

SAFETY DATA SHEET

Tube/Sample Kit for 1H Nano NMR probe, Part Number 99314200

Section 1. Identification

This product is considered an article. This Safety Data Sheet is written based on the encapsulated substance or mixture in this article.

1.1 Product identifier

Product name : Tube/Sample Kit for 1H Nano NMR probe, Part Number 99314200
Part No. (Chemical Kit) : 99314200
Part No. : 1H S/N 190636170
 4Hz D2O 190636190
 1H Lineshape 190636199
Validation date : 12/20/2017

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

Material uses : Reagents and Standards for Analytical Chemistry Laboratory Use
 1H S/N 42 µl
 4Hz D2O 42 µl
 1H Lineshape 42 µl

1.3 Details of the supplier of the safety data sheet

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

1.4 Emergency telephone number

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

Section 2. Hazards identification

This article, when used under reasonable conditions and in accordance with the directions for use, should not present a health hazard. The substance or mixture is encapsulated in the article. Only if released due to use or processing of the article in a manner not in accordance with the product's directions for use it may present potential health and safety hazards.

2.1 Classification of the substance or mixture

OSHA/HCS status : H S/N
 4Hz D2O
 1H Lineshape

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200). While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.
 This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture

Section 2. Hazards identification

1H S/N

H302	ACUTE TOXICITY (oral) - Category 4
H331	ACUTE TOXICITY (inhalation) - Category 3
H315	SKIN IRRITATION - Category 2
H319	EYE IRRITATION - Category 2A
H351	CARCINOGENICITY - Category 2
H361	TOXIC TO REPRODUCTION (Unborn child) - Category 2
H335	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
H336	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3
H372	SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (kidneys, liver) - Category 1

1H Lineshape

H225	FLAMMABLE LIQUIDS - Category 2
H319	EYE IRRITATION - Category 2A
H351	CARCINOGENICITY - Category 2
H361	TOXIC TO REPRODUCTION (Unborn child) - Category 2
H336	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3
H372	SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (blood system, kidneys, liver) - Category 1

Ingredients of unknown toxicity

: 1H Lineshape Percentage of the mixture consisting of ingredient (s) of unknown dermal toxicity: > 60%

2.2 GHS label elements

Hazard pictograms

: 1H S/N



1H Lineshape

Signal word

: 1H S/N
4Hz D2O
1H Lineshape

Danger
No signal word.
Danger

Hazard statements

: 1H S/N

4Hz D2O
1H Lineshape

H331 - Toxic if inhaled.
H302 - Harmful if swallowed.
H319 - Causes serious eye irritation.
H315 - Causes skin irritation.
H361 - Suspected of damaging the unborn child.
H351 - Suspected of causing cancer.
H335 - May cause respiratory irritation.
H336 - May cause drowsiness or dizziness.
H372 - Causes damage to organs through prolonged or repeated exposure. (kidneys, liver)
No known significant effects or critical hazards.
H225 - Highly flammable liquid and vapor.
H319 - Causes serious eye irritation.
H361 - Suspected of damaging the unborn child.
H351 - Suspected of causing cancer.
H336 - May cause drowsiness or dizziness.
H372 - Causes damage to organs through

Section 2. Hazards identification

Precautionary statements

Prevention

:  H S/N

4Hz D2O
1H Lineshape

prolonged or repeated exposure. (blood system, kidneys, liver)

- P201 - Obtain special instructions before use.
- P202 - Do not handle until all safety precautions have been read and understood.
- P280 - Wear protective gloves. Wear eye or face protection. Wear protective clothing.
- P271 - Use only outdoors or in a well-ventilated area.
- P260 - Do not breathe vapor.
- P270 - Do not eat, drink or smoke when using this product.
- P264 - Wash hands thoroughly after handling.
- Not applicable.
- P201 - Obtain special instructions before use.
- P202 - Do not handle until all safety precautions have been read and understood.
- P280 - Wear protective gloves. Wear eye or face protection. Wear protective clothing.
- P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- P241 - Use explosion-proof electrical, ventilating, lighting and all material-handling equipment.
- P242 - Use only non-sparking tools.
- P243 - Take precautionary measures against static discharge.
- P233 - Keep container tightly closed.
- P271 - Use only outdoors or in a well-ventilated area.
- P260 - Do not breathe vapor.
- P270 - Do not eat, drink or smoke when using this product.
- P264 - Wash hands thoroughly after handling.
- P314 - Get medical attention if you feel unwell.
- P308 + P313 - IF exposed or concerned: Get medical attention.
- P304 + P340 + P311 - IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or physician.
- P301 + P312 + P330 - IF SWALLOWED: Call a POISON CENTER or physician if you feel unwell. Rinse mouth.
- P302 + P352 + P362+P364 - IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and wash it before reuse.
- P332 + P313 - If skin irritation occurs: Get medical attention.
- P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P337 + P313 - If eye irritation persists: Get medical attention.
- Not applicable.
- P314 - Get medical attention if you feel unwell.
- P308 + P313 - IF exposed or concerned: Get

