

SAFETY DATA SHEET

APCI Chemical Kit, Part Number G1947-60600

Section 1. Identification

1.1 Product identifier

Product name : APCI Chemical Kit, Part Number G1947-60600
Part no. (chemical kit) : G1947-60600
Part no. : APCI/APPI Tuning mix G2432A, G2432-60001
 ES/APCI Positive Ion Performance G1946-85004
 Standard
Validation date : 2/12/2018

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

Material uses : Reagents and Standards for Analytical Chemistry Laboratory Use
 APCI/APPI Tuning mix A 100 mL container (For R&D Use Only)
 ES/APCI Positive Ion Performance Standard 5 x 1 ml ampoule

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 : APCI/APPI Tuning mix This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
 ES/APCI Positive Ion Performance Standard This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture

APCI/APPI Tuning mix

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, liver) - Category 1

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H225 FLAMMABLE LIQUIDS - Category 2
 H319 EYE IRRITATION - Category 2A

Section 2. Hazards identification

H335	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
H336	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3
H373	SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (kidneys) - Category 2

Ingredients of unknown toxicity : APCI/APPI Tuning mix
 Percentage of the mixture consisting of ingredient (s) of unknown dermal toxicity: 1 - 10%
 Percentage of the mixture consisting of ingredient (s) of unknown inhalation toxicity: 1 - 10%

2.2 GHS label elements

Hazard pictograms : APCI/APPI Tuning mix



ES/APCI Positive Ion Performance Standard

Signal word : APCI/APPI Tuning mix
 ES/APCI Positive Ion Performance Standard
 Danger
 Danger

Hazard statements : APCI/APPI Tuning mix
 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)

ES/APCI Positive Ion Performance Standard
 H225 - Highly flammable liquid and vapor.
 H319 - Causes serious eye irritation.
 H335 - May cause respiratory irritation.
 H336 - May cause drowsiness or dizziness.
 H373 - May cause damage to organs through prolonged or repeated exposure. (kidneys)

Precautionary statements

Prevention : APCI/APPI Tuning mix
 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.

Section 2. Hazards identification

ES/APCI Positive Ion Performance Standard

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.
 P280 - Wear protective gloves. Wear eye or face protection.
 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.
 P264 - Wash hands thoroughly after handling.
 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.
 P314 - Get medical attention if you feel unwell.
 P304 + P340 + P312 - IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or physician if you feel unwell.
 P303 + P361 + P353 - IF ON SKIN (or hair): Take

Response

: APCI/APPI Tuning mix

ES/APCI Positive Ion Performance Standard

Section 2. Hazards identification

off immediately all contaminated clothing. Rinse skin with water or shower.
 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 : APCI/APPI Tuning mix
 ES/APCI Positive Ion Performance Standard

P405 - Store locked up.
 P403 - Store in a well-ventilated place.
 P235 - Keep cool.
 P405 - Store locked up.

Disposal : APCI/APPI Tuning mix
 ES/APCI Positive Ion Performance Standard

P403 - Store in a well-ventilated place.
 P235 - Keep cool.
 P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
 P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.

Supplemental label elements : APCI/APPI Tuning mix
 ES/APCI Positive Ion Performance Standard

None known.
 None known.

2.3 Other hazards

Hazards not otherwise classified : APCI/APPI Tuning mix
 ES/APCI Positive Ion Performance Standard

None known.
 None known.

Section 3. Composition/information on ingredients

Substance/mixture : APCI/APPI Tuning mix Mixture
 ES/APCI Positive Ion Performance Standard Mixture

Ingredient name	%	CAS number
APCI/APPI Tuning mix		
Acetonitrile	≥50 - ≤75	75-05-8
Methanol	≥10 - ≤16	67-56-1
Acetone	≤5	67-64-1
Trichloromethane	≤1.9	67-66-3
ES/APCI Positive Ion Performance Standard		
Propan-2-ol	≥50 - ≤75	67-63-0

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	: APCI/APPI Tuning mix	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.
	ES/APCI Positive Ion Performance Standard	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	: APCI/APPI Tuning mix	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.
	ES/APCI Positive Ion Performance Standard	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	: APCI/APPI Tuning mix	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.
	ES/APCI Positive Ion Performance Standard	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention following exposure or if feeling unwell. Wash clothing before reuse. Clean shoes

Section 4. First aid measures

Ingestion	: APCI/APPI Tuning mix	thoroughly before reuse. 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.
	ES/APCI Positive Ion Performance Standard	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	: APCI/APPI Tuning mix ES/APCI Positive Ion Performance Standard	Causes serious eye irritation. Causes serious eye irritation.
Inhalation	: APCI/APPI Tuning mix ES/APCI Positive Ion Performance Standard	Toxic if inhaled. Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. May cause respiratory irritation.
Skin contact	: APCI/APPI Tuning mix ES/APCI Positive Ion Performance Standard	Toxic in contact with skin. Causes skin irritation. No known significant effects or critical hazards.
Ingestion	: APCI/APPI Tuning mix ES/APCI Positive Ion Performance Standard	Harmful if swallowed. Can cause central nervous system (CNS) depression.

