

# SAFETY DATA SHEET



2.5mm Twin Cold ST Probe, SAMPL KIT, Part Number 192269600

## Section 1. Identification

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

**Product name** : 2.5mm Twin Cold ST Probe, SAMPL KIT, Part Number 192269600

**Part No. (Chemical Kit)** : 192269600

**Part No.** : 1H Lineshape 192265589  
 Sucrose salt, NMR tested 192265514  
 Temp Grad 192265511

**Validation date** : 10/24/2013.

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

**Material uses** : Analytical chemistry.  
 1H Lineshape 270 µl  
 Sucrose salt, NMR tested 270 µl  
 Temp Grad 270 µl

**Supplier/Manufacturer** : Agilent Technologies, Inc.  
 Logistics Center - Americas  
 500 Ships Landing Way  
 New Castle, Delaware 19720  
 800-227-9770


**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.

<b>OSHA/HCS status</b>	: 1H Lineshape	This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
	: Sucrose salt, NMR tested	While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this MSDS contains valuable information critical to the safe handling and proper use of the product. This MSDS should be retained and available for employees and other users of this product.
	: Temp Grad	While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this MSDS contains valuable information critical to the safe handling and proper use of the product. This MSDS should be retained and available for employees and other users of this product.

## Section 2. Hazards identification

<b>Classification of the substance or mixture</b>	: 1H Lineshape  Sucrose salt, NMR tested Temp Grad	FLAMMABLE LIQUIDS - Category 2 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A CARCINOGENICITY - Category 2 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2 Not classified. Not classified.
<b><u>GHS label elements</u></b>		
<b>Hazard pictograms</b>	:	
<b>Signal word</b>	: 1H Lineshape Sucrose salt, NMR tested Temp Grad	Danger No signal word. No signal word.
<b>Hazard statements</b>	: 1H Lineshape  Sucrose salt, NMR tested Temp Grad	Highly flammable liquid and vapor. Causes serious eye irritation. Suspected of causing cancer. May cause drowsiness and dizziness. May cause damage to organs through prolonged or repeated exposure. No known significant effects or critical hazards. No known significant effects or critical hazards.
<b><u>Precautionary statements</u></b>		
<b>Prevention</b>	:	P201 - Obtain special instructions before use. P202 - Do not handle until all safety precautions have been read and understood. P281 - Use personal protective equipment as required. P280 - Wear eye or face protection. P271 - Use only outdoors or in a well-ventilated area. P261 - Avoid breathing vapor. P264 - Wash hands thoroughly after handling.
<b>Response</b>	:	P308 + P313 - IF exposed or concerned: Get medical attention. P304 + P340 + P312 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or physician if you feel unwell. P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337 + P313 - If eye irritation persists: Get medical attention.
<b>Storage</b>	:	P405 - Store locked up.
<b>Disposal</b>	:	P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
<b>Supplemental label elements</b>	: 1H Lineshape  Sucrose salt, NMR tested Temp Grad	Avoid contact with skin and clothing. Wash thoroughly after handling. None known. None known.
<b>Hazards not otherwise classified</b>	: 1H Lineshape  Sucrose salt, NMR tested Temp Grad	Defatting to the skin. Prolonged or repeated contact may dry skin and cause irritation. None known. None known.

### 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 Lineshape Mixture  
 Sucrose salt, NMR tested Mixture  
 Temp Grad Mixture

Ingredient name	%	CAS number
<b>1H Lineshape</b>		
( <sup>2</sup> H <sub>6</sub> )Acetone	60 - 100	666-52-4
Trichloromethane	0.1 - 1	67-66-3

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

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

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

### Section 4. First aid measures

#### Description of necessary first aid measures

<b>Eye contact</b>	: 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.
	Sucrose salt, NMR tested	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.
	Temp Grad	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.
<b>Inhalation</b>	: 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 decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
	Sucrose salt, NMR tested	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
	Temp Grad	Remove victim to fresh air and keep at rest in a

## Section 4. First aid measures

<b>Skin contact</b>	: 1H Lineshape	position comfortable for breathing. Get medical attention if symptoms occur.
	Sucrose salt, NMR tested	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. Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	Temp Grad	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
<b>Ingestion</b>	: 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.
	Sucrose salt, NMR tested	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.
	Temp Grad	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.