Response

:  H S/N

4Hz D2O
1H Lineshape

Section 2. Hazards identification

Storage : ^2H S/N
4Hz D2O
1H Lineshape

Disposal : ^2H S/N

4Hz D2O
1H Lineshape

Supplemental label elements : ^2H S/N
4Hz D2O
1H Lineshape

2.3 Other hazards

Hazards not otherwise classified : ^2H S/N
4Hz D2O
1H Lineshape

medical attention.
P304 + P340 + P312 - IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or physician if you feel unwell.
P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337 + P313 - If eye irritation persists: Get medical attention.

P405 - Store locked up.
Not applicable.
P405 - Store locked up.
P403 - Store in a well-ventilated place.
P235 - Keep cool.

P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
Not applicable.
P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.

None known.
None known.
Avoid contact with skin and clothing. Wash thoroughly after handling.

None known.
None known.
Prolonged or repeated contact may dry skin and cause irritation.

Section 3. Composition/information on ingredients

This article, when used under reasonable conditions and in accordance with the directions for use, should not present a health hazard. The substance or mixture is encapsulated in the article. Only if released due to use or processing of the article in a manner not in accordance with the product's directions for use it may present potential health and safety hazards.

Substance/mixture : 1H S/N Mixture (encapsulated in article)
4Hz D2O Mixture (encapsulated in article)
1H Lineshape Mixture (encapsulated in article)

Ingredient name	%	CAS number
^2H S/N (^2H)Chloroform ethylbenzene	≥ 90 ≤ 0.3	865-49-6 100-41-4
1H Lineshape ($^2\text{H}_6$)Acetone Trichloromethane	≥ 90 < 10	666-52-4 67-66-3

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

Section 3. Composition/information on ingredients

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

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

Section 4. First aid measures

4.1 Description of necessary first aid measures

Eye contact	: 1H S/N	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.
	4Hz D2O	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
	1H Lineshape	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.
Inhalation	: 1H S/N	Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
	4Hz D2O	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
	1H Lineshape	Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of

Section 4. First aid measures

Skin contact

: 1H S/N

decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.

4Hz D2O

Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.

1H Lineshape

Wash skin thoroughly with soap and water or use recognized skin cleanser. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion

: 1H S/N

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.

4Hz D2O

Wash out mouth with water. 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. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.

1H Lineshape

Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. If necessary, call a poison center or physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

4.2 Most important symptoms/effects, acute and delayed

Section 4. First aid measures

Potential acute health effects

Eye contact	: 1H S/N 4Hz D2O 1H Lineshape	Causes serious eye irritation. No known significant effects or critical hazards. Causes serious eye irritation.
Inhalation	: 1 H S/N 4Hz D2O 1H Lineshape	Toxic if inhaled. Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. May cause respiratory irritation. No known significant effects or critical hazards. Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness.
Skin contact	: 1H S/N 4Hz D2O 1H Lineshape	Causes skin irritation. No known significant effects or critical hazards. Defatting to the skin. May cause skin dryness and irritation.
Ingestion	: 1 H S/N 4Hz D2O 1H Lineshape	Harmful if swallowed. Can cause central nervous system (CNS) depression. No known significant effects or critical hazards. Can cause central nervous system (CNS) depression.