Over-exposure signs/symptoms

Section 4. First aid measures

Eye contact	: APCI/APPI Tuning mix	Adverse symptoms may include the following: pain or irritation watering redness
	ES/APCI Positive Ion Performance Standard	Adverse symptoms may include the following: pain or irritation watering redness
Inhalation	: APCI/APPI Tuning mix	Adverse symptoms may include the following: reduced fetal weight increase in fetal deaths skeletal malformations
	ES/APCI Positive Ion Performance Standard	Adverse symptoms may include the following: respiratory tract irritation coughing nausea or vomiting headache drowsiness/fatigue dizziness/vertigo unconsciousness
Skin contact	: APCI/APPI Tuning mix	Adverse symptoms may include the following: irritation redness reduced fetal weight increase in fetal deaths skeletal malformations
	ES/APCI Positive Ion Performance Standard	No specific data.
Ingestion	: APCI/APPI Tuning mix	Adverse symptoms may include the following: reduced fetal weight increase in fetal deaths skeletal malformations
	ES/APCI Positive Ion Performance Standard	No specific data.

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

Notes to physician	: APCI/APPI Tuning mix	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.
	ES/APCI Positive Ion Performance Standard	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Specific treatments	: APCI/APPI Tuning mix	No specific treatment.
	ES/APCI Positive Ion Performance Standard	No specific treatment.
Protection of first-aiders	: APCI/APPI Tuning mix	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.
	ES/APCI Positive Ion Performance Standard	No action shall be taken involving any personal risk

Section 4. First aid measures

Standard

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

5.1 Extinguishing media

Suitable extinguishing media	: APCI/APPI Tuning mix ES/APCI Positive Ion Performance Standard	Use dry chemical, CO ₂ , water spray (fog) or foam. Use dry chemical, CO ₂ , water spray (fog) or foam.
Unsuitable extinguishing media	: APCI/APPI Tuning mix ES/APCI Positive Ion Performance Standard	Do not use water jet. Do not use water jet.

5.2 Special hazards arising from the substance or mixture

Specific hazards arising from the chemical	: APCI/APPI Tuning mix ES/APCI Positive Ion Performance Standard	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. Highly flammable liquid and vapor. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion.
Hazardous thermal decomposition products	: APCI/APPI Tuning mix ES/APCI Positive Ion Performance Standard	Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides halogenated compounds carbonyl halides cyanides Formaldehyde. Decomposition products may include the following materials: carbon dioxide carbon monoxide

5.3 Advice for firefighters

Special protective actions for fire-fighters	: APCI/APPI Tuning mix ES/APCI Positive Ion Performance Standard	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. Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No
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Section 5. Fire-fighting measures

Special protective equipment for fire-fighters

: APCI/APPI Tuning mix

ES/APCI Positive Ion Performance Standard

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.

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

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

: APCI/APPI Tuning mix

ES/APCI Positive Ion Performance Standard

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.

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

: APCI/APPI Tuning mix

ES/APCI Positive Ion Performance Standard

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". 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

: APCI/APPI Tuning mix

ES/APCI Positive Ion Performance Standard

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).

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

Section 6. Accidental release measures

Methods for cleaning up : APCI/APPI Tuning mix

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.

ES/APCI Positive Ion Performance Standard

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 : APCI/APPI Tuning mix

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.

ES/APCI Positive Ion Performance Standard

Put on appropriate personal protective equipment (see Section 8). Do not breathe vapor or mist. Do not ingest. Avoid contact with eyes, skin and clothing. 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.

Section 7. Handling and storage

Advice on general occupational hygiene	: APCI/APPI Tuning mix ES/APCI Positive Ion Performance Standard	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. Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
7.2 Conditions for safe storage, including any incompatibilities	: APCI/APPI Tuning mix ES/APCI Positive Ion Performance Standard	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. 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.
7.3 Specific end use(s)		
Recommendations	: APCI/APPI Tuning mix ES/APCI Positive Ion Performance Standard	Industrial applications, Professional applications. Industrial applications, Professional applications.
Industrial sector specific solutions	: APCI/APPI Tuning mix ES/APCI Positive Ion Performance Standard	Not applicable. Not applicable.

