

# SAFETY DATA SHEET



LC Gradient and Isocratic Sample Kit, Part Number 01080-68702

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

### 1.1 Product identifier

**Product name** : LC Gradient and Isocratic Sample Kit, Part Number 01080-68702  
**Part no. (chemical kit)** : 01080-68702  
**Part no.** : LC Gradient Sample 01080-68703  
LC Isocratic Sample 01080-68704

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

**Material uses** :  Reagents and Standards for Analytical Chemistry Laboratory Use  
LC Gradient Sample 2 x 0.5 ml  
LC Isocratic Sample 2 x 0.5 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** :  Gradient Sample Mixture  
LC Isocratic Sample Mixture

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

##### LC Gradient Sample

H225 FLAMMABLE LIQUIDS - Category 2  
H301 ACUTE TOXICITY (oral) - Category 3  
H311 ACUTE TOXICITY (dermal) - Category 3  
H331 ACUTE TOXICITY (inhalation) - Category 3  
H360FD REPRODUCTIVE TOXICITY (Fertility and Unborn child) - Category 1B  
H370 SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE - Category 1

##### LC Isocratic Sample



H225 FLAMMABLE LIQUIDS - Category 2  
H301 ACUTE TOXICITY (oral) - Category 3  
H311 ACUTE TOXICITY (dermal) - Category 3  
H331 ACUTE TOXICITY (inhalation) - Category 3  
H370 SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE - Category 1

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.

## SECTION 2: Hazards identification

### 2.2 Label elements

<b>Hazard pictograms</b>	: <input checked="" type="checkbox"/> Gradient Sample	
	LC Isocratic Sample	
<b>Signal word</b>	: <input checked="" type="checkbox"/> Gradient Sample LC Isocratic Sample	Danger Danger
<b>Hazard statements</b>	: <input checked="" type="checkbox"/> Gradient Sample	H225 - Highly flammable liquid and vapour. H301 + H311 + H331 - Toxic if swallowed, in contact with skin or if inhaled. H360FD - May damage fertility. May damage the unborn child.
	LC Isocratic Sample	H370 - Causes damage to organs. H225 - Highly flammable liquid and vapour. H301 + H311 + H331 - Toxic if swallowed, in contact with skin or if inhaled. H370 - Causes damage to organs.
<b>Precautionary statements</b>		
<b>Prevention</b>	: <input checked="" type="checkbox"/> Gradient Sample	P201 - Obtain special instructions before use. 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.
	LC Isocratic Sample	P260 - Do not breathe vapour. 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. P260 - Do not breathe vapour.
<b>Response</b>	: <input checked="" type="checkbox"/> Gradient Sample	P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing. P301 + P310 - IF SWALLOWED: Immediately call a POISON CENTER or physician.
	LC Isocratic Sample	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. P301 + P310 - IF SWALLOWED: Immediately call a POISON CENTER or physician. P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
<b>Storage</b>	: <input checked="" type="checkbox"/> Gradient Sample LC Isocratic Sample	P405 - Store locked up. P405 - Store locked up.
<b>Disposal</b>	: <input checked="" type="checkbox"/> Gradient Sample	P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
	LC Isocratic Sample	P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
<b>Hazardous ingredients</b>	: <input checked="" type="checkbox"/> Gradient Sample	- methanol
	LC Isocratic Sample	- bis(2-ethylhexyl) phthalate
<b>Supplemental label elements</b>	: LC Gradient Sample LC Isocratic Sample	Not applicable. Not applicable.

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## SECTION 2: Hazards identification

**Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles** : LC Gradient Sample Restricted to professional users.  
LC Isocratic Sample Not applicable.

### Special packaging requirements

**Tactile warning of danger** : LC Gradient Sample Not applicable.  
LC Isocratic Sample Not applicable.

### 2.3 Other hazards

**Other hazards which do not result in classification** : LC Gradient Sample None known.  
LC Isocratic Sample None known.