Over-exposure signs/symptoms

Eye contact	: 1H S/N 4Hz D2O 1H Lineshape	Adverse symptoms may include the following: pain or irritation watering redness No specific data. Adverse symptoms may include the following: pain or irritation watering redness
Inhalation	: 1H S/N 4Hz D2O 1H Lineshape	Adverse symptoms may include the following: respiratory tract irritation coughing nausea or vomiting headache drowsiness/fatigue dizziness/vertigo unconsciousness reduced fetal weight increase in fetal deaths skeletal malformations No specific data. Adverse symptoms may include the following: nausea or vomiting headache drowsiness/fatigue dizziness/vertigo unconsciousness reduced fetal weight increase in fetal deaths skeletal malformations

Section 4. First aid measures

Skin contact	: 1H S/N 4Hz D2O 1H Lineshape	Adverse symptoms may include the following: irritation redness reduced fetal weight increase in fetal deaths skeletal malformations No specific data. Adverse symptoms may include the following: irritation dryness cracking reduced fetal weight increase in fetal deaths skeletal malformations
Ingestion	: 1 H S/N 4Hz D2O 1H Lineshape	Adverse symptoms may include the following: reduced fetal weight increase in fetal deaths skeletal malformations No specific data. Adverse symptoms may include the following: reduced fetal weight increase in fetal deaths skeletal malformations

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

Notes to physician	: 1H S/N 4Hz D2O 1H Lineshape	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. 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.
Specific treatments	: 1H S/N 4Hz D2O 1H Lineshape	No specific treatment. No specific treatment. No specific treatment.
Protection of first-aiders	: 1H S/N 4Hz D2O 1H Lineshape	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. No action shall be taken involving any personal risk or without suitable training. No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media	: 1H S/N 4Hz D2O 1H Lineshape	Use an extinguishing agent suitable for the surrounding fire. Use an extinguishing agent suitable for the surrounding fire. Use dry chemical, CO ₂ , water spray (fog) or foam.
Unsuitable extinguishing media	: 1H S/N 4Hz D2O 1H Lineshape	None known. None known. Do not use water jet.

5.2 Special hazards arising from the substance or mixture

Specific hazards arising from the chemical	: 1H S/N 4Hz D2O 1H Lineshape	In a fire or if heated, a pressure increase will occur and the container may burst. In a fire or if heated, a pressure increase will occur and the container may burst. Highly flammable liquid and vapor. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion.
Hazardous thermal decomposition products	: 1H S/N 4Hz D2O 1H Lineshape	Decomposition products may include the following materials: carbon dioxide carbon monoxide halogenated compounds carbonyl halides No specific data. Decomposition products may include the following materials: carbon dioxide carbon monoxide halogenated compounds carbonyl halides

5.3 Advice for firefighters

Special protective actions for fire-fighters	: 1H S/N 4Hz D2O 1H Lineshape	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. 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. 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.
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Section 5. Fire-fighting measures

Special protective equipment for fire-fighters	: 1H S/N	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
	4Hz D2O	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
	1H Lineshape	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel	: 1H S/N	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
	4Hz D2O	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment.
	1H Lineshape	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
For emergency responders	: 1H S/N	If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
	4Hz D2O	If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
	1H Lineshape	If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Section 6. Accidental release measures


6.2 Environmental precautions	: 1H S/N	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
	4Hz D2O	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
	1H Lineshape	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

6.3 Methods and materials for containment and cleaning up

Methods for cleaning up	: 1H S/N	Stop leak if without risk. Move containers from spill area. 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.
	4Hz D2O	Stop leak if without risk. Move containers from spill area. 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.
	1H Lineshape	Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Section 7. Handling and storage

7.1 Precautions for safe handling

Protective measures	:  H S/N	Put on appropriate personal protective equipment (see Section 8). Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.
	4Hz D2O	Put on appropriate personal protective equipment (see Section 8).
	1H Lineshape	Put on appropriate personal protective equipment (see Section 8). Avoid exposure - obtain special instructions before use. Avoid exposure during

Section 7. Handling and storage

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

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.

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.

Store in accordance with local regulations. 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. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Store in accordance with local regulations. Store in 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. Keep container tightly closed and sealed until ready for use. Containers that have been

Advice on general occupational hygiene

: 1H S/N

4Hz D2O

1H Lineshape

7.2 Conditions for safe storage, including any incompatibilities

:  H S/N

4Hz D2O

Section 7. Handling and storage

1H Lineshape

opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use. Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

7.3 Specific end use(s)

Recommendations	: 1H S/N 4Hz D2O 1H Lineshape	Industrial applications, Professional applications. Industrial applications, Professional applications. Industrial applications, Professional applications.
Industrial sector specific solutions	: 1H S/N 4Hz D2O 1H Lineshape	Not applicable. Not applicable. Not applicable.

Section 8. Exposure controls/personal protection

Since the hazardous ingredient in this article is encapsulated, the risk of exposure by inhalation, ingestion, skin contact and eyes contact is minimum.