Section 8. Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
<p>APCI/APPI Tuning mix Acetonitrile</p>	<p>ACGIH TLV (United States, 3/2017). Absorbed through skin. TWA: 20 ppm 8 hours.</p> <p>OSHA PEL 1989 (United States, 3/1989). TWA: 40 ppm 8 hours. TWA: 70 mg/m³ 8 hours. STEL: 60 ppm 15 minutes. STEL: 105 mg/m³ 15 minutes.</p> <p>NIOSH REL (United States, 10/2016). TWA: 20 ppm 10 hours. TWA: 34 mg/m³ 10 hours.</p> <p>OSHA PEL (United States, 6/2016). TWA: 40 ppm 8 hours. TWA: 70 mg/m³ 8 hours.</p>
<p>Methanol</p>	<p>ACGIH TLV (United States, 3/2017). Absorbed through skin. TWA: 200 ppm 8 hours. TWA: 262 mg/m³ 8 hours. STEL: 250 ppm 15 minutes. STEL: 328 mg/m³ 15 minutes.</p> <p>OSHA PEL 1989 (United States, 3/1989). Absorbed through skin. TWA: 200 ppm 8 hours. TWA: 260 mg/m³ 8 hours. STEL: 250 ppm 15 minutes. STEL: 325 mg/m³ 15 minutes.</p> <p>NIOSH REL (United States, 10/2016). Absorbed through skin. TWA: 200 ppm 10 hours. TWA: 260 mg/m³ 10 hours. STEL: 250 ppm 15 minutes. STEL: 325 mg/m³ 15 minutes.</p> <p>OSHA PEL (United States, 6/2016). TWA: 200 ppm 8 hours. TWA: 260 mg/m³ 8 hours.</p>
<p>Acetone</p>	<p>ACGIH TLV (United States, 3/2017). TWA: 250 ppm 8 hours. STEL: 500 ppm 15 minutes.</p> <p>OSHA PEL 1989 (United States, 3/1989). TWA: 750 ppm 8 hours. TWA: 1800 mg/m³ 8 hours. STEL: 1000 ppm 15 minutes. STEL: 2400 mg/m³ 15 minutes.</p> <p>NIOSH REL (United States, 10/2016). TWA: 250 ppm 10 hours. TWA: 590 mg/m³ 10 hours.</p> <p>OSHA PEL (United States, 6/2016). TWA: 1000 ppm 8 hours. TWA: 2400 mg/m³ 8 hours.</p>
<p>Trichloromethane</p>	<p>ACGIH TLV (United States, 3/2017). TWA: 10 ppm 8 hours.</p>

Section 8. Exposure controls/personal protection

<p>ES/APCI Positive Ion Performance Standard Propan-2-ol</p>	<p>TWA: 49 mg/m³ 8 hours. OSHA PEL 1989 (United States, 3/1989). TWA: 2 ppm 8 hours. TWA: 9.78 mg/m³ 8 hours. NIOSH REL (United States, 10/2016). STEL: 2 ppm 60 minutes. STEL: 9.78 mg/m³ 60 minutes. OSHA PEL (United States, 6/2016). CEIL: 50 ppm CEIL: 240 mg/m³</p> <p>ACGIH TLV (United States, 3/2017). TWA: 200 ppm 8 hours. STEL: 400 ppm 15 minutes. OSHA PEL 1989 (United States, 3/1989). TWA: 400 ppm 8 hours. TWA: 980 mg/m³ 8 hours. STEL: 500 ppm 15 minutes. STEL: 1225 mg/m³ 15 minutes. NIOSH REL (United States, 10/2016). TWA: 400 ppm 10 hours. TWA: 980 mg/m³ 10 hours. STEL: 500 ppm 15 minutes. STEL: 1225 mg/m³ 15 minutes. OSHA PEL (United States, 6/2016). TWA: 400 ppm 8 hours. TWA: 980 mg/m³ 8 hours.</p>
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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

Section 8. Exposure controls/personal 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

