

# SAFETY DATA SHEET



Electrospray Kit, Part Number G1946-60600

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

### 1.1 Product identifier

**Product name** : Electrospray Kit, Part Number G1946-60600  
**Part no. (chemical kit)** : G1946-60600  
**Part no.** :  ES/APCI Positive Ion Performance Standard G1946-85004  
Electrospray Calibrant Solution G2421-60001

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

**Material uses** :  Reagents and Standards for Analytical Chemistry Laboratory Use  
 ES/APCI Positive Ion Performance Standard 5 x 1 ml ampoule  
Electrospray Calibrant Solution 100 ml

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

Agilent Technologies Manufacturing GmbH & Co. KG  
Hewlett-Packard-Str. 8  
76337 Waldbronn  
Germany  
0800 603 1000

**e-mail address of person responsible for this SDS** : pdl-msds\_author@agilent.com

### 1.4 Emergency telephone number

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

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

**Product definition** :  ES/APCI Positive Ion Performance Standard Mixture  
Electrospray Calibrant Solution Mixture

#### Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

##### ES/APCI Positive Ion Performance Standard

H225 FLAMMABLE LIQUIDS - Category 2  
H319 SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2  
H336 SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE (Narcotic effects) - Category 3

##### Electrospray Calibrant Solution

H225 FLAMMABLE LIQUIDS - Category 2  
H302 ACUTE TOXICITY (oral) - Category 4  
H312 ACUTE TOXICITY (dermal) - Category 4  
H332 ACUTE TOXICITY (inhalation) - Category 4  
H319 SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2

**Date of issue/Date of revision** : 23/08/2018

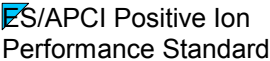




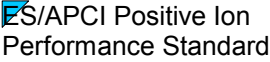
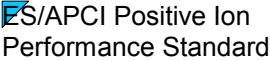
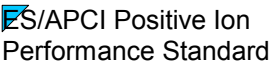
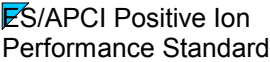
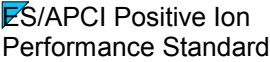
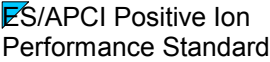
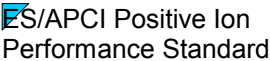
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## SECTION 2: Hazards identification

See Section 16 for the full text of the H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.

### 2.2 Label elements

<b>Hazard pictograms</b>	:  Electro spray Calibrant Solution	   
<b>Signal word</b>	:  Electro spray Calibrant Solution	Danger Danger
<b>Hazard statements</b>	:  Electro spray Calibrant Solution	H225 - Highly flammable liquid and vapour. H319 - Causes serious eye irritation. H336 - May cause drowsiness or dizziness. H225 - Highly flammable liquid and vapour. H302 + H312 + H332 - Harmful if swallowed, in contact with skin or if inhaled. H319 - Causes serious eye irritation.
<b>Precautionary statements</b>		
<b>Prevention</b>	:  Electro spray Calibrant Solution	P280 - Wear protective gloves. Wear protective clothing. Wear eye or face protection. P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P280 - Wear protective gloves. Wear protective clothing. Wear eye or face protection. P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
<b>Response</b>	:  Electro spray Calibrant Solution	P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing. P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing. P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
<b>Storage</b>	:  Electro spray Calibrant Solution	P405 - Store locked up. Not applicable.
<b>Disposal</b>	:  Electro spray Calibrant Solution	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.
<b>Hazardous ingredients</b>	:  Electro spray Calibrant Solution	- propan-2-ol - acetonitrile

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## SECTION 2: Hazards identification

**Supplemental label elements** : **ES/APCI Positive Ion Performance Standard** Not applicable.  
**Electrospray Calibrant Solution** Not applicable.

**Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles** : **ES/APCI Positive Ion Performance Standard** Not applicable.  
**Electrospray Calibrant Solution** Not applicable.

### Special packaging requirements

**Tactile warning of danger** : **ES/APCI Positive Ion Performance Standard** Not applicable.  
**Electrospray Calibrant Solution** Not applicable.

### 2.3 Other hazards

**Other hazards which do not result in classification** : **ES/APCI Positive Ion Performance Standard** None known.  
**Electrospray Calibrant Solution** None known.