8.1 Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
<p>1H S/N (²H)Chloroform</p> <p>ethylbenzene</p>	<p>ACGIH TLV (United States, 3/2017). TWA: 10 ppm 8 hours. TWA: 49 mg/m³ 8 hours.</p> <p>OSHA PEL 1989 (United States, 3/1989). TWA: 2 ppm 8 hours. TWA: 9.78 mg/m³ 8 hours.</p> <p>NIOSH REL (United States, 10/2016). STEL: 2 ppm 60 minutes. STEL: 9.78 mg/m³ 60 minutes.</p> <p>OSHA PEL (United States, 6/2016). CEIL: 50 ppm CEIL: 240 mg/m³</p> <p>ACGIH TLV (United States, 3/2017). TWA: 20 ppm 8 hours.</p> <p>OSHA PEL 1989 (United States, 3/1989). TWA: 100 ppm 8 hours. TWA: 435 mg/m³ 8 hours. STEL: 125 ppm 15 minutes. STEL: 545 mg/m³ 15 minutes.</p> <p>NIOSH REL (United States, 10/2016).</p>

Section 8. Exposure controls/personal protection

1H Lineshape
(²H₆)Acetone

Trichloromethane

TWA: 100 ppm 10 hours.
TWA: 435 mg/m³ 10 hours.
STEL: 125 ppm 15 minutes.
STEL: 545 mg/m³ 15 minutes.
OSHA PEL (United States, 6/2016).
TWA: 100 ppm 8 hours.
TWA: 435 mg/m³ 8 hours.

ACGIH TLV (United States, 3/2017).
TWA: 250 ppm 8 hours.
STEL: 500 ppm 15 minutes.
OSHA PEL 1989 (United States, 3/1989).
TWA: 750 ppm 8 hours.
TWA: 1800 mg/m³ 8 hours.
STEL: 1000 ppm 15 minutes.
STEL: 2400 mg/m³ 15 minutes.
NIOSH REL (United States, 10/2016).
TWA: 250 ppm 10 hours.
TWA: 590 mg/m³ 10 hours.
OSHA PEL (United States, 6/2016).
TWA: 1000 ppm 8 hours.
TWA: 2400 mg/m³ 8 hours.

ACGIH TLV (United States, 3/2017).
TWA: 10 ppm 8 hours.
TWA: 49 mg/m³ 8 hours.
OSHA PEL 1989 (United States, 3/1989).
TWA: 2 ppm 8 hours.
TWA: 9.78 mg/m³ 8 hours.
NIOSH REL (United States, 10/2016).
STEL: 2 ppm 60 minutes.
STEL: 9.78 mg/m³ 60 minutes.
OSHA PEL (United States, 6/2016).
CEIL: 50 ppm
CEIL: 240 mg/m³

8.2 Exposure controls

Appropriate engineering controls

: Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Environmental exposure controls

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

Individual protection measures

Hygiene measures

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

Section 8. Exposure controls/personal protection

- Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.
- Skin protection**
- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.
- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

Physical state	: 1H S/N	Liquid.
	4Hz D2O	Liquid.
	1H Lineshape	Liquid.
Color	: 1H S/N	Not available.
	4Hz D2O	Not available.
	1H Lineshape	Not available.
Odor	: 1H S/N	Not available.
	4Hz D2O	Not available.
	1H Lineshape	Not available.
Odor threshold	: 1H S/N	Not available.
	4Hz D2O	Not available.
	1H Lineshape	Not available.
pH	: 1H S/N	Not available.
	4Hz D2O	Not available.
	1H Lineshape	Not available.
Melting point	: 1H S/N	-64°C (-83.2°F)
	4Hz D2O	3.81°C (38.9°F)
	1H Lineshape	Not available.
Boiling point	: 1H S/N	60.9°C (141.6°F)
	4Hz D2O	101°C (213.8°F)
	1H Lineshape	55.5°C (131.9°F)
Flash point	: 1H S/N	Not available.
	4Hz D2O	Not available.
	1H Lineshape	Closed cup: -17°C (1.4°F)