### Most important symptoms/effects, acute and delayed

#### Potential acute health effects

<b>Eye contact</b>	: 1H Lineshape	Causes serious eye irritation.
	Sucrose salt, NMR tested	No known significant effects or critical hazards.
	Temp Grad	No known significant effects or critical hazards.
<b>Inhalation</b>	: 1H Lineshape	Can cause central nervous system (CNS) depression. May cause drowsiness and dizziness. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
	Sucrose salt, NMR tested	No known significant effects or critical hazards.
	Temp Grad	No known significant effects or critical hazards.

## Section 4. First aid measures

<b>Skin contact</b>	: 1H Lineshape  Sucrose salt, NMR tested Temp Grad	Defatting to the skin. May cause skin dryness and irritation. No known significant effects or critical hazards. No known significant effects or critical hazards.
<b>Ingestion</b>	: 1H Lineshape  Sucrose salt, NMR tested Temp Grad	Can cause central nervous system (CNS) depression. Irritating to mouth, throat and stomach. No known significant effects or critical hazards. No known significant effects or critical hazards.
<b><u>Over-exposure signs/symptoms</u></b>		
<b>Eye contact</b>	: 1H Lineshape  Sucrose salt, NMR tested Temp Grad	Adverse symptoms may include the following: pain or irritation watering redness No specific data. No specific data.
<b>Inhalation</b>	: 1H Lineshape  Sucrose salt, NMR tested Temp Grad	Adverse symptoms may include the following: nausea or vomiting headache drowsiness/fatigue dizziness/vertigo unconsciousness No specific data. No specific data.
<b>Skin contact</b>	: 1H Lineshape  Sucrose salt, NMR tested Temp Grad	Adverse symptoms may include the following: irritation dryness cracking No specific data. No specific data.
<b>Ingestion</b>	: 1H Lineshape Sucrose salt, NMR tested Temp Grad	No specific data. No specific data. No specific data.
<b><u>Indication of immediate medical attention and special treatment needed, if necessary</u></b>		
<b>Notes to physician</b>	: 1H Lineshape  Sucrose salt, NMR tested  Temp Grad	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. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
<b>Specific treatments</b>	: 1H Lineshape Sucrose salt, NMR tested Temp Grad	No specific treatment. No specific treatment. No specific treatment.
<b>Protection of first-aiders</b>	: 1H Lineshape  Sucrose salt, NMR tested  Temp Grad	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

## Section 4. First aid measures

or without suitable training.

See toxicological information (Section 11)

## Section 5. Fire-fighting measures

### Extinguishing media

<b>Suitable extinguishing media</b>	: 1H Lineshape Sucrose salt, NMR tested  Temp Grad	Use dry chemical, CO <sub>2</sub> , water spray (fog) or foam. Use an extinguishing agent suitable for the surrounding fire. Use an extinguishing agent suitable for the surrounding fire.
<b>Unsuitable extinguishing media</b>	: 1H Lineshape Sucrose salt, NMR tested Temp Grad	Do not use water jet. None known. None known.
<b>Specific hazards arising from the chemical</b>	: 1H Lineshape  Sucrose salt, NMR tested  Temp Grad	Highly flammable liquid and vapor. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. 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. In a fire or if heated, a pressure increase will occur and the container may burst.
<b>Hazardous thermal decomposition products</b>	: Decomposition products may include the following materials: carbon dioxide carbon monoxide	
<b>Special protective actions for fire-fighters</b>	: 1H Lineshape  Sucrose salt, NMR tested  Temp Grad	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool. Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No 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.
<b>Special protective equipment for fire-fighters</b>	: 1H Lineshape  Sucrose salt, NMR tested  Temp Grad	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

## Section 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
- For emergency responders** : If 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".

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

### Methods and materials for containment and cleaning up

- 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.
- Sucrose salt, NMR tested  
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.
- Temp Grad  
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.

