

# SAFETY DATA SHEET



NMR Sample Kit - Console - 5mm, Part Number 94906570

## 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.

### 1.1 Product identifier

**Product name** : NMR Sample Kit - Console - 5mm, Part Number 94906570  
**Part No. (Chemical Kit)** : 94906570  
**Part No.** : 1H S/N 9100071170  
                   1H Lineshape 96812089  
                   ID 1 96812096  
                   App Test - Indanone 190185503, 190350603  
                   Autotest, no salt 190185506  
                   Hi Temp Cal 96812079  
                   Lo Temp Cal 96812080, 190350680  
                   13C S/N ASTM 9100071169

**Validation date** : 11/10/2014.

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

**Material uses** : Analytical chemistry.  
                   8x860µL  
                   1H S/N 860 µl  
                   1H Lineshape 860 µl  
                   ID 1 860 µl  
                   App Test - Indanone 860 µl  
                   Autotest, no salt 860 µl  
                   Hi Temp Cal 860 µl  
                   Lo Temp Cal 860 µl  
                   13C S/N ASTM 860 µl

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

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

## Section 2. Hazards identification

<b>OSHA/HCS status</b>	: 1H S/N	This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
	1H Lineshape	This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
	ID 1	This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
	App Test - Indanone	This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
	Autotest, no salt	This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
	Hi Temp Cal	This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
	Lo Temp Cal	This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
	13C S/N ASTM	This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

### Classification of the substance or mixture

#### 1H S/N

H302	ACUTE TOXICITY (oral) - Category 4
H315	SKIN CORROSION/IRRITATION - Category 2
H319	SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A
H351	CARCINOGENICITY - Category 2
H335 and H336	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation and Narcotic effects) - Category 3
H373	SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2

#### 1H Lineshape

H225	FLAMMABLE LIQUIDS - Category 2
H319	SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A
H351	CARCINOGENICITY - Category 2
H336	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3
H373	SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2

#### ID 1

H302	ACUTE TOXICITY (oral) - Category 4
H315	SKIN CORROSION/IRRITATION - Category 2
H319	SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A
H351	CARCINOGENICITY - Category 2
H335 and H336	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation and Narcotic effects) - Category 3
H373	SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2
H304	ASPIRATION HAZARD - Category 1

#### App Test - Indanone

H302	ACUTE TOXICITY (oral) - Category 4
H315	SKIN CORROSION/IRRITATION - Category 2
H319	SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A
H351	CARCINOGENICITY - Category 2
H335 and H336	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract

## Section 2. Hazards identification

H373	irritation and Narcotic effects) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2
<b>Autotest, no salt</b>	
H360	TOXIC TO REPRODUCTION (Fertility) - Category 1B
H360	TOXIC TO REPRODUCTION (Unborn child) - Category 1B
<b>Hi Temp Cal</b>	
H302	ACUTE TOXICITY (oral) - Category 4
H320	SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2B
H370	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) - Category 1
<b>Lo Temp Cal</b>	
H225	FLAMMABLE LIQUIDS - Category 2
H301	ACUTE TOXICITY (oral) - Category 3
H311	ACUTE TOXICITY (dermal) - Category 3
H331	ACUTE TOXICITY (inhalation) - Category 3
H315	SKIN CORROSION/IRRITATION - Category 2
H319	SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A
H360	TOXIC TO REPRODUCTION (Fertility) - Category 1B
H360	TOXIC TO REPRODUCTION (Unborn child) - Category 1B
H370	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (central nervous system (CNS)) - Category 1
H335	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
<b>13C S/N ASTM</b>	
H225	FLAMMABLE LIQUIDS - Category 2
H302	ACUTE TOXICITY (oral) - Category 4
H315	SKIN CORROSION/IRRITATION - Category 2
H319	SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A
H340	GERM CELL MUTAGENICITY - Category 1B
H350	CARCINOGENICITY - Category 1A
H335 and H336	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation and Narcotic effects) - Category 3
H372	SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 1
H304	ASPIRATION HAZARD - Category 1
<b>Ingredients of unknown toxicity</b>	: 1H S/N Not applicable. 1H Lineshape Not applicable. ID 1 Not applicable. App Test - Indanone Percentage of the mixture consisting of ingredient (s) of unknown toxicity: 2.1%  Autotest, no salt Not applicable. Hi Temp Cal Not applicable. Lo Temp Cal Not applicable. 13C S/N ASTM Not applicable.

### 2.2 GHS label elements

#### Hazard pictograms



## Section 2. Hazards identification

<b>Signal word</b>	: 1H S/N 1H Lineshape ID 1 App Test - Indanone Autotest, no salt Hi Temp Cal Lo Temp Cal 13C S/N ASTM	Warning Danger Danger Warning Danger Danger Danger Danger
<b>Hazard statements</b>	: 1H S/N  1H Lineshape  ID 1  App Test - Indanone  Autotest, no salt Hi Temp Cal  Lo Temp Cal  13C S/N ASTM	H302 - Harmful if swallowed. H319 - Causes serious eye irritation. H315 - Causes skin irritation. H351 - Suspected of causing cancer. H335 - May cause respiratory irritation. H336 - May cause drowsiness and dizziness. H373 - May cause damage to organs through prolonged or repeated exposure. H225 - Highly flammable liquid and vapor. H319 - Causes serious eye irritation. H351 - Suspected of causing cancer. H336 - May cause drowsiness and dizziness. H373 - May cause damage to organs through prolonged or repeated exposure. H302 - Harmful if swallowed. H319 - Causes serious eye irritation. H315 - Causes skin irritation. H351 - Suspected of causing cancer. H304 - May be fatal if swallowed and enters airways. H335 - May cause respiratory irritation. H336 - May cause drowsiness and dizziness. H373 - May cause damage to organs through prolonged or repeated exposure. H302 - Harmful if swallowed. H319 - Causes serious eye irritation. H315 - Causes skin irritation. H351 - Suspected of causing cancer. H335 - May cause respiratory irritation. H336 - May cause drowsiness and dizziness. H373 - May cause damage to organs through prolonged or repeated exposure. H360 - May damage fertility or the unborn child. H302 - Harmful if swallowed. H320 - Causes eye irritation. H370 - Causes damage to organs. H225 - Highly flammable liquid and vapor. H301 + H311 + H331 - Toxic if swallowed, in contact with skin or if inhaled. H319 - Causes serious eye irritation. H315 - Causes skin irritation. H360 - May damage fertility or the unborn child. H370 - Causes damage to organs. (central nervous system (CNS)) H335 - May cause respiratory irritation. H225 - Highly flammable liquid and vapor. H302 - Harmful if swallowed. H319 - Causes serious eye irritation. H315 - Causes skin irritation. H340 - May cause genetic defects. H350 - May cause cancer.

## Section 2. Hazards identification

H304 - May be fatal if swallowed and enters airways.

H335 - May cause respiratory irritation.

H336 - May cause drowsiness and dizziness.

H372 - Causes damage to organs through prolonged or repeated exposure.

### Precautionary statements

#### Prevention

: 1H S/N

1H Lineshape

ID 1

App Test - Indanone

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 protective gloves. Wear eye or face protection.

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.

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 protective gloves. Wear eye or face protection.

P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P241 - Use explosion-proof electrical, ventilating, lighting and all material-handling equipment.

P242 - Use only non-sparking tools.

P243 - Take precautionary measures against static discharge.

P233 - Keep container tightly closed.

P271 - Use only outdoors or in a well-ventilated area.

P260 - Do not breathe vapor.

P264 - Wash hands thoroughly after handling.

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 protective gloves. Wear eye or face protection.

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.

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 protective gloves. Wear eye or face

## Section 2. Hazards identification

Autotest, no salt	<p>protection.                  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.                  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.</p>
Hi Temp Cal	<p>P280 - Wear eye or face protection.                  P260 - Do not breathe vapor.                  P270 - Do not eat, drink or smoke when using this product.                  P264 - Wash hands thoroughly after handling.                  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.</p>
Lo Temp Cal	<p>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.                  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 protective gloves. Wear eye or face protection.                  P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.                  P241 - Use explosion-proof electrical, ventilating, lighting and all material-handling equipment.                  P242 - Use only non-sparking tools.                  P243 - Take precautionary measures against static discharge.                  P233 - Keep container tightly closed.                  P271 - Use only outdoors or in a well-ventilated area.                  P260 - Do not breathe vapor.                  P270 - Do not eat, drink or smoke when using</p>
13C S/N ASTM	<p>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.                  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 protective gloves. Wear eye or face protection.                  P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.                  P241 - Use explosion-proof electrical, ventilating, lighting and all material-handling equipment.                  P242 - Use only non-sparking tools.                  P243 - Take precautionary measures against static discharge.                  P233 - Keep container tightly closed.                  P271 - Use only outdoors or in a well-ventilated area.                  P260 - Do not breathe vapor.                  P270 - Do not eat, drink or smoke when using</p>

## Section 2. Hazards identification

### Response

: 1H S/N

1H Lineshape

ID 1

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 + 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.

P301 + P312 + P330 - IF SWALLOWED: Call a POISON CENTER or physician if you feel unwell.

Rinse mouth.

P302 + P352 + P362-2 + P363 - IF ON SKIN:

Wash with plenty of soap and water. Take off contaminated clothing. Wash contaminated clothing before reuse.

P332 + P313 - If skin irritation occurs: Get medical attention.

P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes.

Remove contact lenses, if present and easy to do. Continue rinsing.

P337 + P313 - If eye irritation persists: Get medical attention.

P314 - Get medical attention if you feel unwell.

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.

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.

P314 - Get medical attention if you feel unwell.

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.

P301 + P310 + P330 + P331 - IF SWALLOWED: Immediately call a POISON CENTER or physician. Rinse mouth. Do NOT induce vomiting.

P302 + P352 + P362-2 + P363 - IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing. Wash contaminated clothing 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.