## SECTION 3: Composition/information on ingredients

**3.1 Substances** :  Gradient Sample Mixture  
LC Isocratic Sample Mixture

Product/ingredient name	Identifiers	%	Regulation (EC) No. 1272/2008 [CLP]	Type
<input checked="" type="checkbox"/> Gradient Sample Methanol	EC: 200-659-6 CAS: 67-56-1 Index: 603-001-00-X	≥90	Flam. Liq. 2, H225 Acute Tox. 3, H301 Acute Tox. 3, H311 Acute Tox. 3, H331 STOT SE 1, H370	[1] [2]
bis(2-Ethylhexyl) phthalate	EC: 204-211-0 CAS: 117-81-7 Index: 607-317-00-9	≤1	Repr. 1B, H360FD (Fertility and Unborn child)	[1] [2] [5]
<b>LC Isocratic Sample</b> Methanol	EC: 200-659-6 CAS: 67-56-1 Index: 603-001-00-X	≥90	Flam. Liq. 2, H225 Acute Tox. 3, H301 Acute Tox. 3, H311 Acute Tox. 3, H331 STOT SE 1, H370  <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>	: LC Gradient Sample	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.
	LC Isocratic Sample	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.
<b>Inhalation</b>	: LC Gradient Sample	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.
	LC Isocratic Sample	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.
<b>Skin contact</b>	: LC Gradient Sample	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.
	LC Isocratic Sample	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.
<b>Ingestion</b>	: LC Gradient Sample	Get medical attention immediately. Call a poison center or physician. 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. 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

## SECTION 4: First aid measures

	LC Isocratic Sample	or waistband. Get medical attention immediately. Call a poison center or physician. 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. 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.
<b>Protection of first-aiders</b>	: LC Gradient Sample	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.
	LC Isocratic Sample	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

<b>Eye contact</b>	: LC Gradient Sample LC Isocratic Sample	No known significant effects or critical hazards. No known significant effects or critical hazards.
<b>Inhalation</b>	: LC Gradient Sample LC Isocratic Sample	Toxic if inhaled. Toxic if inhaled.
<b>Skin contact</b>	: LC Gradient Sample LC Isocratic Sample	Toxic in contact with skin. Toxic in contact with skin.
<b>Ingestion</b>	: LC Gradient Sample LC Isocratic Sample	Toxic if swallowed. Toxic if swallowed.

#### Over-exposure signs/symptoms

<b>Eye contact</b>	: LC Gradient Sample LC Isocratic Sample	No specific data. No specific data.
<b>Inhalation</b>	: LC Gradient Sample	Adverse symptoms may include the following: reduced foetal weight increase in foetal deaths skeletal malformations
	LC Isocratic Sample	No specific data.
<b>Skin contact</b>	: LC Gradient Sample	Adverse symptoms may include the following: reduced foetal weight increase in foetal deaths skeletal malformations
	LC Isocratic Sample	No specific data.
<b>Ingestion</b>	: LC Gradient Sample	Adverse symptoms may include the following: reduced foetal weight increase in foetal deaths skeletal malformations
	LC Isocratic Sample	No specific data.

## SECTION 4: First aid measures

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


<b>Notes to physician</b>	: LC Gradient Sample	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	LC Isocratic Sample	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
<b>Specific treatments</b>	: LC Gradient Sample	No specific treatment.
	LC Isocratic Sample	No specific treatment.

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

<b>Suitable extinguishing media</b>	: LC Gradient Sample	Use dry chemical, CO <sub>2</sub> , water spray (fog) or foam.
	LC Isocratic Sample	Use dry chemical, CO <sub>2</sub> , water spray (fog) or foam.
<b>Unsuitable extinguishing media</b>	: LC Gradient Sample	Do not use water jet.
	LC Isocratic Sample	Do not use water jet.

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

<b>Hazards from the substance or mixture</b>	:  LC Gradient Sample	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.
	LC Isocratic Sample	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>	: LC Gradient Sample	Decomposition products may include the following materials: carbon dioxide carbon monoxide Formaldehyde.
	LC Isocratic Sample	Decomposition products may include the following materials: carbon dioxide carbon monoxide Formaldehyde.

### 5.3 Advice for firefighters

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

### 6.2 Environmental precautions

: LC Gradient Sample	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).
LC Isocratic Sample	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

### 6.3 Methods and material for containment and cleaning up

<b>Methods for cleaning up</b>	: LC Gradient Sample	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.
	LC Isocratic Sample	Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

### 6.4 Reference to other sections

: See Section 1 for emergency contact information. See Section 8 for information on appropriate personal protective equipment. See Section 13 for additional waste treatment information.
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## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

**Protective measures** : LC Gradient Sample

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 vapour or mist. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.

LC Isocratic Sample

Put on appropriate personal protective equipment (see Section 8). Do not get in eyes or on skin or clothing. Do not breathe vapour or mist. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.