## Section 7. Handling and storage

### Precautions for safe handling

- Protective measures** : 1H Lineshape  
Put on appropriate personal protective equipment (see Section 8). Avoid exposure - obtain special instructions before use. 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

## Section 7. Handling and storage

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.

Sucrose salt, NMR tested

Put on appropriate personal protective equipment (see Section 8).

Temp Grad

Put on appropriate personal protective equipment (see Section 8).

### Advice on general occupational hygiene

: Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

### Conditions for safe storage, including any incompatibilities

: 1H Lineshape

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.

Sucrose salt, NMR tested

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 opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Temp Grad

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 opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.



## 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.

### Control parameters

#### Occupational exposure limits

Ingredient name	Exposure limits
<b>1H Lineshape</b> ( <sup>2</sup> H <sub>6</sub> )Acetone	<b>ACGIH TLV (United States, 3/2012).</b> TWA: 500 ppm 8 hours. TWA: 1188 mg/m <sup>3</sup> 8 hours. STEL: 750 ppm 15 minutes. STEL: 1782 mg/m <sup>3</sup> 15 minutes. <b>OSHA PEL 1989 (United States, 3/1989).</b> TWA: 750 ppm 8 hours. TWA: 1800 mg/m <sup>3</sup> 8 hours. STEL: 1000 ppm 15 minutes. STEL: 2400 mg/m <sup>3</sup> 15 minutes. <b>NIOSH REL (United States, 6/2009).</b> TWA: 250 ppm 10 hours. TWA: 590 mg/m <sup>3</sup> 10 hours. <b>OSHA PEL (United States, 6/2010).</b> TWA: 1000 ppm 8 hours. TWA: 2400 mg/m <sup>3</sup> 8 hours.
Trichloromethane	<b>ACGIH TLV (United States, 3/2012).</b> TWA: 49 mg/m <sup>3</sup> 8 hours. TWA: 10 ppm 8 hours. <b>NIOSH REL (United States, 1/2013).</b> STEL: 9.78 mg/m <sup>3</sup> 60 minutes. STEL: 2 ppm 60 minutes. <b>OSHA PEL (United States, 6/2010).</b> CEIL: 240 mg/m <sup>3</sup> CEIL: 50 ppm <b>OSHA PEL 1989 (United States, 3/1989).</b> TWA: 9.78 mg/m <sup>3</sup> 8 hours. TWA: 2 ppm 8 hours.

**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.

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

### Individual protection measures

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

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

### Skin protection

## Section 8. Exposure controls/personal protection

- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.
- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- 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** : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

## Section 9. Physical and chemical properties

### Appearance

<b>Physical state</b>	: 1H Lineshape Sucrose salt, NMR tested Temp Grad	Liquid. Liquid. [Clear.] Liquid.
<b>Color</b>	: 1H Lineshape Sucrose salt, NMR tested Temp Grad	Not available. Not available. Colorless.
<b>Odor</b>	: 1H Lineshape Sucrose salt, NMR tested Temp Grad	Not available. Not available. Not available.
<b>Odor threshold</b>	: 1H Lineshape Sucrose salt, NMR tested Temp Grad	Not available. Not available. Not available.
<b>pH</b>	: 1H Lineshape Sucrose salt, NMR tested Temp Grad	Not available. Not available. Not available.
<b>Melting point</b>	: 1H Lineshape Sucrose salt, NMR tested Temp Grad	-95°C (-139°F) 0°C (32°F) 3.81°C (38.9°F)
<b>Boiling point</b>	: 1H Lineshape Sucrose salt, NMR tested Temp Grad	55.5°C (131.9°F) 100°C (212°F) 101.42°C (214.6°F)
<b>Flash point</b>	: 1H Lineshape Sucrose salt, NMR tested Temp Grad	Closed cup: -17°C (1.4°F) Not available. Not available.
<b>Evaporation rate</b>	: 1H Lineshape Sucrose salt, NMR tested Temp Grad	Not available. Not available. Not available.
<b>Flammability (solid, gas)</b>	: 1H Lineshape Sucrose salt, NMR tested Temp Grad	Not available. Not available. Not available.
<b>Lower and upper explosive (flammable) limits</b>	: 1H Lineshape Sucrose salt, NMR tested Temp Grad	Not available. Not available. Not available.

