

SAFETY DATA SHEET



NMR Sample Kit, non-precursor Part Number 190350515

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, non-precursor Part Number 190350515 |
| Part No. (Chemical Kit) | : 190350515 |
| Part No. | : Hi Temp Cal 190350679 |
| | Lo Temp Cal 190350680 |
| | Autotest, no salt 190350606 |
| | 13C S/N ASTM 190350669 |
| | 19F S/N 190350682 |
| | 15N S/N 190350683 |

Validation date : 12/31/2015

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

| | |
|----------------------|--------------------------|
| Material uses | : Analytical chemistry. |
| | 6 x 250 µl |
| | Sealed NMR Tube |
| | Hi Temp Cal 250 µl |
| | Lo Temp Cal 250 µl |
| | Autotest, no salt 250 µl |
| | 13C S/N ASTM 250 µl |
| | 19F S/N 250 µl |
| | 15N S/N 250 µl |

1.3 Details of the supplier of the safety data sheet

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

1.4 Emergency telephone number

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

Section 2. Hazards identification

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

2.1 Classification of the substance or mixture

| | | |
|------------------------|-------------------|---|
| OSHA/HCS status | : 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). |
| | Autotest, no salt | 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). |
| | 19F S/N | This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200). |

Section 2. Hazards identification

15N S/N

This material is considered hazardous by the OSHA
Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture

Hi Temp Cal

H302 ACUTE TOXICITY (oral) - Category 4
H320 EYE IRRITATION - Category 2B
H373 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (kidneys) - Category 2

Lo Temp Cal

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 IRRITATION - Category 2
H319 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

Autotest, no salt

H360 TOXIC TO REPRODUCTION (Fertility) - Category 1B
H360 TOXIC TO REPRODUCTION (Unborn child) - Category 1B

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H225 FLAMMABLE LIQUIDS - Category 2
H302 ACUTE TOXICITY (oral) - Category 4
H315 SKIN IRRITATION - Category 2
H319 EYE IRRITATION - Category 2A
H340 GERM CELL MUTAGENICITY - Category 1
H350 CARCINOGENICITY - Category 1A
H335 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
H336 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3
H372 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (blood system, kidneys and liver) - Category 1
H304 ASPIRATION HAZARD - Category 1

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H225 FLAMMABLE LIQUIDS - Category 2
H302 ACUTE TOXICITY (oral) - Category 4
H315 SKIN IRRITATION - Category 2
H319 EYE IRRITATION - Category 2A
H340 GERM CELL MUTAGENICITY - Category 1
H350 CARCINOGENICITY - Category 1A
H335 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
H336 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3
H372 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (blood system) - Category 1
H304 ASPIRATION HAZARD - Category 1

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H227 FLAMMABLE LIQUIDS - Category 4

Section 2. Hazards identification

H319 EYE IRRITATION - Category 2A
H360 TOXIC TO REPRODUCTION (Unborn child) - Category 1B

2.2 GHS label elements

Hazard pictograms



Signal word

:  Hi Temp Cal Warning
Lo Temp Cal Danger
Autotest, no salt Danger
13C S/N ASTM Danger
19F S/N Danger
15N S/N Danger

Hazard statements

:  Hi Temp Cal **GHS SYMBOL - Exclamation mark - Health hazard -**
H302 - Harmful if swallowed.
H320 - Causes eye irritation.
H373 - May cause damage to organs through prolonged or repeated exposure. (kidneys)
GHS SYMBOL - Flame - Skull and crossbones - Exclamation mark - Health hazard -
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.
GHS SYMBOL - Health hazard -
H360 - May damage fertility or the unborn child.
GHS SYMBOL - Flame - Exclamation mark - Health hazard -
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.
H304 - May be fatal if swallowed and enters airways.
H335 - May cause respiratory irritation.
H336 - May cause drowsiness or dizziness.
H372 - Causes damage to organs through prolonged or repeated exposure. (blood system, kidneys, liver)
GHS SYMBOL - Flame - Exclamation mark - Health hazard -
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.
H304 - May be fatal if swallowed and enters

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airways.
 H335 - May cause respiratory irritation.
 H336 - May cause drowsiness or dizziness.
 H372 - Causes damage to organs through prolonged or repeated exposure. (blood system)
 H227 - Combustible liquid.
 GHS SYMBOL - **Exclamation mark - Health hazard** -
 H319 - Causes serious eye irritation.
 H360 - May damage the unborn child.

Precautionary statements

Prevention

: Hi Temp Cal

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.
 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.

Lo Temp Cal

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.
 P280 - Wear protective gloves. Wear eye or face protection. Wear protective clothing.
 P201 - Obtain special instructions before use.
 P202 - Do not handle until all safety precautions have been read and understood.
 P280 - Wear protective gloves. Wear eye or face protection. Wear protective clothing.
 P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
 P241 - Use explosion-proof electrical, ventilating, lighting and all material-handling equipment.
 P242 - Use only non-sparking tools.
 P243 - Take precautionary measures against static discharge.
 P233 - Keep container tightly closed.
 P271 - Use only outdoors or in a well-ventilated area.
 P260 - Do not breathe vapor.
 P270 - Do not eat, drink or smoke when using this product.

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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.
 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.

15N S/N

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.
 P280 - Wear protective gloves. Wear eye or face protection. Wear protective clothing.
 P210 - Keep away from flames and hot surfaces. - No smoking.

Response

:  Temp Cal

P264 - Wash hands thoroughly after handling.
 P314 - Get medical attention if you feel unwell.
 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.