## SECTION 3: Composition/information on ingredients

**3.1 Substances** : **ES/APCI Positive Ion Performance Standard** Mixture  
**Electrospray Calibrant Solution** Mixture

Product/ingredient name	Identifiers	%	Regulation (EC) No. 1272/2008 [CLP]	Type
<b>ES/APCI Positive Ion Performance Standard</b> Propan-2-ol	EC: 200-661-7 CAS: 67-63-0 Index: 603-117-00-0	≥50 - ≤75	Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336	[1] [2]
<b>Electrospray Calibrant Solution</b> Acetonitrile	EC: 200-835-2 CAS: 75-05-8 Index: 608-001-00-3	≥90	Flam. Liq. 2, H225 Acute Tox. 4, H302 Acute Tox. 4, H312 Acute Tox. 4, H332 Eye Irrit. 2, H319  <b>See Section 16 for the full text of the H statements declared above.</b>	[1] [2]

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.

### Type

- [1] Substance classified with a health or environmental hazard
- [2] Substance with a workplace exposure limit
- [3] Substance meets the criteria for PBT according to Regulation (EC) No. 1907/2006, Annex XIII
- [4] Substance meets the criteria for vPvB according to Regulation (EC) No. 1907/2006, Annex XIII
- [5] Substance of equivalent concern
- [6] Additional disclosure due to company policy

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

<b>Eye contact</b>	: 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.
	Electrospray Calibrant Solution	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.
<b>Inhalation</b>	: 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.
	Electrospray Calibrant Solution	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 adverse health effects persist or are severe. 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.
<b>Skin contact</b>	: ES/APCI Positive Ion Performance Standard	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.
	Electrospray Calibrant Solution	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 adverse health effects persist or are severe. If necessary, call a poison center or physician. Wash clothing before reuse. Clean shoes thoroughly before reuse.
<b>Ingestion</b>	: 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

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## SECTION 4: First aid measures

Electrospray Calibrant Solution

open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

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.

**Protection of first-aiders** :  S/APCI Positive Ion Performance Standard


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.

Electrospray Calibrant Solution

No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.


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

#### Potential acute health effects


**Eye contact** :  S/APCI Positive Ion Performance Standard  
Electrospray Calibrant Solution

Causes serious eye irritation.

Causes serious eye irritation.


**Inhalation** :  S/APCI Positive Ion Performance Standard  
Electrospray Calibrant Solution

Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. Harmful if inhaled.

**Skin contact** :  S/APCI Positive Ion Performance Standard  
Electrospray Calibrant Solution

No known significant effects or critical hazards.

Harmful in contact with skin.

**Ingestion** :  S/APCI Positive Ion Performance Standard  
Electrospray Calibrant Solution

Can cause central nervous system (CNS) depression.

Harmful if swallowed.

#### Over-exposure signs/symptoms

**Eye contact** :  S/APCI Positive Ion Performance Standard

Adverse symptoms may include the following:

pain or irritation  
watering  
redness

Electrospray Calibrant Solution

Adverse symptoms may include the following:

pain or irritation  
watering  
redness

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## SECTION 4: First aid measures

<b>Inhalation</b>	: ES/APCI Positive Ion Performance Standard	Adverse symptoms may include the following: nausea or vomiting headache drowsiness/fatigue dizziness/vertigo unconsciousness No specific data.
	Electrospray Calibrant Solution	
<b>Skin contact</b>	: ES/APCI Positive Ion Performance Standard Electrospray Calibrant Solution	No specific data. No specific data.
<b>Ingestion</b>	: ES/APCI Positive Ion Performance Standard Electrospray Calibrant Solution	No specific data. No specific data.

### 4.3 Indication of any immediate medical attention and special treatment needed

<b>Notes to physician</b>	: ES/APCI Positive Ion Performance Standard Electrospray Calibrant Solution	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. 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.
<b>Specific treatments</b>	: ES/APCI Positive Ion Performance Standard Electrospray Calibrant Solution	No specific treatment. No specific treatment.