## Section 9. Physical and chemical properties

<b>Vapor pressure</b>	: 1H Lineshape Sucrose salt, NMR tested Temp Grad	Not available. Not available. Not available.
<b>Vapor density</b>	: 1H Lineshape Sucrose salt, NMR tested Temp Grad	Not available. Not available. Not available.
<b>Relative density</b>	: 1H Lineshape Sucrose salt, NMR tested Temp Grad	0.872 Not available. 1.1
<b>Solubility</b>	: 1H Lineshape  Sucrose salt, NMR tested  Temp Grad	Easily soluble in the following materials: cold water, hot water and acetone. Easily soluble in the following materials: cold water and hot water. Easily soluble in the following materials: cold water and hot water.
<b>Solubility in water</b>	: Not available.	
<b>Partition coefficient: n-octanol/water</b>	: 1H Lineshape Sucrose salt, NMR tested Temp Grad	Not available. Not available. Not available.
<b>Auto-ignition temperature</b>	: 1H Lineshape Sucrose salt, NMR tested Temp Grad	Not available. Not available. Not available.
<b>Decomposition temperature</b>	: 1H Lineshape Sucrose salt, NMR tested Temp Grad	Not available. Not available. Not available.
<b>Viscosity</b>	: 1H Lineshape Sucrose salt, NMR tested Temp Grad	Not available. Not available. Not available.

## Section 10. Stability and reactivity

<b>Reactivity</b>	: 1H Lineshape  Sucrose salt, NMR tested  Temp Grad	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.
<b>Chemical stability</b>	: 1H Lineshape Sucrose salt, NMR tested Temp Grad	The product is stable. The product is stable. The product is stable.
<b>Possibility of hazardous reactions</b>	: 1H Lineshape  Sucrose salt, NMR tested  Temp Grad	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.
<b>Conditions to avoid</b>	: 1H Lineshape  Sucrose salt, NMR tested Temp Grad	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. No specific data. No specific data.

## Section 10. Stability and reactivity

<b>Incompatible materials</b>	: 1H Lineshape  Sucrose salt, NMR tested Temp Grad	Reactive or incompatible with the following materials: oxidizing materials No specific data. No specific data.
<b>Hazardous decomposition products</b>	: 1H Lineshape  Sucrose salt, NMR tested  Temp Grad	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

### Information on toxicological effects

#### Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
<b>1H Lineshape</b> ( <sup>2</sup> H <sub>6</sub> )Acetone Trichloromethane	LD50 Oral	Rat	5800 mg/kg	-
	LC50 Inhalation Vapor	Rat	47702 mg/m <sup>3</sup>	4 hours
	LD50 Dermal	Rabbit	>20 g/kg	-
	LD50 Oral	Rat	300 mg/kg	-

#### Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
<b>1H Lineshape</b> ( <sup>2</sup> H <sub>6</sub> )Acetone	Eyes - Mild irritant	Human	-	186300 parts per million	-
	Eyes - Mild irritant	Rabbit	-	10 microliters	-
	Eyes - Moderate irritant	Rabbit	-	24 hours 20 milligrams	-
	Eyes - Severe irritant	Rabbit	-	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

## Section 11. Toxicological information

Product/ingredient name	OSHA	IARC	NTP
<b>1H Lineshape</b> Trichloromethane	-	2B	Reasonably anticipated to be a human carcinogen.

### Reproductive toxicity

Not available.

### Teratogenicity

Not available.

### Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
<b>1H Lineshape</b> ( <sup>2</sup> H <sub>6</sub> )Acetone Trichloromethane	Category 3 Category 3	Not applicable. Not applicable.	Narcotic effects Respiratory tract irritation and Narcotic effects

### Specific target organ toxicity (repeated exposure)

Name	Category	Route of exposure	Target organs
<b>1H Lineshape</b> Trichloromethane	Category 2	Not determined	heart, kidneys and liver

### Aspiration hazard

Not available.