9.1 Information on basic physical and chemical properties

Appearance

Physical state	: APCI/APPI Tuning mix	Liquid.
	ES/APCI Positive Ion Performance	Liquid.
	Standard	
Color	: APCI/APPI Tuning mix	Ether. [Light]
	ES/APCI Positive Ion Performance	Colorless.
	Standard	
Odor	: APCI/APPI Tuning mix	Not available.
	ES/APCI Positive Ion Performance	Not available.
	Standard	
Odor threshold	: APCI/APPI Tuning mix	70 ppm
	ES/APCI Positive Ion Performance	Not available.
	Standard	
pH	: APCI/APPI Tuning mix	Not available.
	ES/APCI Positive Ion Performance	Not available.
	Standard	
Melting point	: APCI/APPI Tuning mix	-45°C (-49°F)
	ES/APCI Positive Ion Performance	Not available.
	Standard	
Boiling point	: APCI/APPI Tuning mix	81.6°C (178.9°F)
	ES/APCI Positive Ion Performance	Not available.
	Standard	
Flash point	: APCI/APPI Tuning mix	Closed cup: 12.8°C (55°F)
	ES/APCI Positive Ion Performance	Closed cup: -18 to 23°C (-0.4 to 73.4°F)
	Standard	
Evaporation rate	: APCI/APPI Tuning mix	5.79 (butyl acetate = 1)
	ES/APCI Positive Ion Performance	Not available.
	Standard	
Flammability (solid, gas)	: APCI/APPI Tuning mix	Not applicable.
	ES/APCI Positive Ion Performance	Not applicable.
	Standard	

Section 9. Physical and chemical properties

Lower and upper explosive (flammable) limits	: APCI/APPI Tuning mix	Lower: 4.4%
		Upper: 16%
	ES/APCI Positive Ion Performance Standard	Not available.
Vapor pressure	: APCI/APPI Tuning mix	11.6 kPa (87 mm Hg) [room temperature]
	ES/APCI Positive Ion Performance Standard	Not available.
Vapor density	: APCI/APPI Tuning mix	1.42 [Air = 1]
	ES/APCI Positive Ion Performance Standard	Not available.
Relative density	: APCI/APPI Tuning mix	Not available.
	ES/APCI Positive Ion Performance Standard	Not available.
Solubility	: APCI/APPI Tuning mix	Easily soluble in the following materials: cold water and hot water.
	ES/APCI Positive Ion Performance Standard	Soluble in the following materials: cold water and hot water.
Partition coefficient: n-octanol/water	: APCI/APPI Tuning mix	-0.34
	ES/APCI Positive Ion Performance Standard	Not available.
Auto-ignition temperature	: APCI/APPI Tuning mix	524°C (975.2°F)
	ES/APCI Positive Ion Performance Standard	Not available.
Decomposition temperature	: APCI/APPI Tuning mix	Not available.
	ES/APCI Positive Ion Performance Standard	Not available.
Viscosity	: APCI/APPI Tuning mix	Not available.
	ES/APCI Positive Ion Performance Standard	Not available.

Section 10. Stability and reactivity

10.1 Reactivity	: APCI/APPI Tuning mix	No specific test data related to reactivity available for this product or its ingredients.
	ES/APCI Positive Ion Performance Standard	No specific test data related to reactivity available for this product or its ingredients.
10.2 Chemical stability	: APCI/APPI Tuning mix	The product is stable.
	ES/APCI Positive Ion Performance Standard	The product is stable.
10.3 Possibility of hazardous reactions	: APCI/APPI Tuning mix	Under normal conditions of storage and use, hazardous reactions will not occur.
	ES/APCI Positive Ion Performance Standard	Under normal conditions of storage and use, hazardous reactions will not occur.
10.4 Conditions to avoid	: APCI/APPI Tuning mix	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.
	ES/APCI Positive Ion Performance Standard	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.

Section 10. Stability and reactivity

10.5 Incompatible materials : APCI/APPI Tuning mix

Reactive or incompatible with the following materials:

oxidizing materials

ES/APCI Positive Ion Performance Standard

Reactive or incompatible with the following materials:

oxidizing materials

10.6 Hazardous decomposition products : APCI/APPI Tuning mix

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

ES/APCI Positive Ion Performance Standard

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
APCI/APPI Tuning mix				
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 ³	4 hours
	LD50 Dermal	Rabbit	>20 g/kg	-
	LD50 Oral	Rat	300 mg/kg	-
ES/APCI Positive Ion Performance Standard				
Propan-2-ol	LD50 Dermal	Rabbit	12800 mg/kg	-
	LD50 Oral	Rat	5000 mg/kg	-

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
APCI/APPI Tuning mix					
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	-

Section 11. Toxicological information

ES/APCI Positive Ion Performance Standard Propan-2-ol	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Eyes - Moderate irritant	Rabbit	-	24 hours 100 milligrams	-
	Eyes - Moderate irritant Skin - Mild irritant	Rabbit Rabbit	- -	10 milligrams 500 milligrams	- -

Sensitization

Not available.