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

<b>Suitable extinguishing media</b>	: ES/APCI Positive Ion Performance Standard Electrospray Calibrant Solution	Use dry chemical, CO <sub>2</sub> , water spray (fog) or foam. Use dry chemical, CO <sub>2</sub> , water spray (fog) or foam.
<b>Unsuitable extinguishing media</b>	: ES/APCI Positive Ion Performance Standard Electrospray Calibrant Solution	Do not use water jet. Do not use water jet.

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



<b>Hazards from the substance or mixture</b>	: ES/APCI Positive Ion Performance Standard  Electrospray Calibrant Solution	Highly flammable liquid and vapour. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Highly flammable liquid and vapour. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion.
<b>Hazardous combustion products</b>	: ES/APCI Positive Ion Performance Standard  Electrospray Calibrant Solution	Decomposition products may include the following materials: carbon dioxide carbon monoxide Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides

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## SECTION 5: Firefighting measures



cyanides

### 5.3 Advice for firefighters

<b>Special precautions for fire-fighters</b>	:  S/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.
	Electrospray Calibrant Solution	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.
<b>Special protective equipment for fire-fighters</b>	:  S/APCI Positive Ion Performance Standard	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.
	Electrospray Calibrant Solution	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.



## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

<b>For non-emergency personnel</b>	:  S/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 spilt material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
	Electrospray Calibrant Solution	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
<b>For emergency responders</b>	:  S/APCI Positive Ion Performance Standard	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
	Electrospray Calibrant Solution	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".


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## SECTION 6: Accidental release measures

<b>6.2 Environmental precautions</b>	:  S/APCI Positive Ion Performance Standard	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
	Electrospray Calibrant Solution	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
<b>6.3 Methods and material for containment and cleaning up</b>		
<b>Methods for cleaning up</b>	:  S/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.
	Electrospray Calibrant Solution	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.
<b>6.4 Reference to other sections</b>	: See Section 1 for emergency contact information. See Section 8 for information on appropriate personal protective equipment. See Section 13 for additional waste treatment information.	

## SECTION 7: Handling and storage


### 7.1 Precautions for safe handling

<b>Protective measures</b>	:  S/APCI Positive Ion Performance Standard	Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapour 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.
	Electrospray Calibrant Solution	Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapour 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.




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## SECTION 7: Handling and storage

<b>Advice on general occupational hygiene</b>	:  S/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.
	Electrospray Calibrant Solution	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

<b>Storage</b>	:  S/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 unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.
	Electrospray Calibrant Solution	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. 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 unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

### Danger criteria

Category	Notification and MAPP threshold	Safety report threshold
 S/APCI Positive Ion Performance Standard P5c	5000	50000
Electrospray Calibrant Solution P5c	5000	50000

### 7.3 Specific end use(s)

<b>Recommendations</b>	:  S/APCI Positive Ion Performance Standard	Industrial applications, Professional applications.
	Electrospray Calibrant Solution	Industrial applications, Professional applications.
<b>Industrial sector specific solutions</b>	:  S/APCI Positive Ion Performance Standard	Not applicable.
	Electrospray Calibrant Solution	Not applicable.

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## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### Occupational exposure limits

Product/ingredient name	Exposure limit values
<b>ES/APCI Positive Ion Performance Standard</b> Propan-2-ol	<b>EH40/2005 WELs (United Kingdom (UK), 12/2011).</b> STEL: 1250 mg/m <sup>3</sup> 15 minutes. STEL: 500 ppm 15 minutes. TWA: 999 mg/m <sup>3</sup> 8 hours. TWA: 400 ppm 8 hours.
<b>Electrospray Calibrant Solution</b> Acetonitrile	<b>EH40/2005 WELs (United Kingdom (UK), 12/2011).</b> STEL: 102 mg/m <sup>3</sup> 15 minutes. STEL: 60 ppm 15 minutes. TWA: 40 ppm 8 hours. TWA: 68 mg/m <sup>3</sup> 8 hours.

#### Recommended monitoring procedures

: If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

#### DNELs/DMELs

No DNELs/DMELs available.

#### PNECs

No PNECs available

### 8.2 Exposure controls

#### Appropriate engineering controls

: Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

#### Individual protection measures

##### Hygiene measures

: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

##### Eye/face protection

: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.