Section 9. Physical and chemical properties

Evaporation rate	: 1H S/N 4Hz D2O 1H Lineshape	Not available. Not available. Not available.
Flammability (solid, gas)	: 1H S/N 4Hz D2O 1H Lineshape	Not applicable. Not applicable. Not applicable.
Lower and upper explosive (flammable) limits	: 1H S/N 4Hz D2O 1H Lineshape	Not available. Not available. Not available.
Vapor pressure	: 1H S/N 4Hz D2O 1H Lineshape	Not available. Not available. Not available.
Vapor density	: 1H S/N 4Hz D2O 1H Lineshape	Not available. Not available. Not available.
Relative density	: 1H S/N 4Hz D2O 1H Lineshape	1.5 Not available. 0.872
Solubility	: 1H S/N 4Hz D2O 1H Lineshape	Very slightly soluble in the following materials: cold water and hot water. Easily soluble in the following materials: cold water and hot water. Easily soluble in the following materials: cold water and hot water.
Partition coefficient: n-octanol/water	: 1H S/N 4Hz D2O 1H Lineshape	Not available. Not available. Not available.
Auto-ignition temperature	: 1H S/N 4Hz D2O 1H Lineshape	Not available. Not available. Not available.
Decomposition temperature	: 1H S/N 4Hz D2O 1H Lineshape	Not available. Not available. Not available.
Viscosity	: 1H S/N 4Hz D2O 1H Lineshape	Not available. Not available. Not available.

Section 10. Stability and reactivity

10.1 Reactivity	: 1H S/N 4Hz D2O 1H Lineshape	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. No specific test data related to reactivity available for this product or its ingredients.
10.2 Chemical stability	: 1H S/N 4Hz D2O 1H Lineshape	The product is stable. The product is stable. The product is stable.

Section 10. Stability and reactivity

10.3 Possibility of hazardous reactions	: 1H S/N 4Hz D2O 1H Lineshape	Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous reactions will not occur.
10.4 Conditions to avoid	: 1H S/N 4Hz D2O 1H Lineshape	No specific data. No specific data. Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.
10.5 Incompatible materials	: 1H S/N 4Hz D2O 1H Lineshape	May react or be incompatible with oxidizing materials. May react or be incompatible with oxidizing materials. Reactive or incompatible with the following materials: oxidizing materials
10.6 Hazardous decomposition products	: 1H S/N 4Hz D2O 1H Lineshape	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. 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
1H S/N (² H)Chloroform	LC50 Inhalation Vapor	Rat	47702 mg/m ³	4 hours
	LD50 Dermal	Rabbit	>20 g/kg	-
	LD50 Oral	Rat	300 mg/kg	-
ethylbenzene	LD50 Dermal	Rabbit	>5000 mg/kg	-
	LD50 Oral	Rat	3500 mg/kg	-
1H Lineshape (² H ₆)Acetone Trichloromethane	LD50 Oral	Rat	5800 mg/kg	-
	LC50 Inhalation Vapor	Rat	47702 mg/m ³	4 hours
	LD50 Dermal	Rabbit	>20 g/kg	-
	LD50 Oral	Rat	300 mg/kg	-

Irritation/Corrosion

Section 11. Toxicological information

Product/ingredient name	Result	Species	Score	Exposure	Observation	
1H S/N (² H)Chloroform	Eyes - Moderate irritant	Rabbit	-	24 hours 20 milligrams	-	
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-	
	ethylbenzene	Eyes - Severe irritant	Rabbit	-	500 milligrams	-
		Skin - Mild irritant	Rabbit	-	24 hours 15 milligrams	-
1H Lineshape (² H ₆)Acetone	Eyes - Mild irritant	Rabbit	-	10 microliters	-	
	Eyes - Moderate irritant	Rabbit	-	24 hours 20 milligrams	-	
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-	
	Skin - Mild irritant	Rabbit	-	395 milligrams	-	
Trichloromethane	Eyes - Moderate irritant	Rabbit	-	24 hours 20 milligrams	-	
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-	

Sensitization

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Classification

Product/ingredient name	OSHA	IARC	NTP
1H S/N (² H)Chloroform ethylbenzene	-	2B	Reasonably anticipated to be a human carcinogen.
	-	2B	-
1H Lineshape Trichloromethane	-	2B	Reasonably anticipated to be a human carcinogen.

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Section 11. Toxicological information

Name	Category	Route of exposure	Target organs
1H S/N (² H)Chloroform	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
ethylbenzene	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
1H Lineshape (² H ₆)Acetone	Category 3	Not applicable.	Narcotic effects
Trichloromethane	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects

Specific target organ toxicity (repeated exposure)

Name	Category	Route of exposure	Target organs
1H S/N (² H)Chloroform	Category 1	Not determined	kidneys and liver hearing organs
ethylbenzene	Category 2	Not determined	
1H Lineshape (² H ₆)Acetone	Category 2	Not determined	blood system kidneys and liver
Trichloromethane	Category 1	Not determined	

Aspiration hazard

Name	Result
1H S/N ethylbenzene	ASPIRATION HAZARD - Category 1

Information on the likely routes of exposure

: 1H S/N
4Hz D2O
1H Lineshape

Routes of entry anticipated: Oral, Dermal, Inhalation.
Not available.
Routes of entry anticipated: Oral, Dermal, Inhalation.