## Section 2. Hazards identification

App Test - Indanone	<p>Continue rinsing.  P337 + P313 - If eye irritation persists: Get medical attention.  P314 - Get medical attention if you feel unwell.  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.  P301 + P312 + P330 - IF SWALLOWED: Call a POISON CENTER or physician if you feel unwell.  Rinse mouth.  P302 + P352 + P362-2 + P363 - IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing. Wash contaminated clothing 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.  P308 + P313 - IF exposed or concerned: Get medical attention.</p>
Autotest, no salt	<p>P307 + P311 - IF exposed: Call a POISON CENTER or physician.  P301 + P312 + P330 - IF SWALLOWED: Call a POISON CENTER or physician if you feel unwell.  Rinse mouth.  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.</p>
Hi Temp Cal	<p>P307 + P311 - IF exposed: Call a POISON CENTER or physician.  P304 + P340 + P311 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or physician.  P301 + P310 + P330 - IF SWALLOWED: Immediately call a POISON CENTER or physician. Rinse mouth.  P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.  P302 + P352 + P312 + P362-2 - IF ON SKIN: Wash with plenty of soap and water. Call a POISON CENTER or physician if you feel unwell. Take off contaminated clothing.  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.</p>
Lo Temp Cal	<p>P307 + P311 - IF exposed: Call a POISON CENTER or physician.  P304 + P340 + P311 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or physician.  P301 + P310 + P330 - IF SWALLOWED: Immediately call a POISON CENTER or physician. Rinse mouth.  P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.  P302 + P352 + P312 + P362-2 - IF ON SKIN: Wash with plenty of soap and water. Call a POISON CENTER or physician if you feel unwell. Take off contaminated clothing.  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.</p>

## Section 2. Hazards identification

		13C S/N ASTM	<p>Continue rinsing.  P337 + P313 - If eye irritation persists: Get medical attention.  P314 - Get medical attention if you feel unwell.  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.  P301 + P310 + P330 + P331 - IF SWALLOWED: Immediately call a POISON CENTER or physician. Rinse mouth. Do NOT induce vomiting.  P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.  P302 + P352 + P362-2 - IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing.  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.</p>
<b>Storage</b>	:	1H S/N 1H Lineshape  ID 1 App Test - Indanone Autotest, no salt Hi Temp Cal Lo Temp Cal  13C S/N ASTM	<p>P405 - Store locked up.  P405 - Store locked up.  P403 - Store in a well-ventilated place.  P235 - Keep cool.  P405 - Store locked up.  P403 - Store in a well-ventilated place.  P235 - Keep cool.  P405 - Store locked up.  P403 - Store in a well-ventilated place.  P235 - Keep cool.</p>
<b>Disposal</b>	:	1H S/N  1H Lineshape  ID 1  App Test - Indanone  Autotest, no salt  Hi Temp Cal	<p>P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.  P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.  P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.  P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.  P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.  P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.  P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.</p>

## Section 2. Hazards identification

Lo Temp Cal

P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.

13C S/N ASTM

P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.

### Supplemental label elements

: Avoid contact with skin and clothing. Wash thoroughly after handling.

### 2.3 Other hazards

#### Hazards not otherwise classified

: 1H S/N

None known.

1H Lineshape

Defatting to the skin. Prolonged or repeated contact may dry skin and cause irritation.

ID 1

None known.

App Test - Indanone

None known.

Autotest, no salt

None known.

Hi Temp Cal

None known.

Lo Temp Cal

Defatting to the skin. Prolonged or repeated contact may dry skin and cause irritation.

13C S/N ASTM

Defatting to the skin. 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)

1H Lineshape

Mixture (encapsulated in article)

ID 1

Mixture (encapsulated in article)

App Test - Indanone

Mixture (encapsulated in article)

Autotest, no salt

Mixture (encapsulated in article)

Hi Temp Cal

Substance (encapsulated in article)

Lo Temp Cal

Substance (encapsulated in article)

13C S/N ASTM

Mixture (encapsulated in article)

Ingredient name	%	CAS number
<b>1H S/N</b>		
( <sup>2</sup> H)Chloroform	60 - 100	865-49-6
Ethylbenzene	< 0.1	100-41-4
<b>1H Lineshape</b>		
( <sup>2</sup> H <sub>6</sub> )Acetone	60 - 100	666-52-4
Trichloromethane	0.1 - 1	67-66-3
<b>ID 1</b>		
( <sup>2</sup> H)Chloroform	60 - 100	865-49-6
Iodomethane ( <sup>13</sup> C)	0.1 - 1	4227-95-6
Trimethyl phosphite	0.1 - 1	121-45-9
<b>App Test - Indanone</b>		
( <sup>2</sup> H)Chloroform	60 - 100	865-49-6
<b>Autotest, no salt</b>		
Methanol ( <sup>13</sup> C)	< 0.1	14742-26-8
<b>Hi Temp Cal</b>		

## Section 3. Composition/information on ingredients

Ethenediol	60 - 100	107-21-1
<b>Lo Temp Cal</b> Methanol	60 - 100	67-56-1
<b>13C S/N ASTM</b> ( <sup>2</sup> H <sub>6</sub> )Benzene	30 - 60	1076-43-3
1,4-Dioxane	30 - 60	123-91-1

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

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

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

## Section 4. First aid measures

### 4.1 Description of necessary first aid measures

<b>Eye contact</b>	: 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.
	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.
	ID 1	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.
	App Test - Indanone	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.
	Autotest, no salt	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention if irritation occurs.
	Hi Temp Cal	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention. If necessary, call a poison center or physician.
	Lo Temp Cal	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention. If necessary, call a poison center or physician.
	13C S/N ASTM	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

## Section 4. First aid measures

### Inhalation

: 1H S/N

medical attention.

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.

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.

ID 1

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.

App Test - Indanone

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-

## Section 4. First aid measures

Autotest, no salt	<p>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. Remove victim to fresh air and keep at rest in a position comfortable for breathing. 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 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.</p>
Hi Temp Cal	<p>Remove victim to fresh air and keep at rest in a position comfortable for breathing. 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.</p>
Lo Temp Cal	<p>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.</p>
13C S/N ASTM	<p>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</p>

## Section 4. First aid measures

### Skin contact

: 1H S/N

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.

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.

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.

ID 1

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.

App Test - Indanone

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.

Autotest, no salt

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

Hi Temp Cal

Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention. If necessary, call a poison center or physician. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Lo Temp Cal

Wash skin thoroughly with soap and water or use recognized skin cleanser. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. If necessary, call a poison center or physician. Wash clothing before reuse. Clean shoes thoroughly before reuse.

13C S/N ASTM

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

## Section 4. First aid measures

### 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.

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.

ID 1

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

App Test - Indanone

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

## Section 4. First aid measures

Autotest, no salt	<p>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.</p> <p>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. 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.</p>
Hi Temp Cal	<p>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.</p>
Lo Temp Cal	<p>Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.</p>
13C S/N ASTM	<p>Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels</p>

## Section 4. First aid measures

sick as vomiting may be dangerous. Aspiration hazard if swallowed. Can enter lungs and cause damage. Do not induce vomiting. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

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

#### Potential acute health effects

<b>Eye contact</b>	: 1H S/N 1H Lineshape ID 1 App Test - Indanone Autotest, no salt Hi Temp Cal Lo Temp Cal 13C S/N ASTM	Causes serious eye irritation. Causes serious eye irritation. Causes serious eye irritation. Causes serious eye irritation. No known significant effects or critical hazards. Causes eye irritation. Causes serious eye irritation. Causes serious eye irritation.
<b>Inhalation</b>	: 1H S/N  1H Lineshape  ID 1  App Test - Indanone  Autotest, no salt Hi Temp Cal Lo Temp Cal 13C S/N ASTM	Can cause central nervous system (CNS) depression. May cause drowsiness and dizziness. May cause respiratory irritation. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure. 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. Can cause central nervous system (CNS) depression. May cause drowsiness and dizziness. May cause respiratory irritation. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure. Can cause central nervous system (CNS) depression. May cause drowsiness and dizziness. May cause respiratory irritation. 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. Toxic if inhaled. May cause respiratory irritation. Can cause central nervous system (CNS) depression. May cause drowsiness and dizziness. May cause respiratory irritation.
<b>Skin contact</b>	: 1H S/N 1H Lineshape  ID 1 App Test - Indanone Autotest, no salt Hi Temp Cal Lo Temp Cal  13C S/N ASTM	Causes skin irritation. Defatting to the skin. May cause skin dryness and irritation. Causes skin irritation. Causes skin irritation. No known significant effects or critical hazards. No known significant effects or critical hazards. Toxic in contact with skin. Causes skin irritation. Defatting to the skin. Causes skin irritation. Defatting to the skin.

## Section 4. First aid measures

<b>Ingestion</b>	: 1H S/N	Harmful if swallowed. Can cause central nervous system (CNS) depression. Irritating to mouth, throat and stomach.
	1H Lineshape	Can cause central nervous system (CNS) depression. Irritating to mouth, throat and stomach.
	ID 1	Harmful if swallowed. Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways. Irritating to mouth, throat and stomach.
	App Test - Indanone	Harmful if swallowed. Can cause central nervous system (CNS) depression. Irritating to mouth, throat and stomach.
	Autotest, no salt Hi Temp Cal	No known significant effects or critical hazards. Harmful if swallowed. May be irritating to mouth, throat and stomach.
	Lo Temp Cal	Toxic if swallowed. Irritating to mouth, throat and stomach.
	13C S/N ASTM	Harmful if swallowed. Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways. Irritating to mouth, throat and stomach.
 <b><u>Over-exposure signs/symptoms</u></b>		
<b>Eye contact</b>	: 1H S/N	Adverse symptoms may include the following: pain or irritation watering redness
	1H Lineshape	Adverse symptoms may include the following: pain or irritation watering redness
	ID 1	Adverse symptoms may include the following: pain or irritation watering redness
	App Test - Indanone	Adverse symptoms may include the following: pain or irritation watering redness
	Autotest, no salt Hi Temp Cal	No specific data. Adverse symptoms may include the following: irritation watering redness
	Lo Temp Cal	Adverse symptoms may include the following: pain or irritation watering redness
	13C S/N ASTM	Adverse symptoms may include the following: pain or irritation watering redness
<b>Inhalation</b>	: 1H S/N	Adverse symptoms may include the following: respiratory tract irritation coughing nausea or vomiting headache drowsiness/fatigue dizziness/vertigo

## Section 4. First aid measures

	1H Lineshape	unconsciousness Adverse symptoms may include the following: nausea or vomiting headache drowsiness/fatigue dizziness/vertigo unconsciousness
	ID 1	Adverse symptoms may include the following: respiratory tract irritation coughing nausea or vomiting headache drowsiness/fatigue dizziness/vertigo unconsciousness
	App Test - Indanone	Adverse symptoms may include the following: respiratory tract irritation coughing nausea or vomiting headache drowsiness/fatigue dizziness/vertigo unconsciousness
	Autotest, no salt	Adverse symptoms may include the following: reduced fetal weight increase in fetal deaths skeletal malformations
	Hi Temp Cal Lo Temp Cal	No specific data. Adverse symptoms may include the following: respiratory tract irritation coughing reduced fetal weight increase in fetal deaths skeletal malformations
	13C S/N ASTM	Adverse symptoms may include the following: respiratory tract irritation coughing nausea or vomiting headache drowsiness/fatigue dizziness/vertigo unconsciousness
<b>Skin contact</b>	: 1H S/N	Adverse symptoms may include the following: irritation redness
	1H Lineshape	Adverse symptoms may include the following: irritation dryness cracking
	ID 1	Adverse symptoms may include the following: irritation redness
	App Test - Indanone	Adverse symptoms may include the following: irritation redness
	Autotest, no salt	Adverse symptoms may include the following: reduced fetal weight increase in fetal deaths skeletal malformations