##### Skin protection

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## SECTION 8: Exposure controls/personal protection

- Hand protection** : 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.
- 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.
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

#### Appearance

- Physical state** : ES/APCI Positive Ion Performance Standard Electropray Calibrant Solution Liquid.  
ES/APCI Positive Ion Performance Standard Electropray Calibrant Solution Liquid.
- Colour** : ES/APCI Positive Ion Performance Standard Electropray Calibrant Solution Colourless.  
ES/APCI Positive Ion Performance Standard Electropray Calibrant Solution Not available.
- Odour** : ES/APCI Positive Ion Performance Standard Electropray Calibrant Solution Not available.  
ES/APCI Positive Ion Performance Standard Electropray Calibrant Solution Not available.
- Odour threshold** : ES/APCI Positive Ion Performance Standard Electropray Calibrant Solution Not available.  
ES/APCI Positive Ion Performance Standard Electropray Calibrant Solution Not available.
- pH** : ES/APCI Positive Ion Performance Standard Electropray Calibrant Solution Not available.  
ES/APCI Positive Ion Performance Standard Electropray Calibrant Solution Not available.
- Melting point/freezing point** : ES/APCI Positive Ion Performance Standard Electropray Calibrant Solution Not available.  
ES/APCI Positive Ion Performance Standard Electropray Calibrant Solution Not available.
- Initial boiling point and boiling range** : ES/APCI Positive Ion Performance Standard Electropray Calibrant Solution Not available.  
ES/APCI Positive Ion Performance Standard Electropray Calibrant Solution 81.7°C
- Flash point** : ES/APCI Positive Ion Performance Standard Electropray Calibrant Solution Closed cup: -18 to 23°C  
ES/APCI Positive Ion Performance Standard Electropray Calibrant Solution Closed cup: -18 to 23°C

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## SECTION 9: Physical and chemical properties

<b>Evaporation rate</b>	: <input checked="" type="checkbox"/> ES/APCI Positive Ion Performance Standard Electropray Calibrant Solution	Not available. Not available.
<b>Flammability (solid, gas)</b>	: <input checked="" type="checkbox"/> ES/APCI Positive Ion Performance Standard Electropray Calibrant Solution	Not applicable. Not applicable.
<b>Upper/lower flammability or explosive limits</b>	: <input checked="" type="checkbox"/> ES/APCI Positive Ion Performance Standard Electropray Calibrant Solution	Not available. Not available.
<b>Vapour pressure</b>	: <input checked="" type="checkbox"/> ES/APCI Positive Ion Performance Standard Electropray Calibrant Solution	Not available. Not available.
<b>Vapour density</b>	: <input checked="" type="checkbox"/> ES/APCI Positive Ion Performance Standard Electropray Calibrant Solution	Not available. Not available.
<b>Relative density</b>	: <input checked="" type="checkbox"/> ES/APCI Positive Ion Performance Standard Electropray Calibrant Solution	Not available. Not available.
<b>Solubility(ies)</b>	: <input checked="" type="checkbox"/> ES/APCI Positive Ion Performance Standard Electropray Calibrant Solution	Soluble in the following materials: cold water and hot water. Soluble in the following materials: cold water and hot water.
<b>Partition coefficient: n-octanol/water</b>	: <input checked="" type="checkbox"/> ES/APCI Positive Ion Performance Standard Electropray Calibrant Solution	Not available. Not available.
<b>Auto-ignition temperature</b>	: <input checked="" type="checkbox"/> ES/APCI Positive Ion Performance Standard Electropray Calibrant Solution	Not available. Not available.
<b>Decomposition temperature</b>	: <input checked="" type="checkbox"/> ES/APCI Positive Ion Performance Standard Electropray Calibrant Solution	Not available. Not available.
<b>Viscosity</b>	: <input checked="" type="checkbox"/> ES/APCI Positive Ion Performance Standard Electropray Calibrant Solution	Not available. Not available.
<b>Explosive properties</b>	: <input checked="" type="checkbox"/> ES/APCI Positive Ion Performance Standard Electropray Calibrant Solution	Not available. Not available.
<b>Oxidising properties</b>	: <input checked="" type="checkbox"/> ES/APCI Positive Ion Performance Standard Electropray Calibrant Solution	Not available. Not available.

### 9.2 Other information

No additional information.