Potential acute health effects

Eye contact

: 1H S/N
4Hz D2O
1H Lineshape

Causes serious eye irritation.
No known significant effects or critical hazards.
Causes serious eye irritation.

Inhalation

: **1H S/N**
4Hz D2O
1H Lineshape

Toxic if inhaled. Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. May cause respiratory irritation.
No known significant effects or critical hazards.
Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness.

Skin contact

: 1H S/N
4Hz D2O
1H Lineshape

Causes skin irritation.
No known significant effects or critical hazards.
Defatting to the skin. May cause skin dryness and irritation.

Section 11. Toxicological information

Ingestion : ^1H S/N
 4Hz D2O
 1H Lineshape
 Harmful if swallowed. Can cause central nervous system (CNS) depression.
 No known significant effects or critical hazards.
 Can cause central nervous system (CNS) depression.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : 1H S/N
 4Hz D2O
 1H Lineshape
 Adverse symptoms may include the following:
 pain or irritation
 watering
 redness
 No specific data.
 Adverse symptoms may include the following:
 pain or irritation
 watering
 redness

Inhalation : 1H S/N
 4Hz D2O
 1H Lineshape
 Adverse symptoms may include the following:
 respiratory tract irritation
 coughing
 nausea or vomiting
 headache
 drowsiness/fatigue
 dizziness/vertigo
 unconsciousness
 reduced fetal weight
 increase in fetal deaths
 skeletal malformations
 No specific data.
 Adverse symptoms may include the following:
 nausea or vomiting
 headache
 drowsiness/fatigue
 dizziness/vertigo
 unconsciousness
 reduced fetal weight
 increase in fetal deaths
 skeletal malformations

Skin contact : 1H S/N
 4Hz D2O
 1H Lineshape
 Adverse symptoms may include the following:
 irritation
 redness
 reduced fetal weight
 increase in fetal deaths
 skeletal malformations
 No specific data.
 Adverse symptoms may include the following:
 irritation
 dryness
 cracking
 reduced fetal weight
 increase in fetal deaths
 skeletal malformations

Section 11. Toxicological information

Ingestion	: ^1H S/N 4Hz D2O 1H Lineshape	Adverse symptoms may include the following: reduced fetal weight increase in fetal deaths skeletal malformations No specific data. Adverse symptoms may include the following: reduced fetal weight increase in fetal deaths skeletal malformations
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Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects	: Not available.
Potential delayed effects	: Not available.

Long term exposure

Potential immediate effects	: Not available.
Potential delayed effects	: Not available.

Potential chronic health effects

General	: 1H S/N 4Hz D2O 1H Lineshape	Causes damage to organs through prolonged or repeated exposure. No known significant effects or critical hazards. Causes damage to organs through prolonged or repeated exposure. Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis.
Carcinogenicity	: 1H S/N 4Hz D2O 1H Lineshape	Suspected of causing cancer. Risk of cancer depends on duration and level of exposure. No known significant effects or critical hazards. Suspected of causing cancer. Risk of cancer depends on duration and level of exposure.
Mutagenicity	: 1H S/N 4Hz D2O 1H Lineshape	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
Teratogenicity	: 1H S/N 4Hz D2O 1H Lineshape	Suspected of damaging the unborn child. No known significant effects or critical hazards. Suspected of damaging the unborn child.
Developmental effects	: 1H S/N 4Hz D2O 1H Lineshape	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
Fertility effects	: 1H S/N 4Hz D2O 1H Lineshape	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Section 11. Toxicological information

Route	ATE value
1H S/N Oral Inhalation (vapors)	500.6 mg/kg 3.003 mg/l
1H Lineshape Oral Inhalation (vapors)	9523.8 mg/kg 57.14 mg/l

Other information

: **1H S/N**

4Hz D2O
 1H Lineshape

Adverse symptoms may include the following:
 jaundice, nausea or vomiting.

Not available.

Adverse symptoms may include the following:
 altered blood counts. Repeated exposure may
 cause skin dryness or cracking.