## Section 4. First aid measures

	Hi Temp Cal	No specific data.
	Lo Temp Cal	Adverse symptoms may include the following: irritation redness dryness cracking reduced fetal weight increase in fetal deaths skeletal malformations
	13C S/N ASTM	Adverse symptoms may include the following: irritation redness dryness cracking
<b>Ingestion</b>	: 1H S/N	No specific data.
	1H Lineshape	No specific data.
	ID 1	Adverse symptoms may include the following: nausea or vomiting
	App Test - Indanone	No specific data.
	Autotest, no salt	Adverse symptoms may include the following: reduced fetal weight increase in fetal deaths skeletal malformations
	Hi Temp Cal	No specific data.
	Lo Temp Cal	Adverse symptoms may include the following: reduced fetal weight increase in fetal deaths skeletal malformations
	13C S/N ASTM	Adverse symptoms may include the following: nausea or vomiting

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

<b>Notes to physician</b>	: 1H S/N	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.
	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.
	ID 1	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.
	App Test - Indanone	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.
	Autotest, no salt	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	Hi Temp Cal	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	Lo Temp Cal	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	13C S/N ASTM	Treat symptomatically. Contact poison treatment



## Section 4. First aid measures

providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

## Section 5. Fire-fighting measures

### 5.1 Extinguishing media

#### Suitable extinguishing media

: 1H S/N

1H Lineshape  
ID 1

App Test - Indanone

Autotest, no salt

Hi Temp Cal

Lo Temp Cal  
13C S/N ASTM

Use an extinguishing agent suitable for the surrounding fire.

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.

Use an extinguishing agent suitable for the surrounding fire.

Use an extinguishing agent suitable for the surrounding fire.

Use dry chemical, CO<sub>2</sub>, water spray (fog) or foam.

Use dry chemical, CO<sub>2</sub>, water spray (fog) or foam.

#### Unsuitable extinguishing media

: 1H S/N

1H Lineshape  
ID 1

App Test - Indanone

Autotest, no salt

Hi Temp Cal

Lo Temp Cal  
13C S/N ASTM

None known.

Do not use water jet.

None known.

None known.

None known.

None known.

Do not use water jet.

Do not use water jet.

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

#### Specific hazards arising from the chemical

: 1H S/N

1H Lineshape

ID 1

App Test - Indanone

Autotest, no salt

Hi Temp Cal

Lo Temp Cal

13C S/N ASTM

In a fire or if heated, a pressure increase will occur and the container may burst.

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.

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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. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. The vapor/gas is heavier than air and will spread along the ground. Vapors may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back. Runoff to sewer may create fire or explosion hazard.

Highly flammable liquid and vapor. In a fire or if

## Section 5. Fire-fighting measures

### Hazardous thermal decomposition products

: 1H S/N

heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. The vapor/gas is heavier than air and will spread along the ground. Vapors may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back. Runoff to sewer may create fire or explosion hazard.

Decomposition products may include the following materials:

carbon dioxide  
carbon monoxide  
halogenated compounds  
carbonyl halides

1H Lineshape

Decomposition products may include the following materials:

carbon dioxide  
carbon monoxide  
halogenated compounds  
carbonyl halides

ID 1

Decomposition products may include the following materials:

carbon dioxide  
carbon monoxide  
phosphorus oxides  
halogenated compounds  
carbonyl halides

App Test - Indanone

Decomposition products may include the following materials:

carbon dioxide  
carbon monoxide  
halogenated compounds  
carbonyl halides

Autotest, no salt  
Hi Temp Cal

No specific data.

Decomposition products may include the following materials:

carbon dioxide  
carbon monoxide

Lo Temp Cal

Decomposition products may include the following materials:

carbon dioxide  
carbon monoxide

13C S/N ASTM

Decomposition products may include the following materials:

carbon dioxide  
carbon monoxide

### 5.3 Advice for firefighters

#### Special protective actions for fire-fighters

: 1H S/N

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.

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. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

## Section 5. Fire-fighting measures

	ID 1	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.
	App Test - Indanone	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.
	Autotest, no salt	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.
	Hi Temp Cal	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.
	Lo Temp Cal	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.
	13C S/N ASTM	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.
<b>Special protective equipment for fire-fighters</b>	: 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.
	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.
	ID 1	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
	App Test - Indanone	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
	Autotest, no salt	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
	Hi Temp Cal	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
	Lo Temp Cal	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
	13C S/N ASTM	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive

## Section 5. Fire-fighting measures

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. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. 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.

ID 1

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.

App Test - Indanone

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.

Autotest, no salt

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.

Hi Temp Cal

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

## Section 6. Accidental release measures

Lo Temp Cal	personal protective equipment. No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
13C S/N ASTM	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.
<b>For emergency responders</b> : 1H S/N	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".
1H Lineshape	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".
ID 1	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".
App Test - Indanone	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".
Autotest, no salt	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".
Hi Temp Cal	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".
Lo Temp Cal	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".
13C S/N ASTM	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".

## Section 6. Accidental release measures

<b>6.2 Environmental precautions</b>	: 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).
	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).
	ID 1	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).
	App Test - Indanone	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).
	Autotest, no salt	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).
	Hi Temp Cal	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).
	Lo Temp Cal	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).
	13C S/N ASTM	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

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.
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.
ID 1	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.
App Test - Indanone	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.

## Section 6. Accidental release measures

Autotest, no salt	disposal container. Dispose of via a licensed waste disposal contractor. 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.
Hi Temp Cal	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.
Lo Temp Cal	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.
13C S/N ASTM	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** : 1H S/N

1H Lineshape

ID 1

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. 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.

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 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.

Put on appropriate personal protective equipment (see Section 8). Avoid exposure - obtain special

## Section 7. Handling and storage

App Test - Indanone

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 swallow. 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.

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. 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.

Autotest, no salt

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 ingest. Avoid breathing vapor or mist. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. 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.

Hi Temp Cal

Put on appropriate personal protective equipment (see Section 8). Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. 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.

Lo Temp Cal

Put on appropriate personal protective equipment (see Section 8). Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless

## Section 7. Handling and storage

13C S/N ASTM

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.

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

### Advice on general occupational hygiene

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

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

: 1H S/N

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.

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

## Section 7. Handling and storage

ID 1	<p>must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.</p> <p>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.</p>
App Test - Indanone	<p>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.</p>
Autotest, no salt	<p>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.</p>
Hi Temp Cal	<p>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.</p>
Lo Temp Cal	<p>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</p>

## Section 7. Handling and storage

13C S/N ASTM

containers. Use appropriate containment to avoid environmental contamination.

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.

### 7.3 Specific end use(s)

<b>Recommendations</b>	: 1H S/N 1H Lineshape ID 1 App Test - Indanone Autotest, no salt Hi Temp Cal Lo Temp Cal 13C S/N ASTM	Industrial applications, Professional applications. Industrial applications, Professional applications.
<b>Industrial sector specific solutions</b>	: 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
1H S/N ( <sup>2</sup> H)Chloroform	<p><b>ACGIH TLV (United States, 3/2012).</b> TWA: 10 ppm 8 hours. TWA: 49 mg/m<sup>3</sup> 8 hours.</p> <p><b>OSHA PEL 1989 (United States, 3/1989).</b> TWA: 2 ppm 8 hours. TWA: 9.78 mg/m<sup>3</sup> 8 hours.</p> <p><b>NIOSH REL (United States, 6/2009).</b> STEL: 2 ppm 60 minutes. STEL: 9.78 mg/m<sup>3</sup> 60 minutes.</p> <p><b>OSHA PEL (United States, 6/2010).</b> CEIL: 50 ppm CEIL: 240 mg/m<sup>3</sup></p>
Ethylbenzene	<p><b>ACGIH TLV (United States, 6/2013).</b> TWA: 20 ppm 8 hours.</p> <p><b>OSHA PEL 1989 (United States, 3/1989).</b> TWA: 100 ppm 8 hours. TWA: 435 mg/m<sup>3</sup> 8 hours. STEL: 125 ppm 15 minutes. STEL: 545 mg/m<sup>3</sup> 15 minutes.</p> <p><b>NIOSH REL (United States, 10/2013).</b> TWA: 100 ppm 10 hours.</p>

## Section 8. Exposure controls/personal protection

**1H Lineshape**  
(<sup>2</sup>H<sub>6</sub>)Acetone

Trichloromethane

**ID 1**  
(<sup>2</sup>H)Chloroform

Iodomethane (<sup>13</sup> C)

TWA: 435 mg/m<sup>3</sup> 10 hours.  
 STEL: 125 ppm 15 minutes.  
 STEL: 545 mg/m<sup>3</sup> 15 minutes.  
**OSHA PEL (United States, 2/2013).**  
 TWA: 100 ppm 8 hours.  
 TWA: 435 mg/m<sup>3</sup> 8 hours.

**ACGIH TLV (United States, 3/2012).**  
 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.  
**OSHA PEL 1989 (United States, 3/1989).**  
 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.  
**NIOSH REL (United States, 6/2009).**  
 TWA: 250 ppm 10 hours.  
 TWA: 590 mg/m<sup>3</sup> 10 hours.  
**OSHA PEL (United States, 6/2010).**  
 TWA: 1000 ppm 8 hours.  
 TWA: 2400 mg/m<sup>3</sup> 8 hours.  
**ACGIH TLV (United States, 6/2013).**  
 TWA: 10 ppm 8 hours.  
 TWA: 49 mg/m<sup>3</sup> 8 hours.  
**OSHA PEL 1989 (United States, 3/1989).**  
 TWA: 2 ppm 8 hours.  
 TWA: 9.78 mg/m<sup>3</sup> 8 hours.  
**NIOSH REL (United States, 10/2013).**  
 STEL: 2 ppm 60 minutes.  
 STEL: 9.78 mg/m<sup>3</sup> 60 minutes.  
**OSHA PEL (United States, 2/2013).**  
 CEIL: 50 ppm  
 CEIL: 240 mg/m<sup>3</sup>

**ACGIH TLV (United States, 3/2012).**  
 TWA: 10 ppm 8 hours.  
 TWA: 49 mg/m<sup>3</sup> 8 hours.  
**OSHA PEL 1989 (United States, 3/1989).**  
 TWA: 2 ppm 8 hours.  
 TWA: 9.78 mg/m<sup>3</sup> 8 hours.  
**NIOSH REL (United States, 6/2009).**  
 STEL: 2 ppm 60 minutes.  
 STEL: 9.78 mg/m<sup>3</sup> 60 minutes.  
**OSHA PEL (United States, 6/2010).**  
 CEIL: 50 ppm  
 CEIL: 240 mg/m<sup>3</sup>  
**ACGIH TLV (United States, 3/2012).**  
**Absorbed through skin.**  
 TWA: 2 ppm 8 hours.  
**OSHA PEL 1989 (United States, 3/1989).**  
**Absorbed through skin.**  
 TWA: 2 ppm 8 hours.  
 TWA: 10 mg/m<sup>3</sup> 8 hours.  
**NIOSH REL (United States, 6/2009).**  
**Absorbed through skin.**  
 TWA: 2 ppm 10 hours.  
 TWA: 10 mg/m<sup>3</sup> 10 hours.