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## SECTION 10: Stability and reactivity

<b>10.1 Reactivity</b>	: <b>ES/APCI Positive Ion Performance Standard Electropray Calibrant Solution</b>	No specific test data related to reactivity available for this product or its ingredients. No specific test data related to reactivity available for this product or its ingredients.
<b>10.2 Chemical stability</b>	: <b>ES/APCI Positive Ion Performance Standard Electropray Calibrant Solution</b>	The product is stable. The product is stable.
<b>10.3 Possibility of hazardous reactions</b>	: <b>ES/APCI Positive Ion Performance Standard Electropray Calibrant Solution</b>	Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous reactions will not occur.
<b>10.4 Conditions to avoid</b>	: <b>ES/APCI Positive Ion Performance Standard Electropray Calibrant Solution</b>	Avoid all possible sources of ignition (spark or flame). Do not pressurise, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Avoid all possible sources of ignition (spark or flame). Do not pressurise, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.
<b>10.5 Incompatible materials</b>	: <b>ES/APCI Positive Ion Performance Standard Electropray Calibrant Solution</b>	Reactive or incompatible with the following materials: oxidizing materials Reactive or incompatible with the following materials: oxidizing materials
<b>10.6 Hazardous decomposition products</b>	: <b>ES/APCI Positive Ion Performance Standard Electropray Calibrant Solution</b>	Under normal conditions of storage and use, hazardous decomposition products should not be produced. 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
<b>ES/APCI Positive Ion Performance Standard</b> Propan-2-ol	LD50 Dermal	Rabbit	12800 mg/kg	-
	LD50 Oral	Rat	5000 mg/kg	-
<b>Electrospray Calibrant Solution</b> Acetonitrile	LC50 Inhalation Vapour	Rat	17100 ppm	4 hours
	LD50 Oral	Rat	2460 mg/kg	-

#### Acute toxicity estimates

Route	ATE value
<b>Electrospray Calibrant Solution</b> Oral Dermal Inhalation (vapours)	526.3 mg/kg 1157.9 mg/kg 11.58 mg/l

#### Irritation/Corrosion

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## SECTION 11: Toxicological information

Product/ingredient name	Result	Species	Score	Exposure	Observation
ES/APCI Positive Ion Performance Standard Propan-2-ol	Eyes - Moderate irritant	Rabbit	-	24 hours 100 milligrams	-
	Eyes - Moderate irritant	Rabbit	-	10 milligrams	-
	Skin - Mild irritant	Rabbit	-	500 milligrams	-
Electrospray Calibrant Solution Acetonitrile	Eyes - Moderate irritant	Rabbit	-	24 hours 100 microliters	-
	Skin - Mild irritant	Rabbit	-	500 milligrams	-

### Sensitiser

Conclusion/Summary : Not available.

### Mutagenicity

Conclusion/Summary : Not available.

### Carcinogenicity

Conclusion/Summary : Not available.

### Reproductive toxicity

Conclusion/Summary : Not available.

### Teratogenicity

Conclusion/Summary : Not available.

### Specific target organ toxicity (single exposure)

Product/ingredient name	Category	Route of exposure	Target organs
ES/APCI Positive Ion Performance Standard Propan-2-ol	Category 3	Not applicable.	Narcotic effects

### Specific target organ toxicity (repeated exposure)

Not available.

### Aspiration hazard

Not available.

### Information on likely routes of exposure

ES/APCI Positive Ion Performance Standard  
Electrospray Calibrant Solution

Routes of entry anticipated: Oral, Dermal, Inhalation.

Routes of entry anticipated: Oral, Dermal, Inhalation.

### Potential acute health effects

#### Inhalation

ES/APCI Positive Ion Performance Standard  
Electrospray Calibrant Solution

Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness.  
Harmful if inhaled.

#### Ingestion

ES/APCI Positive Ion Performance Standard  
Electrospray Calibrant Solution

Can cause central nervous system (CNS) depression.  
Harmful if swallowed.

#### Skin contact

ES/APCI Positive Ion Performance Standard  
Electrospray Calibrant Solution

No known significant effects or critical hazards.  
Harmful in contact with skin.

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## SECTION 11: Toxicological information

**Eye contact** : ES/APCI Positive Ion Performance Standard Causes serious eye irritation.  
Electrospray Calibrant Solution Causes serious eye irritation.