Section 12. Ecological information

12.1 Toxicity

Product/ingredient name	Result	Species	Exposure	
1H S/N (² H)Chloroform	Acute EC50 13.3 mg/l Fresh water	Algae - Chlamydomonas reinhardtii - Exponential growth phase	72 hours	
	Acute EC50 2.803 mg/l Fresh water	Crustaceans - Cypris subglobosa	48 hours	
	Acute LC50 29000 µg/l Fresh water	Daphnia - Daphnia magna	48 hours	
	Acute LC50 13300 µg/l Fresh water	Fish - Lepomis macrochirus	96 hours	
	Chronic EC10 3.61 mg/l Fresh water	Algae - Chlamydomonas reinhardtii - Exponential growth phase	72 hours	
	ethylbenzene	Chronic NOEC 1.8 mg/l Fresh water	Daphnia - Daphnia magna	21 days
		Acute EC50 4600 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata	72 hours
		Acute EC50 3600 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata	96 hours
		Acute EC50 6530 µg/l Fresh water	Crustaceans - Artemia sp. - Nauplii	48 hours
		Acute EC50 2930 µg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
Acute LC50 4200 µg/l Fresh water		Fish - Oncorhynchus mykiss	96 hours	
1H Lineshape (² H ₆)Acetone	Acute EC50 7200000 µg/l Fresh water	Algae - Selenastrum sp.	96 hours	
	Acute LC50 6000000 µg/l Fresh water	Crustaceans - Gammarus pulex	48 hours	
	Acute LC50 6900 mg/l Fresh water	Daphnia - Daphnia magna	48 hours	
	Acute LC50 5600 ppm Fresh water	Fish - Poecilia reticulata	96 hours	
	Chronic NOEC 4.95 mg/l Marine water	Algae - Ulva pertusa	96 hours	
	Chronic NOEC 0.016 ml/L Fresh water	Crustaceans - Daphniidae	21 days	
	Chronic NOEC 0.1 ml/L Fresh water	Daphnia - Daphnia magna - Neonate	21 days	
	Chronic NOEC 5 µg/l Marine water	Fish - Gasterosteus aculeatus - Larvae	42 days	
Trichloromethane	Acute EC50 13.3 mg/l Fresh water	Algae - Chlamydomonas reinhardtii - Exponential growth phase	72 hours	

Section 12. Ecological information

	Acute EC50 2.803 mg/l Fresh water Acute LC50 29000 µg/l Fresh water Acute LC50 13.3 ppm Fresh water Chronic EC10 3.61 mg/l Fresh water	Crustaceans - Cypris subglobosa Daphnia - Daphnia magna Fish - Lepomis macrochirus Algae - Chlamydomonas reinhardtii - Exponential growth phase Daphnia - Daphnia magna	48 hours 48 hours 96 hours 72 hours 21 days
	Chronic NOEC 1.8 mg/l Fresh water		

12.2 Persistence and degradability

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
1H S/N ethylbenzene	-	-	Readily

12.3 Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
1H S/N (² H)Chloroform ethylbenzene	1.97 3.6	690 -	high low
1H Lineshape (² H ₆)Acetone Trichloromethane	-0.23 1.97	- 690	low high

12.4 Mobility in soil

Soil/water partition coefficient (K_{oc}) : Not available.

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

Section 13. Disposal considerations

13.1 Waste treatment methods

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

[United States - RCRA Toxic hazardous waste "U" List](#)

Section 13. Disposal considerations

Ingredient	CAS #	Status	Reference number
1H S/N Chloroform; Methane, trichloro-	865-49-6	Listed	U044
1H Lineshape Acetone (l); 2-Propanone (l) Chloroform; Methane, trichloro-	666-52-4 67-66-3	Listed Listed	U002 U044

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

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

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

Section 14. Transport information

This Safety Data Sheet is written based on the encapsulated substance or mixture in this article. Since the hazardous ingredient is encapsulated, the risk of exposure by inhalation, ingestion, skin contact and eyes contact is minimum.

DOT / TDG / Mexico / IMDG / IATA : Not regulated.

Additional information

Remarks: De minimis quantities

DOT Classification : **Reportable quantity** 30.03 lbs / 13.634 kg. Package sizes shipped in quantities less than the product reportable quantity are not subject to the RQ (reportable quantity) transportation requirements.

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

Transport in bulk according to Annex II of MARPOL and the IBC Code : Not available.