**Advice on general occupational hygiene** : LC Gradient Sample

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.

LC Isocratic Sample

### 7.2 Conditions for safe storage, including any incompatibilities

**Storage** :  Gradient Sample

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.



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## SECTION 7: Handling and storage

LC Isocratic Sample

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.

### Danger criteria

Category	Notification and MAPP threshold	Safety report threshold
<b>LC Gradient Sample</b>		
H2	50	200
H3	50	200
P5c	5000	50000
<b>LC Isocratic Sample</b>		
H2	50	200
H3	50	200
P5c	5000	50000

### 7.3 Specific end use(s)

**Recommendations** : LC Gradient Sample Industrial applications, Professional applications.  
 LC Isocratic Sample Industrial applications, Professional applications.

**Industrial sector specific solutions** : LC Gradient Sample Not applicable.  
 LC Isocratic Sample Not applicable.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### Occupational exposure limits

Product/ingredient name	Exposure limit values
<b>LC Gradient Sample</b> Methanol	<b>EH40/2005 WELs (United Kingdom (UK), 12/2011). Absorbed through skin.</b> STEL: 333 mg/m <sup>3</sup> 15 minutes. STEL: 250 ppm 15 minutes. TWA: 266 mg/m <sup>3</sup> 8 hours. TWA: 200 ppm 8 hours.
bis(2-Ethylhexyl) phthalate	<b>EH40/2005 WELs (United Kingdom (UK), 12/2011).</b> STEL: 10 mg/m <sup>3</sup> 15 minutes. TWA: 5 mg/m <sup>3</sup> 8 hours.
<b>LC Isocratic Sample</b> Methanol	<b>EH40/2005 WELs (United Kingdom (UK), 12/2011). Absorbed through skin.</b> STEL: 333 mg/m <sup>3</sup> 15 minutes. STEL: 250 ppm 15 minutes. TWA: 266 mg/m <sup>3</sup> 8 hours. TWA: 200 ppm 8 hours.

## SECTION 8: Exposure controls/personal protection

**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. The engineering controls also need to keep gas, vapour or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

### Individual protection measures

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

**Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

### Skin protection

**Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

**Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves. Refer to European Standard EN 1149 for further information on material and design requirements and test methods.

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

**Respiratory protection** : 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.

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## SECTION 8: Exposure controls/personal protection

**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

<b>Physical state</b>	: LC Gradient Sample LC Isocratic Sample	Liquid. Liquid.
<b>Colour</b>	: LC Gradient Sample LC Isocratic Sample	Light Light
<b>Odour</b>	: LC Gradient Sample LC Isocratic Sample	Slight Slight
<b>Odour threshold</b>	: LC Gradient Sample LC Isocratic Sample	Not available. Not available.
<b>pH</b>	: LC Gradient Sample LC Isocratic Sample	Not available. Not available.
<b>Melting point/freezing point</b>	: LC Gradient Sample LC Isocratic Sample	-97.8°C -97.8°C
<b>Initial boiling point and boiling range</b>	: LC Gradient Sample LC Isocratic Sample	64.5°C 64.5°C
<b>Flash point</b>	: LC Gradient Sample LC Isocratic Sample	Closed cup: 12°C [Setaflash.] Closed cup: -18 to 23°C
<b>Evaporation rate</b>	: LC Gradient Sample LC Isocratic Sample	Not available. Not available.
<b>Flammability (solid, gas)</b>	: LC Gradient Sample LC Isocratic Sample	Not applicable. Not applicable.
<b>Upper/lower flammability or explosive limits</b>	: LC Gradient Sample LC Isocratic Sample	Lower: 6% Upper: >13% Lower: 6% Upper: >13%
<b>Vapour pressure</b>	: LC Gradient Sample LC Isocratic Sample	Not available. Not available.
<b>Vapour density</b>	: LC Gradient Sample LC Isocratic Sample	Not available. Not available.
<b>Relative density</b>	: LC Gradient Sample LC Isocratic Sample	Not available. Not available.
<b>Solubility(ies)</b>	: LC Gradient Sample LC Isocratic Sample	Easily soluble in the following materials: cold water and hot water. Easily soluble in the following materials: cold water and hot water.
<b>Partition coefficient: n-octanol/water</b>	: LC Gradient Sample LC Isocratic Sample	Not available. Not available.
<b>Auto-ignition temperature</b>	: LC Gradient Sample LC Isocratic Sample	464°C Not available.
<b>Decomposition temperature</b>	: LC Gradient Sample LC Isocratic Sample	Not available. Not available.
<b>Viscosity</b>	: LC Gradient Sample LC Isocratic Sample	Not available. Not available.
<b>Explosive properties</b>	: LC Gradient Sample LC Isocratic Sample	Not available. Not available.
<b>Oxidising properties</b>	: LC Gradient Sample LC Isocratic Sample	Not available. Not available.