### Symptoms related to the physical, chemical and toxicological characteristics

**Inhalation** : ES/APCI Positive Ion Performance Standard Adverse symptoms may include the following:  
nausea or vomiting  
headache  
drowsiness/fatigue  
dizziness/vertigo  
unconsciousness  
Electrospray Calibrant Solution No specific data.

**Ingestion** : ES/APCI Positive Ion Performance Standard No specific data.  
Electrospray Calibrant Solution No specific data.

**Skin contact** : ES/APCI Positive Ion Performance Standard No specific data.  
Electrospray Calibrant Solution No specific data.

**Eye contact** : ES/APCI Positive Ion Performance Standard Adverse symptoms may include the following:  
pain or irritation  
watering  
redness  
Electrospray Calibrant Solution Adverse symptoms may include the following:  
pain or irritation  
watering  
redness

### Delayed and immediate effects as well as chronic effects from short and long-term exposure

#### Short term exposure

**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

#### Long term exposure

**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

### Potential chronic health effects

**General** : ES/APCI Positive Ion Performance Standard No known significant effects or critical hazards.  
Electrospray Calibrant Solution No known significant effects or critical hazards.

**Carcinogenicity** : ES/APCI Positive Ion Performance Standard No known significant effects or critical hazards.  
Electrospray Calibrant Solution No known significant effects or critical hazards.

**Mutagenicity** : ES/APCI Positive Ion Performance Standard No known significant effects or critical hazards.  
Electrospray Calibrant Solution No known significant effects or critical hazards.

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## SECTION 11: Toxicological information

<b>Teratogenicity</b>	: <input checked="" type="checkbox"/> ES/APCI Positive Ion Performance Standard	No known significant effects or critical hazards.
	Electrospray Calibrant Solution	No known significant effects or critical hazards.
<b>Developmental effects</b>	: <input checked="" type="checkbox"/> ES/APCI Positive Ion Performance Standard	No known significant effects or critical hazards.
	Electrospray Calibrant Solution	No known significant effects or critical hazards.
<b>Fertility effects</b>	: <input checked="" type="checkbox"/> ES/APCI Positive Ion Performance Standard	No known significant effects or critical hazards.
	Electrospray Calibrant Solution	No known significant effects or critical hazards.
<b>Other information</b>	: <input checked="" type="checkbox"/> ES/APCI Positive Ion Performance Standard	Adverse symptoms may include the following: Repeated exposure may cause skin dryness or cracking. Adverse symptoms may include the following: May cause headache, weakness, dizziness, shortness of breath, cyanosis, rapid heart beat, unconsciousness and possible death.
	Electrospray Calibrant Solution	

## SECTION 12: Ecological information

### 12.1 Toxicity

Product/ingredient name	Result	Species	Exposure
<input checked="" type="checkbox"/> ES/APCI Positive Ion Performance Standard Propan-2-ol	Acute EC50 10100 mg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 1400000 µg/l Marine water	Crustaceans - Crangon crangon	48 hours
	Acute LC50 4200 mg/l Fresh water	Fish - Rasbora heteromorpha	96 hours
<b>Electrospray Calibrant Solution</b> Acetonitrile	Acute IC50 3685000 µg/l Fresh water	Aquatic plants - Lemna minor	96 hours
	Acute LC50 3600000 µg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 1000000 µg/l Fresh water	Fish - Pimephales promelas	96 hours
	Chronic NOEC 1000000 µg/l Fresh water	Aquatic plants - Lemna minor	96 hours
	Chronic NOEC 160000 µg/l Fresh water	Daphnia - Daphnia magna	21 days

### 12.2 Persistence and degradability

Not available.

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
<input checked="" type="checkbox"/> ES/APCI Positive Ion Performance Standard Propan-2-ol	-	-	Readily
<b>Electrospray Calibrant Solution</b> Acetonitrile	-	-	Readily

### 12.3 Bioaccumulative potential



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## SECTION 12: Ecological information

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
ES/APCI Positive Ion Performance Standard Propan-2-ol	0.05	-	low
Electrospray Calibrant Solution Acetonitrile	-0.34	3	low

### 12.4 Mobility in soil

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

Mobility : Not available.

### 12.5 Results of PBT and vPvB assessment

PBT : Not applicable.

vPvB : Not applicable.

