-2-ol	Isopropanol	≥45 - ≤70	CAS: 67-63-0	-

Ranges if listed above for hazardous ingredient(s) are prescribed ranges. The actual concentration(s) or actual concentration range(s) are being withheld as a trade secret.

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.

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.

Skin contact : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. 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 : Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness.

Skin contact : No known significant effects or critical hazards.

Ingestion : Can cause central nervous system (CNS) depression.

Over-exposure signs/symptoms

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

Section 4. First-aid measures

Inhalation : Adverse symptoms may include the following:
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness

Skin contact : No specific data.

Ingestion : No specific data.

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

Notes to physician : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

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.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

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

Unsuitable extinguishing media : Do not use water jet.

Specific hazards arising from the chemical : 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

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Section 6. Accidental release measures

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). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. 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
Propan-2-ol	**CA Saskatchewan Provincial (Canada, 4/2021)** STEL 15 minutes: 400 ppm. TWA 8 hours: 200 ppm. **CA British Columbia Provincial (Canada, 9/2024)** TWA 8 hours: 200 ppm. STEL 15 minutes: 400 ppm. **CA Ontario Provincial (Canada, 6/2019)** TWA 8 hours: 200 ppm.

Section 8. Exposure controls/personal protection

	STEL 15 minutes: 400 ppm. **CA Quebec Provincial (Canada, 2/2024)** TWAEV 8 hours: 200 ppm. STEV 15 minutes: 400 ppm. **CA Alberta Provincial (Canada, 3/2023)** OEL 15 minutes: 984 mg/m³. OEL 8 hours: 200 ppm. OEL 15 minutes: 400 ppm. OEL 8 hours: 492 mg/m³.

Biological exposure indices

No exposure indices known.

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.

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.

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

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

Section 9. Physical and chemical properties

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

Appearance

Physical state : Liquid.

Color : Colorless.

Odor : Not available.

Odor threshold : Not available.

pH : Not available.

Melting point/freezing point : Not available.

Initial boiling point and boiling range : Not available.

Flash point : Closed cup: 23 to 37.8°C (73.4 to 100°F)

Evaporation rate : Not available.

Flammability (solid, gas) : Not applicable.

Upper/lower flammability or explosive limits : Not available.

Vapor pressure :

Ingredient name	Vapor Pressure at 20˚C			Vapor pressure at 50˚C		
	mm Hg	kPa	Method	mm Hg	kPa	Method
Propan-2-ol	33.00268	4.4	-	177	23.6	-
water	17.5	2.3	-	92.258	12.3	-

Vapor density : Not available.

Relative density : Not available.

Solubility :

Media	Result
water	Soluble

Miscible with water : Yes.

Partition coefficient: n-octanol/water : Not applicable.

Auto-ignition temperature :

Ingredient name	°C	°F	Method
Propan-2-ol	456	852.8	-

Decomposition temperature : Not available.

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

Particle characteristics

Median particle size : Not applicable.

Section 10. Stability and reactivity

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

Chemical stability : The product is stable.

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

Section 10. Stability and reactivity

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.

Incompatible materials : Reactive or incompatible with the following materials:
oxidizing materials

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

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	
Propan-2-ol	Rabbit - Dermal - LD50	12800 mg/kg
	Rat - Oral - LD50	5000 mg/kg

Conclusion/Summary [Product] : Not available.

Skin corrosion/irritation

Product/ingredient name	Result	
Propan-2-ol	Rabbit - Skin - Mild irritant	Amount/concentration applied: 500 mg

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

Ingredient name	Conclusion/Summary
Propan-2-ol	Repeated exposure may cause skin dryness or cracking.

Serious eye damage/eye irritation

Product/ingredient name	Result	
Propan-2-ol	Rabbit - Eyes - Moderate irritant	Duration of treatment/ exposure: 24 hours Amount/concentration applied: 100 mg
	Rabbit - Eyes - Moderate irritant	Amount/concentration applied: 10 mg

Conclusion/Summary [Product] : Not available.

Respiratory corrosion/irritation

Conclusion/Summary [Product] : Not available.

Respiratory corrosion/irritation

Not available.

Conclusion/Summary [Product] : Not available.

Respiratory or skin sensitization

Skin

Section 11. Toxicological information

Conclusion/Summary [Product] : Not available.

Respiratory

Conclusion/Summary [Product] : Not available.

Germ cell mutagenicity

Conclusion/Summary [Product] : Not available.

Carcinogenicity

Conclusion/Summary [Product] : Not available.

Classification

Product/ingredient name	IARC	NTP	ACGIH
Propan-2-ol	3	-	A4

Reproductive toxicity

Conclusion/Summary [Product] : Not available.

Specific target organ toxicity (single exposure)

Product/ingredient name	Result
Propan-2-ol	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3

Specific target organ toxicity (repeated exposure)

Not available.

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 : Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness.

Skin contact : No known significant effects or critical hazards.

Ingestion : Can cause central nervous system (CNS) depression.

Symptoms related to the physical, chemical and toxicological characteristics

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

Section 11. Toxicological information

Inhalation : Adverse symptoms may include the following:
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness

Skin contact : No specific data.

Ingestion : No specific data.

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 : No known significant effects or critical hazards.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Reproductive toxicity : No known significant effects or critical hazards.

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)
ES/APCI Positive Ion Performance Standard	10000.0	N/A	N/A	N/A	N/A
Propan-2-ol	5000	12800	N/A	72.2	N/A

Section 12. Ecological information

Toxicity

Product/ingredient name	Result		
Propan-2-ol	Acute - LC50 - Marine water	1400 mg/l [48 hours]	Crustaceans - Common shrimp, sand shrimp - *Crangon crangon*
	Acute - LC50 - Fresh water	4200 mg/l [96 hours]	Fish - Harlequinfish, red rasbora - *Rasbora heteromorpha*

Conclusion/Summary [Product] : Not available.

Persistence and degradability

Section 12. Ecological information

Conclusion/Summary [Product] : Not available.

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Propan-2-ol	-	-	Readily

Bioaccumulative potential

Product/ingredient name	$LogP_{ow}$	BCF	Potential
Propan-2-ol	0.05	-	Low

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.

Section 14. Transport information

TDG / IMDG / IATA : Not regulated.

Additional information

Remarks: De minimis quantities

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

Section 15. Regulatory information

Canadian lists

Canadian NPRI : The following components are listed: isopropyl alcohol

CEPA Toxic substances : None of the components are listed.

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Section 15. Regulatory information

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

Canada : Not determined.

United States : All components are active or exempted.

Section 16. Other information

History

Date of issue/Date of revision : 12/19/2025

Date of previous issue : 05/23/2018

Version : 5

Key to abbreviations : ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
DOT = Department of Transportation
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
HPR = Hazardous Products Regulations
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
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LogPow = logarithm of the octanol/water partition coefficient
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SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3	Calculation method

Indicates information that has changed from previously issued version.

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