Section 15. Regulatory information

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

U.S. Federal regulations : **TSCA 8(a) CDR Exempt/Partial exemption:** Not determined
Clean Water Act (CWA) 307: (2H)Chloroform; ethylbenzene; Trichloromethane
Clean Water Act (CWA) 311: (2H)Chloroform; ethylbenzene; Trichloromethane

Clean Air Act (CAA) 112 regulated toxic substances: (2H)Chloroform; Trichloromethane

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) : Listed

Section 15. Regulatory information

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Listed

SARA 302/304

Composition/information on ingredients

Name	%	EHS	SARA 302 TPQ		SARA 304 RQ	
			(lbs)	(gallons)	(lbs)	(gallons)
2H S/N (² H)Chloroform	≥90	Yes.	-	-	-	-
1H Lineshape Trichloromethane	<10	Yes.	10000	803.8	10	0.8

SARA 304 RQ : 571.4 lbs / 259.4 kg

SARA 311/312

Classification : **2H S/N**

ACUTE TOXICITY (oral) - Category 4
 ACUTE TOXICITY (inhalation) - Category 3
 SKIN IRRITATION - Category 2
 EYE IRRITATION - Category 2A
 CARCINOGENICITY - Category 2
 TOXIC TO REPRODUCTION (Unborn child) - Category 2
 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3
 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (kidneys, liver) - Category 1
 Not applicable.
 FLAMMABLE LIQUIDS - Category 2
 EYE IRRITATION - Category 2A
 CARCINOGENICITY - Category 2
 TOXIC TO REPRODUCTION (Unborn child) - Category 2
 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3
 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (blood system, kidneys, liver) - Category 1
 HNOC - Defatting irritant

4Hz D2O
 1H Lineshape

Composition/information on ingredients

Name	%	Classification
2H S/N (² H)Chloroform	≥90	ACUTE TOXICITY (oral) - Category 4 ACUTE TOXICITY (inhalation) - Category 3 SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A CARCINOGENICITY - Category 2 TOXIC TO REPRODUCTION (Unborn child) - Category 2 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (kidneys, liver) - Category 1
ethylbenzene	≤0.3	FLAMMABLE LIQUIDS - Category 2 EYE IRRITATION - Category 2A CARCINOGENICITY - Category 2

Section 15. Regulatory information

1H Lineshape (² H ₆)Acetone	≥90	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (hearing organs) - Category 2 ASPIRATION HAZARD - Category 1 HNOC - Defatting irritant
Trichloromethane	<10	FLAMMABLE LIQUIDS - Category 2 EYE IRRITATION - Category 2A SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (blood system) - Category 2 HNOC - Defatting irritant ACUTE TOXICITY (oral) - Category 4 ACUTE TOXICITY (inhalation) - Category 3 SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A CARCINOGENICITY - Category 2 TOXIC TO REPRODUCTION (Unborn child) - Category 2 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (kidneys, liver) - Category 1

SARA 313

	Product name	CAS number	%
Form R - Reporting requirements	1H S/N (² H)Chloroform ethylbenzene	865-49-6 100-41-4	≥90 ≤0.3
	1H Lineshape Trichloromethane	67-66-3	<10
	1H S/N (² H)Chloroform ethylbenzene	865-49-6 100-41-4	≥90 ≤0.3
Supplier notification	1H Lineshape Trichloromethane	67-66-3	<10

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

State regulations

Massachusetts

: The following components are listed: CHLOROFORM; CHLOROFORM; TRICHLOROMETHANE; ACETONE

New York

: The following components are listed: Chloroform; Methane, trichloro-; Chloroform; Methane, trichloro-; Acetone; 2-Propanone

New Jersey

: The following components are listed: CHLOROFORM; METHANE, TRICHLORO-; CHLOROFORM; METHANE, TRICHLORO-; ACETONE; 2-PROPANONE

Pennsylvania

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

California Prop. 65

⚠ WARNING: This product can expose you to chemicals including (²H)Chloroform, Chloroform, which are known to the State of California to cause cancer and birth defects or other reproductive harm. This product can expose you to Ethylbenzene, which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

Section 15. Regulatory information

Ingredient name	No significant risk level	Maximum acceptable dosage level
1H S/N Ethylbenzene (2H)Chloroform	Yes. -	-
1H Lineshape Chloroform	Yes.	-

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

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

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Inventory list

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

Section 16. Other information

History

Date of issue	: 12/20/2017
Date of previous issue	: 03/10/2016.
Version	: 4

Indicates information that has changed from previously issued version.

Notice to reader

Section 16. Other information

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