**Information on the likely routes of exposure** : Not available.

### Potential acute health effects

<b>Eye contact</b>	: 1H Lineshape Sucrose salt, NMR tested Temp Grad	Causes serious eye irritation. No known significant effects or critical hazards. No known significant effects or critical hazards.
<b>Inhalation</b>	: 1H Lineshape  Sucrose salt, NMR tested Temp Grad	Can cause central nervous system (CNS) depression. May cause drowsiness and dizziness. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure. No known significant effects or critical hazards. No known significant effects or critical hazards.
<b>Skin contact</b>	: 1H Lineshape  Sucrose salt, NMR tested Temp Grad	Defatting to the skin. May cause skin dryness and irritation. No known significant effects or critical hazards. No known significant effects or critical hazards.
<b>Ingestion</b>	: 1H Lineshape  Sucrose salt, NMR tested Temp Grad	Can cause central nervous system (CNS) depression. Irritating to mouth, throat and stomach. No known significant effects or critical hazards. No known significant effects or critical hazards.

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

## Section 11. Toxicological information

<b>Eye contact</b>	: 1H Lineshape  Sucrose salt, NMR tested Temp Grad	Adverse symptoms may include the following: pain or irritation watering redness No specific data. No specific data.
<b>Inhalation</b>	: 1H Lineshape  Sucrose salt, NMR tested Temp Grad	Adverse symptoms may include the following: nausea or vomiting headache drowsiness/fatigue dizziness/vertigo unconsciousness No specific data. No specific data.
<b>Skin contact</b>	: 1H Lineshape  Sucrose salt, NMR tested Temp Grad	Adverse symptoms may include the following: irritation dryness cracking No specific data. No specific data.
<b>Ingestion</b>	: 1H Lineshape Sucrose salt, NMR tested Temp Grad	No specific data. No specific data. No specific data.

### Delayed and immediate effects and also chronic effects from short and long term exposure

#### Short term exposure

**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

#### Long term exposure

**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

#### Potential chronic health effects

Not available.

<b>General</b>	: 1H Lineshape  Sucrose salt, NMR tested Temp Grad	May cause damage to organs through prolonged or repeated exposure. Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis. No known significant effects or critical hazards. No known significant effects or critical hazards.
<b>Carcinogenicity</b>	: 1H Lineshape  Sucrose salt, NMR tested Temp Grad	Suspected of causing cancer. Risk of cancer depends on duration and level of exposure. No known significant effects or critical hazards. No known significant effects or critical hazards.
<b>Mutagenicity</b>	: 1H Lineshape Sucrose salt, NMR tested Temp Grad	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
<b>Teratogenicity</b>	: 1H Lineshape Sucrose salt, NMR tested Temp Grad	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
<b>Developmental effects</b>	: 1H Lineshape Sucrose salt, NMR tested Temp Grad	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.

## Section 11. Toxicological information

<b>Fertility effects</b>	: 1H Lineshape Sucrose salt, NMR tested Temp Grad	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
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### Numerical measures of toxicity

#### Acute toxicity estimates

Route	ATE value
1H Lineshape Oral	30000 mg/kg

<b>Other information</b>	: 1H Lineshape Sucrose salt, NMR tested Temp Grad	Not available. Not available. Not available.
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## Section 12. Ecological information

### Toxicity

Product/ingredient name	Result	Species	Exposure
1H Lineshape ( <sup>2</sup> H <sub>6</sub> )Acetone	Acute EC50 20.565 mg/l Marine water	Algae - Ulva pertusa	96 hours
	Acute LC50 6000000 µg/l Fresh water	Crustaceans - Gammarus pulex	48 hours
	Acute LC50 10000 µg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 100000 µg/l Fresh water	Fish - Pimephales promelas - Juvenile (Fledgling, Hatchling, Weanling)	96 hours
Trichloromethane	Chronic NOEC 4.95 mg/l Marine water	Algae - Ulva pertusa	96 hours
	Chronic NOEC 0.1 ml/L Fresh water	Daphnia - Daphnia magna - Neonate	21 days
	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 63800 µg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute LC50 13.3 ppm Fresh water	Fish - Lepomis macrochirus	96 hours
Chronic EC10 3.61 mg/l Fresh water	Algae - Chlamydomonas reinhardtii - Exponential growth phase	72 hours	
Chronic NOEC 6300 µg/l Fresh water	Daphnia - Daphnia magna	21 days	

### Persistence and degradability

Not available.