## Section 8. Exposure controls/personal protection

Trimethyl phosphite

**App Test - Indanone**  
(<sup>2</sup>H)Chloroform

**Autotest, no salt**  
Methanol (<sup>13</sup>C)

**Hi Temp Cal**  
Ethanediol

**Lo Temp Cal**  
Methanol

**OSHA PEL (United States, 6/2010).**  
**Absorbed through skin.**

TWA: 5 ppm 8 hours.

TWA: 28 mg/m<sup>3</sup> 8 hours.

**ACGIH TLV (United States, 6/2013).**

TWA: 2 ppm 8 hours.

TWA: 10 mg/m<sup>3</sup> 8 hours.

**OSHA PEL 1989 (United States, 3/1989).**

TWA: 2 ppm 8 hours.

TWA: 10 mg/m<sup>3</sup> 8 hours.

**NIOSH REL (United States, 10/2013).**

TWA: 2 ppm 10 hours.

TWA: 10 mg/m<sup>3</sup> 10 hours.

**ACGIH TLV (United States, 3/2012).**

TWA: 10 ppm 8 hours.

TWA: 49 mg/m<sup>3</sup> 8 hours.

**OSHA PEL 1989 (United States, 3/1989).**

TWA: 2 ppm 8 hours.

TWA: 9.78 mg/m<sup>3</sup> 8 hours.

**NIOSH REL (United States, 6/2009).**

STEL: 2 ppm 60 minutes.

STEL: 9.78 mg/m<sup>3</sup> 60 minutes.

**OSHA PEL (United States, 6/2010).**

CEIL: 50 ppm

CEIL: 240 mg/m<sup>3</sup>

**ACGIH TLV (United States, 3/2012).**

**Absorbed through skin.**

TWA: 200 ppm 8 hours.

TWA: 262 mg/m<sup>3</sup> 8 hours.

STEL: 250 ppm 15 minutes.

STEL: 328 mg/m<sup>3</sup> 15 minutes.

**OSHA PEL 1989 (United States, 3/1989).**

**Absorbed through skin.**

TWA: 200 ppm 8 hours.

TWA: 260 mg/m<sup>3</sup> 8 hours.

STEL: 250 ppm 15 minutes.

STEL: 325 mg/m<sup>3</sup> 15 minutes.

**NIOSH REL (United States, 6/2009).**

**Absorbed through skin.**

TWA: 200 ppm 10 hours.

TWA: 260 mg/m<sup>3</sup> 10 hours.

STEL: 250 ppm 15 minutes.

STEL: 325 mg/m<sup>3</sup> 15 minutes.

**OSHA PEL (United States, 6/2010).**

TWA: 200 ppm 8 hours.

TWA: 260 mg/m<sup>3</sup> 8 hours.

**OSHA PEL 1989 (United States, 3/1989).**

CEIL: 50 ppm

CEIL: 125 mg/m<sup>3</sup>

**ACGIH TLV (United States, 6/2013).**

C: 100 mg/m<sup>3</sup> Form: Aerosol

**ACGIH TLV (United States, 6/2013).**

**Absorbed through skin.**

TWA: 200 ppm 8 hours.

## Section 8. Exposure controls/personal protection

**13C S/N ASTM**  
(<sup>2</sup>H<sub>6</sub>)Benzene

1,4-Dioxane

TWA: 262 mg/m<sup>3</sup> 8 hours.  
 STEL: 250 ppm 15 minutes.  
 STEL: 328 mg/m<sup>3</sup> 15 minutes.  
**OSHA PEL 1989 (United States, 3/1989).**  
**Absorbed through skin.**  
 TWA: 200 ppm 8 hours.  
 TWA: 260 mg/m<sup>3</sup> 8 hours.  
 STEL: 250 ppm 15 minutes.  
 STEL: 325 mg/m<sup>3</sup> 15 minutes.  
**NIOSH REL (United States, 10/2013).**  
**Absorbed through skin.**  
 TWA: 200 ppm 10 hours.  
 TWA: 260 mg/m<sup>3</sup> 10 hours.  
 STEL: 250 ppm 15 minutes.  
 STEL: 325 mg/m<sup>3</sup> 15 minutes.  
**OSHA PEL (United States, 2/2013).**  
 TWA: 200 ppm 8 hours.  
 TWA: 260 mg/m<sup>3</sup> 8 hours.  
  
**ACGIH TLV (United States, 6/2013).**  
**Absorbed through skin.**  
 TWA: 0.5 ppm 8 hours.  
 TWA: 1.6 mg/m<sup>3</sup> 8 hours.  
 STEL: 2.5 ppm 15 minutes.  
 STEL: 8 mg/m<sup>3</sup> 15 minutes.  
**OSHA PEL 1989 (United States, 3/1989).**  
 TWA: 1 ppm 8 hours.  
 STEL: 5 ppm 15 minutes.  
**OSHA PEL Z2 (United States, 2/2013).**  
 TWA: 10 ppm 8 hours.  
 CEIL: 25 ppm  
 AMP: 50 ppm 10 minutes.  
**NIOSH REL (United States, 10/2013).**  
 TWA: 0.1 ppm 10 hours.  
 STEL: 1 ppm 15 minutes.  
**OSHA PEL (United States, 2/2013).**  
 TWA: 1 ppm 8 hours.  
 STEL: 5 ppm 15 minutes.  
**OSHA PEL 1989 (United States, 3/1989).**  
**Absorbed through skin.**  
 TWA: 25 ppm 8 hours.  
 TWA: 90 mg/m<sup>3</sup> 8 hours.  
**NIOSH REL (United States, 10/2013).**  
 CEIL: 1 ppm 30 minutes.  
 CEIL: 3.6 mg/m<sup>3</sup> 30 minutes.  
**ACGIH TLV (United States, 6/2013).**  
**Absorbed through skin.**  
 TWA: 20 ppm 8 hours.  
**OSHA PEL (United States, 2/2013).**  
**Absorbed through skin.**  
 TWA: 100 ppm 8 hours.  
 TWA: 360 mg/m<sup>3</sup> 8 hours.

### [8.2 Exposure controls](#)

## Section 8. Exposure controls/personal protection

- Appropriate engineering controls** : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.
- Individual protection measures**
- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
- Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.
- Skin protection**
- 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** : 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

### 9.1 Information on basic physical and chemical properties

#### Appearance

<b>Physical state</b>	: 1H S/N	Liquid.
	1H Lineshape	Solid.(containing flammable liquid)
	ID 1	Liquid.
	App Test - Indanone	Liquid.
	Autotest, no salt	Liquid.
	Hi Temp Cal	Liquid. [Viscous liquid.]
	Lo Temp Cal	Liquid. [Clear.]
	13C S/N ASTM	Liquid.

## Section 9. Physical and chemical properties

<b>Color</b>	:	1H S/N	Not available.
		1H Lineshape	Not available.
		ID 1	Not available.
		App Test - Indanone	Colorless.
		Autotest, no salt	Not available.
		Hi Temp Cal	Colorless.
		Lo Temp Cal	Colorless. Clear.
		13C S/N ASTM	Colorless.
<b>Odor</b>	:	1H S/N	Not available.
		1H Lineshape	Not available.
		ID 1	Not available.
		App Test - Indanone	Pleasant.-Sweet.
		Autotest, no salt	Not available.
		Hi Temp Cal	Slight
		Lo Temp Cal	Characteristic.
		13C S/N ASTM	Not available.
<b>Odor threshold</b>	:	1H S/N	Not available.
		1H Lineshape	Not available.
		ID 1	Not available.
		App Test - Indanone	Not available.
		Autotest, no salt	Not available.
		Hi Temp Cal	Not available.
		Lo Temp Cal	Not available.
		13C S/N ASTM	Not available.
<b>pH</b>	:	1H S/N	Not available.
		1H Lineshape	Not available.
		ID 1	Not available.
		App Test - Indanone	Not available.
		Autotest, no salt	Not available.
		Hi Temp Cal	Not available.
		Lo Temp Cal	Not available.
		13C S/N ASTM	Not available.
<b>Melting point</b>	:	1H S/N	-64°C (-83.2°F)
		1H Lineshape	-95°C (-139°F)
		ID 1	-64°C (-83.2°F)
		App Test - Indanone	-63°C (-81.4°F)
		Autotest, no salt	3.81°C (38.9°F)
		Hi Temp Cal	-13°C (8.6°F)
		Lo Temp Cal	-97.8°C (-144°F)
		13C S/N ASTM	6.8°C (44.2°F)
<b>Boiling point</b>	:	1H S/N	60.9°C (141.6°F)
		1H Lineshape	55.5°C (131.9°F)
		ID 1	60.9°C (141.6°F)
		App Test - Indanone	60.5 to 61.5°C (140.9 to 142.7°F)
		Autotest, no salt	101.1°C (214°F)
		Hi Temp Cal	198°C (388.4°F)
		Lo Temp Cal	60.9°C (141.6°F)
		13C S/N ASTM	79.1°C (174.4°F)
<b>Flash point</b>	:	1H S/N	Not available.
		1H Lineshape	Closed cup: -17°C (1.4°F)
		ID 1	Not available.
		App Test - Indanone	Not available.
		Autotest, no salt	Not available.
		Hi Temp Cal	Closed cup: 111°C (231.8°F)
		Lo Temp Cal	Open cup: 115°C (239°F)
		13C S/N ASTM	Closed cup: 15°C (59°F) [Setaflash.] Closed cup: -18 to 23°C (-0.4 to 73.4°F)