**Date of issue/Date of revision** : 09/05/2018

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## SECTION 9: Physical and chemical properties

### 9.2 Other information

No additional information.

## SECTION 10: Stability and reactivity

<b>10.1 Reactivity</b>	: LC Gradient Sample LC Isocratic Sample	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>	: LC Gradient Sample LC Isocratic Sample	The product is stable. The product is stable.
<b>10.3 Possibility of hazardous reactions</b>	: LC Gradient Sample LC Isocratic Sample	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>	: LC Gradient Sample LC Isocratic Sample	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>	: LC Gradient Sample LC Isocratic Sample	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>	: LC Gradient Sample LC Isocratic Sample	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>LC Gradient Sample</b> Methanol	LC50 Inhalation Vapour	Rat	145000 ppm	1 hours	
	LC50 Inhalation Vapour	Rat	64000 ppm	4 hours	
	LD50 Dermal	Rabbit	15800 mg/kg	-	
	LD50 Oral	Rat	5600 mg/kg	-	
	bis(2-Ethylhexyl) phthalate	LD50 Dermal	Rabbit	25 g/kg	-
		LD50 Oral	Rat	30 g/kg	-
<b>LC Isocratic Sample</b> Methanol	LC50 Inhalation Vapour	Rat	145000 ppm	1 hours	
	LC50 Inhalation Vapour	Rat	64000 ppm	4 hours	
	LD50 Dermal	Rabbit	15800 mg/kg	-	
	LD50 Oral	Rat	5600 mg/kg	-	

#### Acute toxicity estimates

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## SECTION 11: Toxicological information

Route	ATE value
<b>LC Gradient Sample</b> Oral Dermal Inhalation (vapours)	100.7 mg/kg 302 mg/kg 3.02 mg/l
<b>LC Isocratic Sample</b> Oral Dermal Inhalation (vapours)	100.3 mg/kg 301 mg/kg 3.01 mg/l

### Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
<b>LC Gradient Sample</b> Methanol  bis(2-Ethylhexyl) phthalate	Eyes - Moderate irritant	Rabbit	-	24 hours 100 milligrams	-
	Eyes - Moderate irritant	Rabbit	-	40 milligrams	-
	Skin - Moderate irritant	Rabbit	-	24 hours 20 milligrams	-
	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Eyes - Mild irritant	Rabbit	-	500 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
<b>LC Isocratic Sample</b> Methanol	Eyes - Moderate irritant	Rabbit	-	24 hours 100 milligrams	-
	Eyes - Moderate irritant	Rabbit	-	40 milligrams	-
	Skin - Moderate irritant	Rabbit	-	24 hours 20 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
<b>LC Gradient Sample</b> Methanol	Category 1	Not determined	Not determined
<b>LC Isocratic Sample</b> Methanol	Category 1	Not determined	Not determined

### Specific target organ toxicity (repeated exposure)

Not available.

### Aspiration hazard

Not available.

## SECTION 11: Toxicological information

**Information on likely routes of exposure** : LC Gradient Sample Routes of entry anticipated: Oral, Dermal, Inhalation.  
LC Isocratic Sample Routes of entry anticipated: Oral, Dermal, Inhalation.

### Potential acute health effects

**Inhalation** : LC Gradient Sample Toxic if inhaled.  
LC Isocratic Sample Toxic if inhaled.

**Ingestion** : LC Gradient Sample Toxic if swallowed.  
LC Isocratic Sample Toxic if swallowed.

**Skin contact** : LC Gradient Sample Toxic in contact with skin.  
LC Isocratic Sample Toxic in contact with skin.

**Eye contact** : LC Gradient Sample No known significant effects or critical hazards.  
LC Isocratic Sample No known significant effects or critical hazards.

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

**Inhalation** : LC Gradient Sample Adverse symptoms may include the following:  
reduced foetal weight  
increase in foetal deaths  
skeletal malformations  
LC Isocratic Sample No specific data.