Mutagenicity

Conclusion/Summary : Not available.

Carcinogenicity

Conclusion/Summary : Not available.

Classification

Product/ingredient name	OSHA	IARC	NTP
APCI/APPI Tuning mix Trichloromethane	-	2B	Reasonably anticipated to be a human carcinogen.
ES/APCI Positive Ion Performance Standard Propan-2-ol	-	3	-

Reproductive toxicity

Conclusion/Summary : Not available.

Teratogenicity

Conclusion/Summary : Not available.

Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
APCI/APPI Tuning mix Methanol	Category 1 Category 3	Not determined Not applicable.	central nervous system (CNS) Respiratory tract irritation
Acetone Trichloromethane	Category 3 Category 3	Not applicable. Not applicable.	Narcotic effects Respiratory tract irritation and Narcotic effects
ES/APCI Positive Ion Performance Standard Propan-2-ol	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects

Specific target organ toxicity (repeated exposure)

Section 11. Toxicological information

Name	Category	Route of exposure	Target organs
APCI/APPI Tuning mix 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
ES/APCI Positive Ion Performance Standard Propan-2-ol	Category 2	Not determined	kidneys

Aspiration hazard

Not available.

Information on the likely routes of exposure : APCI/APPI Tuning mix Routes of entry anticipated: Oral, Dermal, Inhalation.

ES/APCI Positive Ion Performance Standard Routes of entry anticipated: Oral, Dermal, Inhalation.

Potential acute health effects

Eye contact : APCI/APPI Tuning mix Causes serious eye irritation.
ES/APCI Positive Ion Performance Standard Causes serious eye irritation.

Inhalation : APCI/APPI Tuning mix Toxic if inhaled.
ES/APCI Positive Ion Performance Standard Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. May cause respiratory irritation.

Skin contact : APCI/APPI Tuning mix Toxic in contact with skin. Causes skin irritation.
ES/APCI Positive Ion Performance Standard No known significant effects or critical hazards.

Ingestion : APCI/APPI Tuning mix Harmful if swallowed.
ES/APCI Positive Ion Performance Standard Can cause central nervous system (CNS) depression.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : APCI/APPI Tuning mix Adverse symptoms may include the following:
pain or irritation
watering
redness

ES/APCI Positive Ion Performance Standard Adverse symptoms may include the following:
pain or irritation
watering
redness

Inhalation : APCI/APPI Tuning mix Adverse symptoms may include the following:
reduced fetal weight
increase in fetal deaths
skeletal malformations

ES/APCI Positive Ion Performance Standard Adverse symptoms may include the following:
respiratory tract irritation
coughing
nausea or vomiting
headache

Section 11. Toxicological information

		drowsiness/fatigue dizziness/vertigo unconsciousness
Skin contact	: APCI/APPI Tuning mix	Adverse symptoms may include the following: irritation redness reduced fetal weight increase in fetal deaths skeletal malformations
	ES/APCI Positive Ion Performance Standard	No specific data.
Ingestion	: APCI/APPI Tuning mix	Adverse symptoms may include the following: reduced fetal weight increase in fetal deaths skeletal malformations
	ES/APCI Positive Ion Performance Standard	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

General	: APCI/APPI Tuning mix	Causes damage to organs through prolonged or repeated exposure.
	ES/APCI Positive Ion Performance Standard	May cause damage to organs through prolonged or repeated exposure.
Carcinogenicity	: APCI/APPI Tuning mix	Suspected of causing cancer. Risk of cancer depends on duration and level of exposure.
	ES/APCI Positive Ion Performance Standard	No known significant effects or critical hazards.
Mutagenicity	: APCI/APPI Tuning mix	No known significant effects or critical hazards.
	ES/APCI Positive Ion Performance Standard	No known significant effects or critical hazards.
Teratogenicity	: APCI/APPI Tuning mix	May damage the unborn child.
	ES/APCI Positive Ion Performance Standard	No known significant effects or critical hazards.
Developmental effects	: APCI/APPI Tuning mix	No known significant effects or critical hazards.
	ES/APCI Positive Ion Performance Standard	No known significant effects or critical hazards.
Fertility effects	: APCI/APPI Tuning mix	May damage fertility.
	ES/APCI Positive Ion Performance Standard	No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Section 11. Toxicological information