## Section 9. Physical and chemical properties

<b>Evaporation rate</b>	: 1H S/N	Not available.
	1H Lineshape	Not available.
	ID 1	Not available.
	App Test - Indanone	Not available.
	Autotest, no salt	Not available.
	Hi Temp Cal	0.01 (butyl acetate = 1)
	Lo Temp Cal	2.1 (butyl acetate = 1)
<b>Flammability (solid, gas)</b>	: 1H S/N	Not applicable.
	1H Lineshape	Not applicable.
	ID 1	Not applicable.
	App Test - Indanone	Not applicable.
	Autotest, no salt	Not applicable.
	Hi Temp Cal	Not applicable.
	Lo Temp Cal	Not applicable.
<b>Lower and upper explosive (flammable) limits</b>	: 1H S/N	Not available.
	1H Lineshape	Not available.
	ID 1	Not available.
	App Test - Indanone	Not available.
	Autotest, no salt	Not available.
	Hi Temp Cal	Lower: 3.2%
	Lo Temp Cal	Upper: 15.3%
<b>Vapor pressure</b>	: 1H S/N	Not available.
	1H Lineshape	Not available.
	ID 1	Not available.
	App Test - Indanone	21.3 kPa (160 mm Hg) [room temperature]
	Autotest, no salt	Not available.
	Hi Temp Cal	0.007 kPa (0.0525 mm Hg) [room temperature]
	Lo Temp Cal	16.9 kPa (126.96 mm Hg) [room temperature]
<b>Vapor density</b>	: 1H S/N	Not available.
	1H Lineshape	Not available.
	ID 1	Not available.
	App Test - Indanone	4.1 [Air = 1]
	Autotest, no salt	Not available.
	Hi Temp Cal	2.1 [Air = 1]
	Lo Temp Cal	1.1 [Air = 1]
<b>Relative density</b>	: 1H S/N	1.5
	1H Lineshape	0.872
	ID 1	1500
	App Test - Indanone	1.492
	Autotest, no salt	1.1 [(D2O)]
	Hi Temp Cal	1.1
	Lo Temp Cal	0.79
13C S/N ASTM	0.95	

## Section 9. Physical and chemical properties

<b>Solubility</b>	: 1H S/N	Very slightly soluble in the following materials: cold water and hot water.
	1H Lineshape	Easily soluble in the following materials: cold water, hot water and acetone.
	ID 1	Very slightly soluble in the following materials: cold water and hot water.
	App Test - Indanone	Very slightly soluble in the following materials: cold water and hot water.
	Autotest, no salt	Easily soluble in the following materials: cold water and hot water.
	Hi Temp Cal	Easily soluble in the following materials: cold water, hot water, methanol and acetone.
	Lo Temp Cal	Easily soluble in the following materials: cold water, hot water, methanol, n-octanol and acetone.
	13C S/N ASTM	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 S/N	Not available.
	1H Lineshape	Not available.
	ID 1	Not available.
	App Test - Indanone	Not available.
	Autotest, no salt	Not available.
	Hi Temp Cal	-1.93
	Lo Temp Cal	-0.77
	13C S/N ASTM	Not available.
<b>Auto-ignition temperature</b>	: 1H S/N	Not available.
	1H Lineshape	Not available.
	ID 1	Not available.
	App Test - Indanone	Not available.
	Autotest, no salt	Not available.
	Hi Temp Cal	398°C (748.4°F)
	Lo Temp Cal	455°C (851°F)
	13C S/N ASTM	Not available.
<b>Decomposition temperature</b>	: 1H S/N	Not available.
	1H Lineshape	Not available.
	ID 1	Not available.
	App Test - Indanone	Not available.
	Autotest, no salt	Not available.
	Hi Temp Cal	500 to 600°C (932 to 1112°F)
	Lo Temp Cal	Not available.
	13C S/N ASTM	Not available.
<b>Viscosity</b>	: 1H S/N	Not available.
	1H Lineshape	Not available.
	ID 1	Not available.
	App Test - Indanone	Not available.
	Autotest, no salt	Not available.
	Hi Temp Cal	Dynamic (room temperature): 16.1 mPa·s (16.1 cP)
	Lo Temp Cal	Dynamic (room temperature): 0.54 to 0.59 mPa·s (0.54 to 0.59 cP)
	13C S/N ASTM	Not available.

## Section 10. Stability and reactivity

<b>10.1 Reactivity</b>	: 1H S/N 1H Lineshape ID 1 App Test - Indanone Autotest, no salt Hi Temp Cal Lo Temp Cal 13C S/N ASTM	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. 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. No specific test data related to reactivity available for this product or its ingredients. No specific test data related to reactivity available for this product or its ingredients.
<b>10.2 Chemical stability</b>	: 1H S/N 1H Lineshape ID 1 App Test - Indanone Autotest, no salt Hi Temp Cal Lo Temp Cal 13C S/N ASTM	The product is stable. The product is stable.
<b>10.3 Possibility of hazardous reactions</b>	: 1H S/N 1H Lineshape ID 1 App Test - Indanone Autotest, no salt Hi Temp Cal Lo Temp Cal 13C S/N ASTM	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. 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. Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous reactions will not occur.
<b>10.4 Conditions to avoid</b>	: 1H S/N 1H Lineshape  ID 1 App Test - Indanone Autotest, no salt Hi Temp Cal Lo Temp Cal	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. No specific data. No specific data. 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. Do not allow vapor to accumulate in low or confined areas.

## Section 10. Stability and reactivity

	13C S/N ASTM	Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Do not allow vapor to accumulate in low or confined areas.
<b>10.5 Incompatible materials</b>	: 1H S/N 1H Lineshape	No specific data. Reactive or incompatible with the following materials: oxidizing materials
	ID 1 App Test - Indanone Autotest, no salt Hi Temp Cal Lo Temp Cal	No specific data. No specific data. No specific data. No specific data. Reactive or incompatible with the following materials: oxidizing materials
	13C S/N ASTM	Reactive or incompatible with the following materials: oxidizing materials
<b>10.6 Hazardous decomposition products</b>	: 1H S/N	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	1H Lineshape	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	ID 1	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	App Test - Indanone	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	Autotest, no salt	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	Hi Temp Cal	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	Lo Temp Cal	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	13C S/N ASTM	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](#)

## Section 11. Toxicological information

Product/ingredient name	Result	Species	Dose	Exposure
<b>1H S/N</b> ( <sup>2</sup> H)Chloroform	LC50 Inhalation Vapor	Rat	47702 mg/m <sup>3</sup>	4 hours
	LD50 Dermal	Rabbit	>20 g/kg	-
	LD50 Oral	Rat	300 mg/kg	-
Ethylbenzene	LC50 Inhalation Gas.	Rat	4000 ppm	4 hours
	LD50 Dermal	Rabbit	>5000 mg/kg	-
	LD50 Oral	Rat	3500 mg/kg	-
<b>1H Lineshape</b> ( <sup>2</sup> H <sub>6</sub> )Acetone	LD50 Oral	Rat	5800 mg/kg	-
Trichloromethane	LC50 Inhalation Dusts and mists	Rat	47702 mg/m <sup>3</sup>	4 hours
	LD50 Dermal	Rabbit	>20 g/kg	-
	LD50 Oral	Rat	300 mg/kg	-
<b>ID 1</b> ( <sup>2</sup> H)Chloroform	LC50 Inhalation Vapor	Rat	47702 mg/m <sup>3</sup>	4 hours
	LD50 Dermal	Rabbit	>20 g/kg	-
	LD50 Oral	Rat	300 mg/kg	-
Iodomethane ( <sup>13</sup> C)	LC50 Inhalation Vapor	Rat	1300 mg/m <sup>3</sup>	4 hours
	LD50 Oral	Rat	76 mg/kg	-
Trimethyl phosphite	LC50 Inhalation Vapor	Rat	182000 mg/m <sup>3</sup>	1 hours
	LD50 Dermal	Rabbit	933.8 mg/kg	-
	LD50 Oral	Rat	1350 mg/kg	-
<b>App Test - Indanone</b> ( <sup>2</sup> H)Chloroform	LC50 Inhalation Vapor	Rat	47702 mg/m <sup>3</sup>	4 hours
	LD50 Dermal	Rabbit	>20 g/kg	-
	LD50 Oral	Rat	300 mg/kg	-
<b>Autotest, no salt</b> Methanol ( <sup>13</sup> C)	LC50 Inhalation Gas.	Rat	145000 ppm	1 hours
	LC50 Inhalation Gas.	Rat	64000 ppm	4 hours
	LD50 Dermal	Rabbit	15800 mg/kg	-
	LD50 Oral	Rat	5600 mg/kg	-
<b>Hi Temp Cal</b> Ethanediol	LD50 Oral	Rat	4700 mg/kg	-
<b>Lo Temp Cal</b> Methanol	LC50 Inhalation Vapor	Rat	145000 ppm	1 hours
	LC50 Inhalation Vapor	Rat	64000 ppm	4 hours
	LD50 Dermal	Rabbit	15800 mg/kg	-
	LD50 Oral	Rat	5600 mg/kg	-
<b>13C S/N ASTM</b> ( <sup>2</sup> H <sub>6</sub> )Benzene	LD50 Oral	Rat	930 mg/kg	-
1,4-Dioxane	LD50 Oral	Rat	4200 mg/kg	-

### Irritation/Corrosion

## Section 11. Toxicological information

Product/ingredient name	Result	Species	Score	Exposure	Observation
<b>1H S/N</b> ( <sup>2</sup> H)Chloroform	Eyes - Moderate irritant	Rabbit	-	24 hours 20 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
Ethylbenzene	Skin - Mild irritant	Rabbit	-	24 hours 15 milligrams	-
<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	-
Trichloromethane	Skin - Mild irritant	Rabbit	-	395 milligrams	-
	Eyes - Moderate irritant	Rabbit	-	24 hours 20 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
<b>ID 1</b> ( <sup>2</sup> H)Chloroform	Eyes - Moderate irritant	Rabbit	-	24 hours 20 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
Iodomethane ( <sup>13</sup> C)	Eyes - Severe irritant	Rabbit	-	100 milligrams	-
	Skin - Mild irritant	Rat	-	30 minutes 1 Grams	-
	Skin - Severe irritant	Rabbit	-	500 milligrams	-
	Skin - Mild irritant	Human	-	10 minutes 1 Grams	-
Trimethyl phosphite	Eyes - Mild irritant	Rabbit	-	0.1 Milliliters	-
	Skin - Severe irritant	Rabbit	-	500 milligrams	-
<b>App Test - Indanone</b> ( <sup>2</sup> H)Chloroform	Eyes - Moderate irritant	Rabbit	-	24 hours 20 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
<b>Autotest, no salt</b> Methanol ( <sup>13</sup> C)	Eyes - Moderate irritant	Rabbit	-	24 hours 100 milligrams	-
	Eyes - Moderate irritant	Rabbit	-	40 milligrams	-
	Skin - Moderate irritant	Rabbit	-	24 hours 20 milligrams	-
<b>Hi Temp Cal</b> Ethanediol	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-