**Ingestion** : LC Gradient Sample Adverse symptoms may include the following:  
reduced foetal weight  
increase in foetal deaths  
skeletal malformations  
LC Isocratic Sample No specific data.

**Skin contact** : LC Gradient Sample Adverse symptoms may include the following:  
reduced foetal weight  
increase in foetal deaths  
skeletal malformations  
LC Isocratic Sample No specific data.

**Eye contact** : LC Gradient Sample No specific data.  
LC Isocratic Sample No specific data.

### 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** : LC Gradient Sample No known significant effects or critical hazards.  
LC Isocratic Sample No known significant effects or critical hazards.

**Carcinogenicity** : LC Gradient Sample No known significant effects or critical hazards.  
LC Isocratic Sample No known significant effects or critical hazards.

**Mutagenicity** : LC Gradient Sample No known significant effects or critical hazards.  
LC Isocratic Sample No known significant effects or critical hazards.

**Teratogenicity** : LC Gradient Sample May damage the unborn child.  
LC Isocratic Sample No known significant effects or critical hazards.

**Developmental effects** : LC Gradient Sample No known significant effects or critical hazards.  
LC Isocratic Sample No known significant effects or critical hazards.

**Fertility effects** : LC Gradient Sample May damage fertility.  
LC Isocratic Sample No known significant effects or critical hazards.

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## SECTION 11: Toxicological information

<b>Other information</b>	: LC Gradient Sample	Adverse symptoms may include the following: redness, blurred or double vision. Eye contact can result in corneal damage or blindness. Repeated or prolonged exposure to the substance can produce liver damage. Repeated exposure may cause skin dryness or cracking.
	LC Isocratic Sample	Adverse symptoms may include the following: redness, blurred or double vision, headache. Eye contact can result in corneal damage or blindness. Repeated exposure may cause skin dryness or cracking.

## SECTION 12: Ecological information

### 12.1 Toxicity

Product/ingredient name	Result	Species	Exposure
LC Gradient Sample Methanol  bis(2-Ethylhexyl) phthalate	Acute LC50 2500000 µg/l Marine water	Crustaceans - Crangon crangon - Adult	48 hours
	Acute LC50 3289 mg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute LC50 290 mg/l Fresh water	Fish - Danio rerio - Egg	96 hours
	Chronic NOEC 9.96 mg/l Marine water	Algae - Ulva pertusa	96 hours
	Acute EC50 31000000 µg/l Marine water	Algae - Karenia brevis	96 hours
	Acute EC50 133 µg/l Fresh water	Daphnia - Daphnia pulex - Neonate	48 hours
	Acute LC50 1106.2 mg/l Fresh water	Fish - Pimephales promelas	96 hours
	Chronic NOEC 76 µg/l Marine water	Algae - Hormosira banksii - Gamete	72 hours
	Chronic NOEC 109 µg/l Fresh water	Crustaceans - Eurytemora affinis - Nauplii	21 days
	Chronic NOEC 77 µg/l Fresh water Chronic NOEC 12 µg/l Fresh water	Daphnia - Daphnia magna Fish - Pimephales promelas - Adult	21 days 28 days
LC Isocratic Sample Methanol	Acute LC50 2500000 µg/l Marine water	Crustaceans - Crangon crangon - Adult	48 hours
	Acute LC50 3289 mg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute LC50 290 mg/l Fresh water	Fish - Danio rerio - Egg	96 hours
	Chronic NOEC 9.96 mg/l Marine water	Algae - Ulva pertusa	96 hours

### 12.2 Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
LC Gradient Sample bis(2-Ethylhexyl) phthalate	OECD 301B Ready Biodegradability - CO2 Evolution Test	82 % - Readily - 29 days	-	20.3 mg/l Activated sludge
	OECD 301B Ready Biodegradability - CO2 Evolution Test	82 % - Readily - 28 days	-	-

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
LC Gradient Sample bis(2-Ethylhexyl) phthalate	-	-	Readily

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## SECTION 12: Ecological information

### 12.3 Bioaccumulative potential

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
<b>LC Gradient Sample</b>			
Methanol	-0.77	<10	low
bis(2-Ethylhexyl) phthalate	7.6	1380	high
<b>LC Isocratic Sample</b>			
Methanol	-0.77	<10	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. Vapour from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