### Bioaccumulative potential

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
1H Lineshape ( <sup>2</sup> H <sub>6</sub> )Acetone	-0.23	-	low
Trichloromethane	1.97	690	high

### Mobility in soil

## Section 12. Ecological information

<b>Soil/water partition coefficient (K<sub>oc</sub>)</b>	: Not available.	
<b>Other adverse effects</b>	: 1H Lineshape Sucrose salt, NMR tested Temp Grad	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.

## Section 13. Disposal considerations

<b>Disposal methods</b>	: 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. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.
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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 Material 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.

### Regulatory information

**Additional information** : **Remarks**  
De minimis quantities

**DOT / IMDG / IATA /** : Not regulated.

## Section 15. Regulatory information

**U.S. Federal regulations** : **TSCA 8(a) PAIR**: Acetonitrile  
**United States inventory (TSCA 8b)**: All components are listed or exempted.  
**Clean Water Act (CWA) 307**: Trichloromethane; Acetonitrile  
**Clean Water Act (CWA) 311**: Trichloromethane

**Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs)** : Not listed

**Clean Air Act Section 602 Class I Substances** : Not listed



## Section 15. Regulatory information

**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)
<b>1H Lineshape</b> Trichloromethane	0.1 - 1	Yes.	-	-	-	-
<b>Sucrose salt, NMR tested</b> Sodium azide	< 0.1	Yes.	-	-	-	-

**SARA 304 RQ** : Not applicable.

### SARA 311/312

**Classification** : Immediate (acute) health hazard  
Delayed (chronic) health hazard

#### Composition/information on ingredients

Name	%	Fire hazard	Sudden release of pressure	Reactive	Immediate (acute) health hazard	Delayed (chronic) health hazard
<b>1H Lineshape</b> ( <sup>2</sup> H <sub>6</sub> )Acetone	60 - 100	Yes.	No.	No.	Yes.	No.
Trichloromethane	0.1 - 1	No.	No.	No.	Yes.	Yes.

### SARA 313

	Product name	CAS number	%
<b>Form R - Reporting requirements</b>	<b>1H Lineshape</b> Trichloromethane	67-66-3	0.1 - 1
<b>Supplier notification</b>	<b>1H Lineshape</b> Trichloromethane	67-66-3	0.1 - 1

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: ACETONE

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

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

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

### California Prop. 65

**WARNING:** This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm.

## Section 15. Regulatory information

Ingredient name	Cancer	Reproductive	No significant risk level	Maximum acceptable dosage level
<b>1H Lineshape</b> Trichloromethane	Yes.	Yes.	20 µg/day (ingestion) 40 µg/day (inhalation)	No.

**Canada inventory** : At least one component is not listed in DSL but all such components are listed in NDSL.

### International regulations

#### **International lists**

**Australia inventory (AICS)**: Not determined.  
**China inventory (IECSC)**: All components are listed or exempted.  
**Japan inventory**: Not determined.  
**Korea inventory**: Not determined.  
**Malaysia Inventory (EHS Register)**: Not determined.  
**New Zealand Inventory of Chemicals (NZIoC)**: Not determined.  
**Philippines inventory (PICCS)**: Not determined.  
**Taiwan inventory (CSNN)**: Not determined.

**Chemical Weapons Convention List Schedule I Chemicals** : Not listed

**Chemical Weapons Convention List Schedule II Chemicals** : Not listed

**Chemical Weapons Convention List Schedule III Chemicals** : Not listed

## Section 16. Other information

### History

**Date of issue** : 10/24/2013.  
**Date of previous issue** : No previous validation.  
**Version** : 2

☑ Indicates information that has changed from previously issued version.

### Notice to reader

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