## Section 11. Toxicological information

<b>Lo Temp Cal</b> Methanol	Eyes - Mild irritant	Rabbit	-	1 hours 100 milligrams	-
	Eyes - Moderate irritant	Rabbit	-	6 hours 1440 milligrams	-
	Skin - Mild irritant	Rabbit	-	555 milligrams	-
	Eyes - Moderate irritant	Rabbit	-	24 hours 100 milligrams	-
	Eyes - Moderate irritant Skin - Moderate irritant	Rabbit Rabbit	- -	40 milligrams 24 hours 20 milligrams	- -
<b>13C S/N ASTM</b> ( <sup>2</sup> H <sub>6</sub> )Benzene	Eyes - Moderate irritant	Rabbit	-	88 milligrams	-
	Eyes - Severe irritant	Rabbit	-	24 hours 2 milligrams	-
	Skin - Mild irritant	Rat	-	8 hours 60 microliters	-
	Skin - Mild irritant	Rabbit	-	24 hours 15 milligrams	-
	Skin - Moderate irritant	Rabbit	-	24 hours 20 milligrams	-
1,4-Dioxane	Eyes - Moderate irritant	Rabbit	-	24 hours 100 milligrams	-
	Skin - Mild irritant	Rabbit	-	515 milligrams	-

### Sensitization

Not available.

### Mutagenicity

Not available.

### Carcinogenicity

Not available.

### Classification

Product/ingredient name	OSHA	IARC	NTP
<b>1H S/N</b> ( <sup>2</sup> H)Chloroform	-	2B	Reasonably anticipated to be a human carcinogen.
Ethylbenzene	-	2B	-
<b>1H Lineshape</b> Trichloromethane	-	2B	Reasonably anticipated to be a human carcinogen.
<b>ID 1</b> ( <sup>2</sup> H)Chloroform	-	2B	Reasonably anticipated to be a human carcinogen.
Iodomethane ( <sup>13</sup> C)	-	3	-
<b>App Test - Indanone</b> ( <sup>2</sup> H)Chloroform	-	2B	Reasonably anticipated to be a human carcinogen.
<b>13C S/N ASTM</b> ( <sup>2</sup> H <sub>6</sub> )Benzene	+	1	Known to be a human carcinogen.
1,4-Dioxane	-	2B	Reasonably anticipated to be a human carcinogen.

### Reproductive toxicity

## Section 11. Toxicological information

Not available.

### Teratogenicity

Not available.

### Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
<b>1H S/N</b> ( <sup>2</sup> H)Chloroform	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Ethylbenzene	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
<b>1H Lineshape</b> ( <sup>2</sup> H <sub>6</sub> )Acetone	Category 3	Not applicable.	Narcotic effects
Trichloromethane	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
<b>ID 1</b> ( <sup>2</sup> H)Chloroform	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Iodomethane ( <sup>13</sup> C)	Category 3	Not applicable.	Respiratory tract irritation
Trimethyl phosphite	Category 3	Not applicable.	Respiratory tract irritation
<b>App Test - Indanone</b> ( <sup>2</sup> H)Chloroform	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
<b>Autotest, no salt</b> Methanol ( <sup>13</sup> C)	Category 1	Not determined	central nervous system (CNS)
	Category 3	Not applicable.	Respiratory tract irritation
<b>Hi Temp Cal</b> Ethanediol	Category 1	Not determined	kidneys
<b>Lo Temp Cal</b> Methanol	Category 1	Not determined	central nervous system (CNS)
	Category 3	Not applicable.	Respiratory tract irritation
<b>13C S/N ASTM</b> ( <sup>2</sup> H <sub>6</sub> )Benzene	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
1,4-Dioxane	Category 3	Not applicable.	Respiratory tract irritation

### Specific target organ toxicity (repeated exposure)

## Section 11. Toxicological information

Name	Category	Route of exposure	Target organs
<b>1H S/N</b> ( <sup>2</sup> H)Chloroform	Category 2	Not determined	kidneys and liver
<b>1H Lineshape</b> Trichloromethane	Category 2	Not determined	heart, kidneys and liver
<b>ID 1</b> ( <sup>2</sup> H)Chloroform	Category 2	Not determined	kidneys and liver
<b>App Test - Indanone</b> ( <sup>2</sup> H)Chloroform	Category 2	Not determined	kidneys and liver
<b>13C S/N ASTM</b> ( <sup>2</sup> H <sub>6</sub> )Benzene	Category 1	Oral Inhalation	blood system blood system
1,4-Dioxane	Category 1	Oral	kidneys and liver

### Aspiration hazard

Name	Result
<b>1H S/N</b> ( <sup>2</sup> H)Chloroform Ethylbenzene	ASPIRATION HAZARD - Category 1 ASPIRATION HAZARD - Category 1
<b>ID 1</b> ( <sup>2</sup> H)Chloroform	ASPIRATION HAZARD - Category 1
<b>App Test - Indanone</b> ( <sup>2</sup> H)Chloroform	ASPIRATION HAZARD - Category 1
<b>13C S/N ASTM</b> ( <sup>2</sup> H <sub>6</sub> )Benzene	ASPIRATION HAZARD - Category 1

<b>Information on the likely routes of exposure</b>	: 1H S/N 1H Lineshape ID 1 App Test - Indanone Autotest, no salt  Hi Temp Cal Lo Temp Cal  13C S/N ASTM	Not available. Not available. Not available. Not available. Routes of entry anticipated: Oral, Dermal, Inhalation. Not available. Routes of entry anticipated: Oral, Dermal, Inhalation. Not available.
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### Potential acute health effects

<b>Eye contact</b>	: 1H S/N 1H Lineshape ID 1 App Test - Indanone Autotest, no salt Hi Temp Cal Lo Temp Cal 13C S/N ASTM	Causes serious eye irritation. Causes serious eye irritation. Causes serious eye irritation. Causes serious eye irritation. No known significant effects or critical hazards. Causes eye irritation. Causes serious eye irritation. Causes serious eye irritation.
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## Section 11. Toxicological information

<b>Inhalation</b>	: 1H S/N	Can cause central nervous system (CNS) depression. May cause drowsiness and dizziness. May cause respiratory irritation. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
	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.
	ID 1	Can cause central nervous system (CNS) depression. May cause drowsiness and dizziness. May cause respiratory irritation. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
	App Test - Indanone	Can cause central nervous system (CNS) depression. May cause drowsiness and dizziness. May cause respiratory irritation. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
	Autotest, no salt Hi Temp Cal Lo Temp Cal 13C S/N ASTM	No known significant effects or critical hazards. No known significant effects or critical hazards. Toxic if inhaled. May cause respiratory irritation. Can cause central nervous system (CNS) depression. May cause drowsiness and dizziness. May cause respiratory irritation.
<b>Skin contact</b>	: 1H S/N	Causes skin irritation.
	1H Lineshape	Defatting to the skin. May cause skin dryness and irritation.
	ID 1	Causes skin irritation.
	App Test - Indanone	Causes skin irritation.
	Autotest, no salt Hi Temp Cal Lo Temp Cal	No known significant effects or critical hazards. No known significant effects or critical hazards. Toxic in contact with skin. Causes skin irritation.
	13C S/N ASTM	Defatting to the skin.
<b>Ingestion</b>	: 1H S/N	Causes skin irritation. Defatting to the skin.
	1H Lineshape	Harmful if swallowed. Can cause central nervous system (CNS) depression. Irritating to mouth, throat and stomach.
	ID 1	Can cause central nervous system (CNS) depression. Irritating to mouth, throat and stomach.
	App Test - Indanone	Harmful if swallowed. Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways. Irritating to mouth, throat and stomach.
	Autotest, no salt Hi Temp Cal	Harmful if swallowed. Can cause central nervous system (CNS) depression. Irritating to mouth, throat and stomach.
	Lo Temp Cal	No known significant effects or critical hazards.
	13C S/N ASTM	Harmful if swallowed. May be irritating to mouth, throat and stomach. Toxic if swallowed. Irritating to mouth, throat and stomach.
	13C S/N ASTM	Harmful if swallowed. Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways. Irritating to mouth, throat and stomach.

## Section 11. Toxicological information

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

<b>Eye contact</b>	: 1H S/N	Adverse symptoms may include the following: pain or irritation watering redness
	1H Lineshape	Adverse symptoms may include the following: pain or irritation watering redness
	ID 1	Adverse symptoms may include the following: pain or irritation watering redness
	App Test - Indanone	Adverse symptoms may include the following: pain or irritation watering redness
	Autotest, no salt Hi Temp Cal	No specific data. Adverse symptoms may include the following: irritation watering redness
	Lo Temp Cal	Adverse symptoms may include the following: pain or irritation watering redness
	13C S/N ASTM	Adverse symptoms may include the following: pain or irritation watering redness
<b>Inhalation</b>	: 1H S/N	Adverse symptoms may include the following: respiratory tract irritation coughing nausea or vomiting headache drowsiness/fatigue dizziness/vertigo unconsciousness
	1H Lineshape	Adverse symptoms may include the following: nausea or vomiting headache drowsiness/fatigue dizziness/vertigo unconsciousness
	ID 1	Adverse symptoms may include the following: respiratory tract irritation coughing nausea or vomiting headache drowsiness/fatigue dizziness/vertigo unconsciousness
	App Test - Indanone	Adverse symptoms may include the following: respiratory tract irritation coughing nausea or vomiting headache drowsiness/fatigue dizziness/vertigo