## SECTION 14: Transport information

**ADR/RID / IMDG / IATA** : Not regulated.

#### Additional information

**Remarks** : De minimis quantities

**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.



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## SECTION 14: Transport information

14.7 Transport in bulk : Not available.

according to Annex II of  
Marpol and the IBC Code

## 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](#)

Ingredient name	Intrinsic property	Status	Reference number	Date of revision
<b>LC Gradient Sample</b> bis(2-Ethylhexyl) phthalate	Toxic to reproduction	Listed	4	2/21/2011

### [Substances of very high concern](#)

Ingredient name	Intrinsic property	Status	Reference number	Date of revision
<b>LC Gradient Sample</b> bis(2-Ethylhexyl) phthalate	Toxic to reproduction	Candidate	ED/67/2008, ED/108/2014, ED/30/2017	7/4/2017
-	Substance of equivalent concern for environment	Candidate	ED/67/2008, ED/108/2014, ED/30/2017	7/4/2017

**Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles** : LC Gradient Sample : Restricted to professional users.  
LC Isocratic Sample : Not applicable.

### [Other EU regulations](#)

[Ozone depleting substances \(1005/2009/EU\)](#)

Not listed.

[Prior Informed Consent \(PIC\) \(649/2012/EU\)](#)

Not listed.

### [Seveso Directive](#)

This product is controlled under the Seveso Directive.

### [Danger criteria](#)

Category
<b>LC Gradient Sample</b> H2 H3 P5c
<b>LC Isocratic Sample</b> H2 H3 P5c

### [International regulations](#)

[Chemical Weapon Convention List Schedules I, II & III Chemicals](#)

Not listed.

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## SECTION 15: Regulatory information

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

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

## SECTION 16: Other information

Indicates information that has changed from previously issued version.

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

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

Classification	Justification
<b>LC Gradient Sample</b> Flam. Liq. 2, H225 Acute Tox. 3, H301 Acute Tox. 3, H311 Acute Tox. 3, H331 Repr. 1B, H360FD (Fertility and Unborn child) STOT SE 1, H370	On basis of test data Calculation method Calculation method Calculation method Calculation method Calculation method
<b>LC Isocratic Sample</b> Flam. Liq. 2, H225 Acute Tox. 3, H301	On basis of test data Calculation method

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## SECTION 16: Other information

Acute Tox. 3, H311	Calculation method
Acute Tox. 3, H331	Calculation method
STOT SE 1, H370	Calculation method

### Full text of abbreviated H statements

<p><b>LC Gradient Sample</b>                  H225                  H301                  H311                  H331                  H360FD                  H370</p> <p><b>LC Isocratic Sample</b>                  H225                  H301                  H311                  H331                  H370</p>	<p>Highly flammable liquid and vapour.                  Toxic if swallowed.                  Toxic in contact with skin.                  Toxic if inhaled.                  May damage fertility. May damage the unborn child.                  Causes damage to organs.</p> <p>Highly flammable liquid and vapour.                  Toxic if swallowed.                  Toxic in contact with skin.                  Toxic if inhaled.                  Causes damage to organs.</p>
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### Full text of classifications [CLP/GHS]

<p><b>LC Gradient Sample</b>                  Acute Tox. 3, H301                  Acute Tox. 3, H311                  Acute Tox. 3, H331                  Flam. Liq. 2, H225                  Repr. 1B, H360FD</p> <p>STOT SE 1, H370</p> <p><b>LC Isocratic Sample</b>                  Acute Tox. 3, H301                  Acute Tox. 3, H311                  Acute Tox. 3, H331                  Flam. Liq. 2, H225                  STOT SE 1, H370</p>	<p>ACUTE TOXICITY (oral) - Category 3                  ACUTE TOXICITY (dermal) - Category 3                  ACUTE TOXICITY (inhalation) - Category 3                  FLAMMABLE LIQUIDS - Category 2                  REPRODUCTIVE TOXICITY (Fertility and Unborn child) - Category 1B                  SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE - Category 1</p> <p>ACUTE TOXICITY (oral) - Category 3                  ACUTE TOXICITY (dermal) - Category 3                  ACUTE TOXICITY (inhalation) - Category 3                  FLAMMABLE LIQUIDS - Category 2                  SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE - Category 1</p>
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**Date of issue/ Date of revision** : 09/05/2018

**Date of previous issue** : 28/04/2016

**Version** : 2

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