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

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

#### Product

**Methods of disposal** : The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.




**Hazardous waste** : The classification of the product may meet the criteria for a hazardous waste.

#### Packaging

**Methods of disposal** : The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

**Special precautions** : This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

## SECTION 14: Transport information

	ADR/RID	IMDG	IATA
14.1 UN number	UN3316	UN3316	UN3316
14.2 UN proper shipping name	CHEMICAL KIT	CHEMICAL KIT	Chemical kit
14.3 Transport hazard class(es)	9 	9 	9 
14.4 Packing group	II	II	II

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## SECTION 14: Transport information

14.5  
Environmental  
hazards

No.

No.

No.

### Additional information

ADR/RID

: **Hazard identification number** 90  
**Limited quantity** See SP 251  
**Special provisions** 251, 340  
**Tunnel code** (E)

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

14.6 Special precautions  
for user

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

14.7 Transport in bulk  
according to 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

EU Regulation (EC) No. 1907/2006 (REACH)

Annex XIV - List of substances subject to authorisation

Annex XIV

None of the components are listed.

Substances of very high concern

None of the components are listed.

**Annex XVII - Restrictions  
on the manufacture,  
placing on the market  
and use of certain  
dangerous substances,  
mixtures and articles**

:  S/APCI Positive Ion Performance Standard Not applicable.  
Electrospray Calibrant Solution Not applicable.

Other EU regulations

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

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

Ozone depleting substances (1005/2009/EU)

Not listed.

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

Not listed.

Seveso Directive

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## SECTION 15: Regulatory information

This product is not controlled under the Seveso Directive.

### Danger criteria

#### Category

ES/APCI Positive Ion Performance Standard

P5c

Electrospray Calibrant Solution

P5c

### 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)

Not listed.

#### UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

### Inventory list

<b>Australia</b>	: Not determined.
<b>Canada</b>	: Not determined.
<b>China</b>	: Not determined.
<b>Europe</b>	: Not determined.
<b>Japan</b>	: <b>Japan inventory (ENCS)</b> : Not determined. <b>Japan inventory (ISHL)</b> : Not determined.
<b>Malaysia</b>	: Not determined.
<b>New Zealand</b>	: Not determined.
<b>Philippines</b>	: Not determined.
<b>Republic of Korea</b>	: Not determined.
<b>Taiwan</b>	: All components are listed or exempted.
<b>Thailand</b>	: Not determined.
<b>Turkey</b>	: Not determined.
<b>United States</b>	: Not determined.
<b>Viet Nam</b>	: Not determined.

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

## SECTION 16: Other information

Indicates information that has changed from previously issued version.

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

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## SECTION 16: Other information

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

Classification	Justification
<b>ES/APCI Positive Ion Performance Standard</b> Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336	On basis of test data Calculation method Calculation method
<b>Electrospray Calibrant Solution</b> Flam. Liq. 2, H225 Acute Tox. 4, H302 Acute Tox. 4, H312 Acute Tox. 4, H332 Eye Irrit. 2, H319	Expert judgment Calculation method Calculation method Calculation method Calculation method

[Full text of abbreviated H statements](#)

<b>ES/APCI Positive Ion Performance Standard</b> H225 H319 H336	Highly flammable liquid and vapour. Causes serious eye irritation. May cause drowsiness or dizziness.
<b>Electrospray Calibrant Solution</b> H225 H302 H312 H319 H332	Highly flammable liquid and vapour. Harmful if swallowed. Harmful in contact with skin. Causes serious eye irritation. Harmful if inhaled.

[Full text of classifications \[CLP/GHS\]](#)

<b>ES/APCI Positive Ion Performance Standard</b> Eye Irrit. 2, H319 Flam. Liq. 2, H225 STOT SE 3, H336	SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2 FLAMMABLE LIQUIDS - Category 2 SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE (Narcotic effects) - Category 3
<b>Electrospray Calibrant Solution</b> Acute Tox. 4, H302 Acute Tox. 4, H312 Acute Tox. 4, H332 Eye Irrit. 2, H319 Flam. Liq. 2, H225	ACUTE TOXICITY (oral) - Category 4 ACUTE TOXICITY (dermal) - Category 4 ACUTE TOXICITY (inhalation) - Category 4 SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2 FLAMMABLE LIQUIDS - Category 2

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