## Section 11. Toxicological information

	Autotest, no salt	unconsciousness Adverse symptoms may include the following: reduced fetal weight increase in fetal deaths skeletal malformations
	Hi Temp Cal Lo Temp Cal	No specific data. Adverse symptoms may include the following: respiratory tract irritation coughing reduced fetal weight increase in fetal deaths skeletal malformations
	13C S/N ASTM	Adverse symptoms may include the following: respiratory tract irritation coughing nausea or vomiting headache drowsiness/fatigue dizziness/vertigo unconsciousness
<b>Skin contact</b>	: 1H S/N	Adverse symptoms may include the following: irritation redness
	1H Lineshape	Adverse symptoms may include the following: irritation dryness cracking
	ID 1	Adverse symptoms may include the following: irritation redness
	App Test - Indanone	Adverse symptoms may include the following: irritation redness
	Autotest, no salt	Adverse symptoms may include the following: reduced fetal weight increase in fetal deaths skeletal malformations
	Hi Temp Cal Lo Temp Cal	No specific data. Adverse symptoms may include the following: irritation redness dryness cracking reduced fetal weight increase in fetal deaths skeletal malformations
	13C S/N ASTM	Adverse symptoms may include the following: irritation redness dryness cracking
<b>Ingestion</b>	: 1H S/N	No specific data.
	1H Lineshape	No specific data.
	ID 1	Adverse symptoms may include the following: nausea or vomiting
	App Test - Indanone	No specific data.
	Autotest, no salt	Adverse symptoms may include the following: reduced fetal weight increase in fetal deaths

## Section 11. Toxicological information

Hi Temp Cal Lo Temp Cal	skeletal malformations No specific data. Adverse symptoms may include the following: reduced fetal weight increase in fetal deaths skeletal malformations
13C S/N ASTM	Adverse symptoms may include the following: nausea or vomiting

### 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

<b>General</b>	: 1H S/N  1H Lineshape  ID 1  App Test - Indanone  Autotest, no salt Hi Temp Cal Lo Temp Cal  13C S/N ASTM	May cause damage to organs through prolonged or repeated exposure. 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. May cause damage to organs through prolonged or repeated exposure. May cause damage to organs through prolonged or repeated exposure. No known significant effects or critical hazards. No known significant effects or critical hazards. Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis. 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.
<b>Carcinogenicity</b>	: 1H S/N  1H Lineshape  ID 1  App Test - Indanone  Autotest, no salt Hi Temp Cal Lo Temp Cal 13C S/N ASTM	Suspected of causing cancer. Risk of cancer depends on duration and level of exposure. Suspected of causing cancer. Risk of cancer depends on duration and level of exposure. Suspected of causing cancer. Risk of cancer depends on duration and level of exposure. 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. No known significant effects or critical hazards. May cause cancer. Risk of cancer depends on duration and level of exposure.

## Section 11. Toxicological information

<b>Mutagenicity</b>	: 1H S/N 1H Lineshape ID 1 App Test - Indanone Autotest, no salt Hi Temp Cal Lo Temp Cal 13C S/N ASTM	No known significant effects or critical hazards. No known significant effects or critical hazards. May cause genetic defects.
<b>Teratogenicity</b>	: 1H S/N 1H Lineshape ID 1 App Test - Indanone Autotest, no salt Hi Temp Cal Lo Temp Cal 13C S/N ASTM	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. May damage the unborn child. No known significant effects or critical hazards. May damage the unborn child. No known significant effects or critical hazards.
<b>Developmental effects</b>	: 1H S/N 1H Lineshape ID 1 App Test - Indanone Autotest, no salt Hi Temp Cal Lo Temp Cal 13C S/N ASTM	No known significant effects or critical hazards. No known significant effects or critical hazards.
<b>Fertility effects</b>	: 1H S/N 1H Lineshape ID 1 App Test - Indanone Autotest, no salt Hi Temp Cal Lo Temp Cal 13C S/N ASTM	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. May damage fertility. No known significant effects or critical hazards. May damage fertility. No known significant effects or critical hazards.

### Numerical measures of toxicity

#### Acute toxicity estimates

Route	ATE value
<b>1H S/N</b> Oral	500.6 mg/kg
<b>1H Lineshape</b> Oral	30000 mg/kg
<b>ID 1</b> Oral	477.3 mg/kg
Dermal	50505.5 mg/kg
Inhalation (vapors)	300 mg/l
<b>App Test - Indanone</b> Oral	510.7 mg/kg
<b>Hi Temp Cal</b> Oral	500 mg/kg
<b>13C S/N ASTM</b> Oral	1356.8 mg/kg

## Section 11. Toxicological information

<b>Other information</b>	: 1H S/N 1H Lineshape ID 1 App Test - Indanone Autotest, no salt Hi Temp Cal Lo Temp Cal	Not available. Not available. Not available. Not available. Not available. Not available. Adverse symptoms may include the following: redness . Defatting to the skin. Adverse health effects could include the following: blurred or double vision, headache Repeated exposure may cause skin dryness or cracking. Eye contact can result in corneal damage or blindness. Repeated or prolonged exposure to the substance can produce liver damage. Not available.
	13C S/N ASTM	

## Section 12. Ecological information

### 12.1 Toxicity

Product/ingredient name	Result	Species	Exposure	
1H S/N ( <sup>2</sup> H)Chloroform	Acute EC50 13.3 mg/l Fresh water	Algae - Chlamydomonas reinhardtii - Exponential growth phase	72 hours	
	Acute LC50 81.5 mg/l Marine water	Crustaceans - Penaeus duorarum	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 6300 µg/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 2970 µg/l Fresh water		Daphnia - Daphnia magna - Neonate	48 hours	
Acute LC50 5200 µg/l Marine water		Crustaceans - Americamysis bahia	48 hours	
Acute LC50 4200 µg/l Fresh water		Fish - Oncorhynchus mykiss	96 hours	
Chronic NOEC 1000 µg/l Fresh water		Algae - Pseudokirchneriella subcapitata	96 hours	
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	
	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	
Trichloromethane	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	

**Section 12. Ecological information**

<b>ID 1</b> ( <sup>2</sup> H)Chloroform	Acute LC50 63800 µg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute LC50 13.3 ppm Fresh water Chronic EC10 3.61 mg/l Fresh water	Fish - Lepomis macrochirus Algae - Chlamydomonas reinhardtii - Exponential growth phase	96 hours 72 hours
<b>App Test - Indanone</b> ( <sup>2</sup> H)Chloroform	Chronic NOEC 6300 µg/l Fresh water	Daphnia - Daphnia magna	21 days
	Acute EC50 13.3 mg/l Fresh water	Algae - Chlamydomonas reinhardtii - Exponential growth phase	72 hours
<b>Autotest, no salt</b> Methanol ( <sup>13</sup> C)	Acute LC50 81.5 mg/l Marine water Acute LC50 29000 µg/l Fresh water Acute LC50 13300 µg/l Fresh water Chronic EC10 3.61 mg/l Fresh water	Crustaceans - Penaeus duorarum Daphnia - Daphnia magna Fish - Lepomis macrochirus Algae - Chlamydomonas reinhardtii - Exponential growth phase	48 hours 48 hours 96 hours 72 hours
	Chronic NOEC 6300 µg/l Fresh water	Daphnia - Daphnia magna	21 days
<b>Hi Temp Cal</b> Ethanol	Acute EC50 13.3 mg/l Fresh water	Algae - Chlamydomonas reinhardtii - Exponential growth phase	72 hours
	Acute LC50 81.5 mg/l Marine water Acute LC50 29000 µg/l Fresh water Acute LC50 13300 µg/l Fresh water Chronic EC10 3.61 mg/l Fresh water	Crustaceans - Penaeus duorarum Daphnia - Daphnia magna Fish - Lepomis macrochirus Algae - Chlamydomonas reinhardtii - Exponential growth phase	48 hours 48 hours 96 hours 72 hours
<b>Lo Temp Cal</b> Methanol	Chronic NOEC 6300 µg/l Fresh water	Daphnia - Daphnia magna	21 days
	Acute EC50 16.912 mg/l Marine water Acute LC50 2500000 µg/l Marine water	Algae - Ulva pertusa Crustaceans - Crangon crangon - Adult	96 hours 48 hours
<b>13C S/N ASTM</b> ( <sup>2</sup> H <sub>6</sub> )Benzene	Acute LC50 3289 mg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute LC50 100000 µg/l Fresh water	Fish - Pimephales promelas - Juvenile (Fledgling, Hatchling, Weanling)	96 hours
<b>Hi Temp Cal</b> Ethanol	Chronic NOEC 9.96 mg/l Marine water	Algae - Ulva pertusa	96 hours
	Acute LC50 100000 µg/l Marine water	Crustaceans - Crangon crangon - Adult	48 hours
<b>Lo Temp Cal</b> Methanol	Acute LC50 10000000 µg/l Fresh water Acute LC50 8050000 µg/l Fresh water	Daphnia - Daphnia magna Fish - Pimephales promelas	48 hours 96 hours
	Acute EC50 10000 ppm Fresh water Acute EC50 10000000 µg/l Fresh water Acute LC50 2500000 µg/l Marine water	Algae - Prorocentrum minimum Daphnia - Daphnia magna Crustaceans - Crangon crangon - Adult	96 hours 48 hours 48 hours
<b>13C S/N ASTM</b> ( <sup>2</sup> H <sub>6</sub> )Benzene	Acute LC50 290 mg/l Fresh water Chronic NOEC 9.96 mg/l Marine water	Fish - Danio rerio - Egg Algae - Ulva pertusa	96 hours 96 hours
	Acute EC50 29000 µg/l Fresh water	Algae - Pseudokirchneriella	72 hours

## Section 12. Ecological information

1,4-Dioxane	Acute EC50 1360000 µg/l Fresh water	subcapitata Algae - Scenedesmus abundans	96 hours
	Acute EC50 9230 µg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute LC50 21000 µg/l Marine water	Crustaceans - Artemia salina - Nauplii	48 hours
	Acute LC50 5.28 ul/L Fresh water	Fish - Oncorhynchus gorbuscha - Fry	96 hours
	Chronic NOEC 1.5 to 5.4 ul/L Marine water	Fish - Morone saxatilis - Juvenile (Fledgling, Hatchling, Weanling)	4 weeks
	Acute LC50 6700000 µg/l Marine water	Fish - Menidia beryllina	96 hours

### 12.2 Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
<b>Hi Temp Cal</b> Ethanediol	-	56 % - Readily - 1 days	100 mg/l	Activated sludge

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
<b>1H S/N</b> Ethylbenzene	-	-	Readily
<b>Hi Temp Cal</b> Ethanediol	-	-	Readily
<b>Lo Temp Cal</b> Methanol	-	-	Readily

### 12.3 Bioaccumulative potential

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
<b>1H S/N</b> ( <sup>2</sup> H)Chloroform	1.97	690	high
Ethylbenzene	3.6	-	low
<b>1H Lineshape</b> ( <sup>2</sup> H <sub>6</sub> )Acetone	-0.23	-	low
Trichloromethane	1.97	690	high
<b>ID 1</b> ( <sup>2</sup> H)Chloroform	1.97	690	high
Iodomethane ( <sup>13</sup> C)	1.57	-	low
Trimethyl phosphite	-0.73	-	low
<b>App Test - Indanone</b> ( <sup>2</sup> H)Chloroform	1.97	690	high
<b>Autotest, no salt</b> Methanol ( <sup>13</sup> C)	-0.77	<10	low
<b>Hi Temp Cal</b> Hi Temp Cal	-1.93	-	low
Ethanediol	-1.36	-	low
<b>Lo Temp Cal</b> Methanol	-0.77	<10	low

## Section 12. Ecological information

13C S/N ASTM			
( <sup>2</sup> H <sub>6</sub> )Benzene	2.13	11	low
1,4-Dioxane	-0.42	0.3 to 0.7	low

### 12.4 Mobility in soil

**Soil/water partition coefficient (K<sub>oc</sub>)** : 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.

**RCRA classification** :

1H S/N	Not available.
1H Lineshape	Not available.
ID 1	Not available.
App Test - Indanone	Not available.
Autotest, no salt	Not available.
Hi Temp Cal	Not available.
Lo Temp Cal	F003, D001, U154
13C S/N ASTM	Not available.