Route	ATE value
APCI/APPI Tuning mix Oral Dermal Inhalation (vapors)	331.6 mg/kg 852.7 mg/kg 8.112 mg/l
ES/APCI Positive Ion Performance Standard Oral	10000 mg/kg

Other information	: APCI/APPI Tuning mix	Adverse symptoms may include the following: headache , redness , blurred or double vision . Eye contact can result in corneal damage or blindness. Repeated exposure may cause skin dryness or cracking.
	ES/APCI Positive Ion Performance Standard	Adverse symptoms may include the following: Repeated exposure may cause skin dryness or cracking.

Section 12. Ecological information

12.1 Toxicity

Product/ingredient name	Result	Species	Exposure
APCI/APPI Tuning mix Acetonitrile	Acute IC50 3685000 µg/l Fresh water Acute LC50 3600000 µg/l Fresh water Acute LC50 1000000 µg/l Fresh water Chronic NOEC 1000000 µg/l Fresh water Chronic NOEC 160000 µg/l Fresh water	Aquatic plants - Lemna minor Daphnia - Daphnia magna Fish - Pimephales promelas Aquatic plants - Lemna minor Daphnia - Daphnia magna	96 hours 48 hours 96 hours 96 hours 21 days
Methanol	Acute LC50 2500000 µg/l Marine water Acute LC50 3289 mg/l Fresh water	Crustaceans - Crangon crangon - Adult Daphnia - Daphnia magna - Neonate	48 hours 48 hours
Acetone	Acute LC50 290 mg/l Fresh water Chronic NOEC 9.96 mg/l Marine water Acute EC50 20.565 mg/l Marine water Acute LC50 6000000 µg/l Fresh water Acute LC50 10000 µg/l Fresh water Acute LC50 5600 ppm Fresh water Chronic NOEC 4.95 mg/l Marine water Chronic NOEC 0.016 ml/L Fresh water Chronic NOEC 0.1 ml/L Fresh water	Fish - Danio rerio - Egg Algae - Ulva pertusa Algae - Ulva pertusa Crustaceans - Gammarus pulex Daphnia - Daphnia magna Fish - Poecilia reticulata Algae - Ulva pertusa Crustaceans - Daphniidae Daphnia - Daphnia magna - Neonate	96 hours 96 hours 96 hours 48 hours 48 hours 96 hours 96 hours 21 days 21 days
Trichloromethane	Chronic NOEC 0.1 mg/l Fresh water Acute EC50 13.3 mg/l Fresh water Acute EC50 2.803 mg/l Fresh water Acute LC50 29000 µg/l Fresh water Acute LC50 13.3 ppm Fresh water Chronic EC10 3.61 mg/l Fresh water Chronic NOEC 1.8 mg/l Fresh water	Fish - Fundulus heteroclitus Algae - Chlamydomonas reinhardtii - Exponential growth phase Crustaceans - Cypris subglobosa Daphnia - Daphnia magna Fish - Lepomis macrochirus Algae - Chlamydomonas reinhardtii - Exponential growth phase Daphnia - Daphnia magna	4 weeks 72 hours 48 hours 48 hours 96 hours 72 hours 21 days
ES/APCI Positive Ion			

Section 12. Ecological information

Performance Standard			
Propan-2-ol	Acute EC50 10100 mg/l Fresh water Acute LC50 1400000 µg/l Marine water Acute LC50 4200 mg/l Fresh water	Daphnia - Daphnia magna Crustaceans - Crangon crangon Fish - Rasbora heteromorpha	48 hours 48 hours 96 hours

12.2 Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
APCI/APPI Tuning mix Acetone	OECD 301B Ready Biodegradability - CO ₂ Evolution Test	95 % - Readily - 28 days	-	-

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
APCI/APPI Tuning mix Acetonitrile Acetone	- -	- -	Readily Readily

12.3 Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
APCI/APPI Tuning mix	-0.34	-	low
APCI/APPI Tuning mix	-0.34	3	low
Acetonitrile	-0.34	<10	low
Methanol	-0.77	<10	low
Acetone	-0.23	3	low
Trichloromethane	1.97	690	high
ES/APCI Positive Ion Performance Standard			
Propan-2-ol	0.05	-	low

12.4 Mobility in soil

Soil/water partition coefficient (K_{oc}) : 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

Section 13. Disposal considerations

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
APCI/APPI Tuning mix			
Acetonitrile (I,T)	75-05-8	Listed	U003
Chloroform; Methane, trichloro-	67-66-3	Listed	U044
Acetone (I); 2-Propanone (I)	67-64-1	Listed	U002
Methanol (I); Methyl alcohol (I)	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


	DOT Classification	TDG Classification	Mexico Classification	IMDG	IATA
UN number	UN3316	UN3316	UN3316	UN3316	UN3316
UN proper shipping name	Chemical kits	CHEMICAL KIT	EQUIPO QUIMICO	CHEMICAL KIT	Chemical kit
Transport hazard class(es)	9 	9 	9 	9 	9 
Packing group	II				
Environmental hazards	No.	No.	No.	No.	No.