### United States - RCRA Toxic hazardous waste "U" List

Ingredient	CAS #	Status	Reference number
<b>1H S/N</b> Chloroform; Methane, trichloro-	865-49-6	Listed	U044
<b>1H Lineshape</b> Acetone (I); 2-Propanone (I)	666-52-4	Listed	U002
Chloroform; Methane, trichloro-	67-66-3	Listed	U044
<b>ID 1</b> Chloroform; Methane, trichloro-	865-49-6	Listed	U044
Methyl iodide; Methane, iodo-	4227-95-6	Listed	U138
<b>App Test - Indanone</b> Chloroform; Methane, trichloro-	865-49-6	Listed	U044
<b>Lo Temp Cal</b> Methanol (I); Methyl alcohol (I)	67-56-1	Listed	U154
<b>13C S/N ASTM</b> Benzene (I,T)	1076-43-3	Listed	U019
1,4-Dioxane; 1,4-Diethyleneoxide	123-91-1	Listed	U108

## Section 13. Disposal considerations

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

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

- U.S. Federal regulations** : **TSCA 8(a) PAIR:** Acetonitrile (<sup>15</sup>N)  
**Commerce control list precursor:** Trimethyl phosphite  
**United States inventory (TSCA 8b):** Not determined.  
**Clean Water Act (CWA) 307:** (<sup>2</sup>H)Chloroform; Ethylbenzene; (<sup>2</sup>H<sub>6</sub>)Benzene; Acetonitrile (<sup>15</sup>N); Chromium(III) 4-oxopent-2-ene-2-olate; Trichloromethane  
**Clean Water Act (CWA) 311:** (<sup>2</sup>H)Chloroform; Ethylbenzene; (<sup>2</sup>H<sub>6</sub>)Benzene; Trichloromethane
- Clean Air Act (CAA) 112 regulated toxic substances:** (<sup>2</sup>H)Chloroform
- Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs)** : Listed
- Clean Air Act Section 602 Class I Substances** : Not listed
- Clean Air Act Section 602 Class II Substances** : Not listed
- DEA List I Chemicals (Precursor Chemicals)** : Not listed
- DEA List II Chemicals (Essential Chemicals)** : Listed
- SARA 302/304**  
Composition/information on ingredients

## Section 15. Regulatory information

Name	%	EHS	SARA 302 TPQ		SARA 304 RQ	
			(lbs)	(gallons)	(lbs)	(gallons)
<b>1H S/N</b> ( <sup>2</sup> H)Chloroform	60 - 100	Yes.	-	-	-	-
<b>1H Lineshape</b> Trichloromethane	0.1 - 1	Yes.	10000	803.8	10	0.8
<b>ID 1</b> ( <sup>2</sup> H)Chloroform	60 - 100	Yes.	-	-	-	-
<b>App Test - Indanone</b> ( <sup>2</sup> H)Chloroform	60 - 100	Yes.	-	-	-	-

**SARA 304 RQ** : 8000 lbs / 3632 kg

### SARA 311/312

**Classification** : Fire hazard  
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 S/N</b> ( <sup>2</sup> H)Chloroform	60 - 100	No.	No.	No.	Yes.	Yes.
Ethylbenzene	< 0.1	Yes.	No.	No.	Yes.	Yes.
<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.
<b>ID 1</b> ( <sup>2</sup> H)Chloroform	60 - 100	No.	No.	No.	Yes.	Yes.
Iodomethane ( <sup>13</sup> C)	0.1 - 1	No.	No.	No.	Yes.	Yes.
Trimethyl phosphite	0.1 - 1	Yes.	No.	No.	Yes.	No.
<b>App Test - Indanone</b> ( <sup>2</sup> H)Chloroform	60 - 100	No.	No.	No.	Yes.	Yes.
<b>Autotest, no salt</b> Methanol ( <sup>13</sup> C)	< 0.1	Yes.	No.	No.	Yes.	Yes.
<b>Hi Temp Cal</b> Ethanediol	60 - 100	No.	No.	No.	Yes.	No.
<b>Lo Temp Cal</b> Methanol	60 - 100	Yes.	No.	No.	Yes.	Yes.
<b>13C S/N ASTM</b> ( <sup>2</sup> H <sub>6</sub> )Benzene	30 - 60	Yes.	No.	No.	Yes.	Yes.
1,4-Dioxane	30 - 60	Yes.	No.	No.	Yes.	Yes.

### SARA 313

## Section 15. Regulatory information

	Product name	CAS number	%
<b>Form R - Reporting requirements</b>	<b>1H S/N</b> ( <sup>2</sup> H)Chloroform Ethylbenzene	865-49-6 100-41-4	60 - 100 0.1 - 1
	<b>1H Lineshape</b> Trichloromethane	67-66-3	0.1 - 1
	<b>ID 1</b> ( <sup>2</sup> H)Chloroform Iodomethane ( <sup>13</sup> C)	865-49-6 4227-95-6	60 - 100 0.1 - 1
	<b>App Test - Indanone</b> ( <sup>2</sup> H)Chloroform	865-49-6	60 - 100
	<b>Hi Temp Cal</b> Ethanediol	107-21-1	60 - 100
	<b>Lo Temp Cal</b> Methanol	67-56-1	60 - 100
	<b>13C S/N ASTM</b> ( <sup>2</sup> H <sub>6</sub> )Benzene 1,4-Dioxane	1076-43-3 123-91-1	30 - 60 30 - 60
<b>Supplier notification</b>	<b>1H S/N</b> ( <sup>2</sup> H)Chloroform Ethylbenzene	865-49-6 100-41-4	60 - 100 <0.1
	<b>1H Lineshape</b> Trichloromethane	67-66-3	0.1 - 1
	<b>ID 1</b> ( <sup>2</sup> H)Chloroform Iodomethane ( <sup>13</sup> C)	865-49-6 4227-95-6	60 - 100 0.1 - 1
	<b>App Test - Indanone</b> ( <sup>2</sup> H)Chloroform	865-49-6	60 - 100
	<b>Hi Temp Cal</b> Ethanediol	107-21-1	60 - 100
	<b>Lo Temp Cal</b> Methanol	67-56-1	60 - 100
	<b>13C S/N ASTM</b> ( <sup>2</sup> H <sub>6</sub> )Benzene 1,4-Dioxane	1076-43-3 123-91-1	30 - 60 30 - 60

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; 1,4-DIOXANE; BENZENE; METHANOL; ETHYLENE GLYCOL; ACETONE

#### New York

: The following components are listed: Chloroform; Methane, trichloro-; 1,4-Dioxane; Benzene; Methanol; Ethylene glycol; Acetone; 2-Propanone; Chloroform; Methane, trichloro-

## Section 15. Regulatory information

**New Jersey** : The following components are listed: CHLOROFORM; METHANE, TRICHLORO-; 1, 4-DIOXANE; 1,4-DIETHYLENE DIOXIDE; BENZENE; METHYL ALCOHOL; METHANOL; ETHYLENE GLYCOL; 1,2-ETHANEDIOL; ACETONE; 2-PROPANONE; CHLOROFORM; METHANE, TRICHLORO-

**Pennsylvania** : The following components are listed: METHANE, TRICHLORO-; 1,4-DIOXANE; BENZENE; METHANOL; 1,2-ETHANEDIOL; 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.

Ingredient name	Cancer	Reproductive	No significant risk level	Maximum acceptable dosage level
<b>1H S/N</b> ( <sup>2</sup> H)Chloroform	Yes.	Yes.	20 µg/day (ingestion) 40 µg/day (inhalation)	No.
Ethylbenzene	Yes.	No.	41 µg/day (ingestion) 54 µg/day (inhalation)	No.
<b>1H Lineshape</b> Trichloromethane	Yes.	Yes.	20 µg/day (ingestion) 40 µg/day (inhalation)	No.
<b>ID 1</b> ( <sup>2</sup> H)Chloroform	Yes.	Yes.	20 µg/day (ingestion) 40 µg/day (inhalation)	No.
Iodomethane ( <sup>13</sup> C)	Yes.	No.	No.	No.
<b>App Test - Indanone</b> ( <sup>2</sup> H)Chloroform	Yes.	Yes.	20 µg/day (ingestion) 40 µg/day (inhalation)	No.
<b>Autotest, no salt</b> Methanol ( <sup>13</sup> C)	No.	Yes.	No.	23000 µg/day (ingestion) 47000 µg/day (inhalation)
<b>Lo Temp Cal</b> Methanol	No.	Yes.	No.	23000 µg/day (ingestion) 47000 µg/day (inhalation)
<b>13C S/N ASTM</b> ( <sup>2</sup> H <sub>6</sub> )Benzene	Yes.	Yes.	6.4 µg/day (ingestion) 13 µg/day (inhalation)	24 µg/day (ingestion) 49 µg/day (inhalation)
1,4-Dioxane	Yes.	No.	Yes.	No.

**Canada inventory** : Not determined.

## Section 15. Regulatory information

### International regulations

<b>International lists</b>	: Australia inventory (AICS): Not determined. China inventory (IECSC): Not determined. 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.
<b>Chemical Weapons Convention List Schedule I Chemicals</b>	: Not listed
<b>Chemical Weapons Convention List Schedule II Chemicals</b>	: Not listed
<b>Chemical Weapons Convention List Schedule III Chemicals</b>	: Listed

## Section 16. Other information

### History

<b>Date of issue</b>	: 11/10/2014.
<b>Date of previous issue</b>	: 11/12/2012.
<b>Version</b>	: 2

✔ Indicates information that has changed from previously issued version.

### Notice to reader

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