Additional information

DOT Classification

- : **Reportable quantity** 1111.1 lbs / 504.44 kg. The classification of the product is due solely to the presence of one or more US DOT-listed 'Hazardous substances' that are subject to reportable quantity requirements and only applies to shipments of packages greater than, or equal to, the product reportable quantity. Package sizes less than the product reportable quantity are not regulated as hazardous materials.
- Limited quantity** Yes.
- Packaging instruction** Exceptions: 161. Non-bulk: 161. Bulk: None.
- Quantity limitation** Passenger aircraft/rail: 10 kg. Cargo aircraft: 10 kg.
- Special provisions** 15

TDG Classification

- :  Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.43-2.45 (Class 9).
- Passenger Carrying Road or Rail Index** 10
- Special provisions** 65, 141

Section 14. Transport information

- Mexico Classification** : **Special provisions** 251, 340
- IMDG** : **Emergency schedules** F-A, _S-P_
Special provisions 251, 340
- IATA** : **Quantity limitation** Passenger and Cargo Aircraft: 10 kg. Packaging instructions: 960.
Cargo Aircraft Only: 10 kg. Packaging instructions: 960. Limited Quantities - Passenger Aircraft: 1 kg. Packaging instructions: Y960.
Special provisions A44, A163
- Special precautions for user** : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.
- Transport in bulk according to Annex II of MARPOL and the IBC Code** : Not available.

Section 15. Regulatory information

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

- U.S. Federal regulations** : **TSCA 5(a)2 final significant new use rules:** reserpine
TSCA 8(a) PAIR: Acetonitrile
TSCA 8(a) CDR Exempt/Partial exemption: Not determined
Clean Water Act (CWA) 307: Acetonitrile; Trichloromethane
Clean Water Act (CWA) 311: 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)
APCI/APPI Tuning mix Trichloromethane	≤1.9	Yes.	10000	803.8	10	0.8

SARA 304 RQ : 1111.1 lbs / 504.4 kg

SARA 311/312

Section 15. Regulatory information

Classification

: APCI/APPI Tuning mix

FLAMMABLE LIQUIDS - Category 2
 ACUTE TOXICITY (oral) - Category 4
 ACUTE TOXICITY (dermal) - Category 3
 ACUTE TOXICITY (inhalation) - Category 3
 SKIN IRRITATION - Category 2
 EYE IRRITATION - Category 2A
 CARCINOGENICITY - Category 2
 TOXIC TO REPRODUCTION (Fertility) - Category 1B
 TOXIC TO REPRODUCTION (Unborn child) - Category 1B
 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE)
 (central nervous system (CNS)) - Category 1
 SPECIFIC TARGET ORGAN TOXICITY (REPEATED
 EXPOSURE) (blood system, central nervous system (CNS),
 kidneys, liver) - Category 1
 FLAMMABLE LIQUIDS - Category 2
 EYE IRRITATION - Category 2A
 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE)
 (Respiratory tract irritation) - Category 3
 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE)
 (Narcotic effects) - Category 3
 SPECIFIC TARGET ORGAN TOXICITY (REPEATED
 EXPOSURE) (kidneys) - Category 2

ES/APCI Positive Ion Performance
 Standard

Composition/information on ingredients

Name	%	Classification
APCI/APPI Tuning mix		
Acetonitrile	≥50 - ≤75	FLAMMABLE LIQUIDS - Category 2 ACUTE TOXICITY (oral) - Category 4 ACUTE TOXICITY (dermal) - Category 4 ACUTE TOXICITY (inhalation) - Category 4 EYE IRRITATION - Category 2A SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (blood system, central nervous system (CNS), kidneys, liver) - Category 2
Methanol	≥10 - ≤16	FLAMMABLE LIQUIDS - Category 2 ACUTE TOXICITY (oral) - Category 3 ACUTE TOXICITY (dermal) - Category 3 ACUTE TOXICITY (inhalation) - Category 3 SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A TOXIC TO REPRODUCTION (Fertility) - Category 1B TOXIC TO REPRODUCTION (Unborn child) - Category 1B SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (central nervous system (CNS)) - Category 1 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
Acetone	≤5	FLAMMABLE LIQUIDS - Category 2 EYE IRRITATION - Category 2A SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (blood system) - Category 2
Trichloromethane	≤1.9	HNOC - Defatting irritant ACUTE TOXICITY (oral) - Category 4 ACUTE TOXICITY (inhalation) - Category 3 SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A CARCINOGENICITY - Category 2 TOXIC TO REPRODUCTION (Unborn child) - Category 2 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (kidneys, liver) - Category 1
ES/APCI Positive Ion Performance Standard		
Propan-2-ol	≥50 - ≤75	FLAMMABLE LIQUIDS - Category 2 EYE IRRITATION - Category 2A SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract

Section 15. Regulatory information

irritation) - Category 3
 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3
 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (kidneys) - Category 2
 HNOC - Defatting irritant

SARA 313

	Product name	CAS number	%
Form R - Reporting requirements	APCI/APPI Tuning mix		
	Acetonitrile	75-05-8	≥50 - ≤75
	Methanol	67-56-1	≥10 - ≤16
	Trichloromethane	67-66-3	≤1.9
Supplier notification	APCI/APPI Tuning mix		
	Acetonitrile	75-05-8	≥50 - ≤75
	Methanol	67-56-1	≥10 - ≤16
	Trichloromethane	67-66-3	≤1.9

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

State regulations

Massachusetts

: The following components are listed: ACETONITRILE; ACETONE; METHANOL; METHYL ALCOHOL; ISOPROPYL ALCOHOL; 2-PROPANOL

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; ISOPROPYL ALCOHOL; 2-PROPANOL

Pennsylvania

: The following components are listed: ACETONITRILE; METHANE, TRICHLORO-; 2-PROPANONE; METHANOL; 2-PROPANOL

California Prop. 65

⚠ WARNING: This product can expose you to Chloroform, which is known to the State of California to cause cancer and birth defects or other reproductive harm. This product can expose you to chemicals including Reserpine, which is known to the State of California to cause cancer, and Methanol, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

Ingredient name	No significant risk level	Maximum acceptable dosage level
APCI/APPI Tuning mix		
Methanol	-	Yes.
Chloroform	Yes.	-
ES/APCI Positive Ion Performance Standard		
Reserpine	Yes.	-

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol (Annexes A, B, C, E)

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Section 15. Regulatory information

Not listed.

[UNECE Aarhus Protocol on POPs and Heavy Metals](#)

Not listed.

[Inventory list](#)

Australia	: Not determined.
Canada	: Not determined.
China	: Not determined.
Europe	: Not determined.
Japan	: Japan inventory (ENCS): Not determined. Japan inventory (ISHL): Not determined.
Malaysia	: Not determined.
New Zealand	: Not determined.
Philippines	: Not determined.
Republic of Korea	: Not determined.
Taiwan	: Not determined.
Thailand	: Not determined.
Turkey	: Not determined.
United States	: Not determined.
Viet Nam	: Not determined.

Section 16. Other information

[History](#)

Date of issue	: 02/12/2018
Date of previous issue	: 01/22/2018
Version	: 5.1

[Procedure used to derive the classification](#)

Classification	Justification
APCI/APPI Tuning mix FLAMMABLE LIQUIDS - Category 2 ACUTE TOXICITY (oral) - Category 4 ACUTE TOXICITY (dermal) - Category 3 ACUTE TOXICITY (inhalation) - Category 3 SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A CARCINOGENICITY - Category 2 TOXIC TO REPRODUCTION (Fertility) - Category 1B TOXIC TO REPRODUCTION (Unborn child) - Category 1B SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (central nervous system (CNS)) - Category 1 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (blood system, central nervous system (CNS), kidneys, liver) - Category 1	On basis of test data Calculation method Calculation method Calculation method Calculation method Calculation method Calculation method Calculation method Calculation method Calculation method Calculation method
ES/APCI Positive Ion Performance Standard FLAMMABLE LIQUIDS - Category 2 EYE IRRITATION - Category 2A SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3	On basis of test data Calculation method Calculation method Calculation method

Section 16. Other information

SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (kidneys) - Category 2	Calculation method
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✔ Indicates information that has changed from previously issued version.

[Notice to reader](#)

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