Lo Temp Cal

P307 + P311 - IF exposed: Call a POISON CENTER or physician.
 P304 + P340 + P311 - IF INHALED: Remove person to fresh air and keep 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 + P361+P364 + P352 + P312 + P362+P364 - IF ON SKIN: Take off immediately all contaminated clothing and wash it before reuse. Wash with plenty of soap and water. Call a POISON CENTER or physician if you feel unwell. Take off contaminated clothing and wash it before reuse.
 P332 + P313 - If skin irritation occurs: Get medical attention.
 P305 + P351 + P338 - IF IN EYES: Rinse

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| Autotest, no salt | 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. |
| 13C S/N ASTM | P314 - Get medical attention if you feel unwell. P308 + P313 - IF exposed or concerned: Get medical attention. P304 + P340 + P312 - IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or physician if you feel unwell. 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+P364 - IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and wash it before reuse. P332 + P313 - If skin irritation occurs: Get medical attention. P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337 + P313 - If eye irritation persists: Get medical attention. |
| 19F S/N | P314 - Get medical attention if you feel unwell. P308 + P313 - IF exposed or concerned: Get medical attention. P304 + P340 + P312 - IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or physician if you feel unwell. 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+P364 - IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and wash it before reuse. P332 + P313 - If skin irritation occurs: Get medical attention. P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337 + P313 - If eye irritation persists: Get medical attention. |
| 15N S/N | P308 + P313 - IF exposed or concerned: Get medical attention. P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove |

Section 2. Hazards identification

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| Storage | :  Hi Temp Cal Lo Temp Cal | contact lenses, if present and easy to do. Continue rinsing. P337 + P313 - If eye irritation persists: Get medical attention. |
| | Autotest, no salt 13C S/N ASTM | Not applicable. P405 - Store locked up. P403 - Store in a well-ventilated place. P235 - Keep cool. |
| | 19F S/N | P405 - Store locked up. P405 - Store locked up. P403 - Store in a well-ventilated place. P235 - Keep cool. |
| | 15N S/N | P405 - Store locked up. P403 - Store in a well-ventilated place. P235 - Keep cool. |
| Disposal | :  Hi Temp Cal | P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations. |
| | Lo Temp Cal | P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations. |
| | Autotest, no salt | 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. |
| | 19F S/N | P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations. |
| | 15N S/N | P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations. |
| Supplemental label elements | :  Hi Temp Cal Lo Temp Cal Autotest, no salt 13C S/N ASTM | None known. None known. None known. |
| | 19F S/N | Avoid contact with skin and clothing. Wash thoroughly after handling. |
| | 15N S/N | Avoid contact with skin and clothing. Wash thoroughly after handling. None known. |
| 2.3 Other hazards | | |
| Hazards not otherwise classified | :  Hi Temp Cal Lo Temp Cal Autotest, no salt 13C S/N ASTM | None known. None known. None known. |
| | 19F S/N | Prolonged or repeated contact may dry skin and cause irritation. |
| | 15N S/N | Prolonged or repeated contact may dry skin and cause irritation. None known. |

Section 3. Composition/information on ingredients

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

| | | | |
|--------------------------|---|-------------------|-------------------------------------|
| Substance/mixture | : | Hi Temp Cal | Substance (encapsulated in article) |
| | | Lo Temp Cal | Substance (encapsulated in article) |
| | | Autotest, no salt | Mixture (encapsulated in article) |
| | | 13C S/N ASTM | Mixture (encapsulated in article) |
| | | 19F S/N | Mixture (encapsulated in article) |
| | | 15N S/N | Mixture (encapsulated in article) |

| Ingredient name | % | CAS number |
|---|-----------|------------|
| Hi Temp Cal Ethenediol | 100 | 107-21-1 |
| Lo Temp Cal Methanol | 100 | 67-56-1 |
| Autotest, no salt Methanol (¹³ C) | ≤0.3 | 14742-26-8 |
| 13C S/N ASTM (² H ₆)benzene | ≥50 - ≤75 | 1076-43-3 |
| 1,4-Dioxane | ≥25 - ≤50 | 123-91-1 |
| 19F S/N (² H ₆)benzene | ≥90 | 1076-43-3 |
| 15N S/N Formamide | ≥90 | 75-12-7 |
| di[(² H ₃)Methyl] sulphoxide | ≥10 - ≤25 | 2206-27-1 |

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

| | | | |
|--------------------|---|-------------------|--|
| Eye contact | : | 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 following exposure or if feeling unwell. |
| | | 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. |
| | | 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 |

Section 4. First aid measures

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| | 13C S/N ASTM | medical attention if irritation occurs. 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. |
| | 19F 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. |
| | 15N 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. |
| Inhalation | : Hi Temp Cal | 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 following exposure or if feeling unwell. 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. |
| | Lo Temp Cal | 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. |
| | Autotest, no salt | 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. |
| | 13C S/N ASTM | 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 |

Section 4. First aid measures

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.

19F S/N

Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

15N S/N

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. 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.

Skin contact

:  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 following exposure or if feeling unwell. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Lo Temp Cal

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

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

Section 4. First aid measures

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|-------------------------|---|---|
| | <p>13C S/N ASTM</p> <p>19F S/N</p> <p>15N S/N</p> | <p>clothing before reuse. Clean shoes thoroughly before reuse.</p> <p>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.</p> <p>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.</p> <p>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.</p> |
| <p>Ingestion</p> | <p>:  Temp Cal</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. 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> |
| | <p>Lo Temp Cal</p> | <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> |
| | <p>Autotest, no salt</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</p> |

Section 4. First aid measures

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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.

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.

19F S/N

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.

15N 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. 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.

Section 4. First aid measures

4.2 Most important symptoms/effects, acute and delayed

Potential acute health effects

| | | |
|---------------------|---|--|
| Eye contact | : <input checked="" type="checkbox"/> Hi Temp Cal Lo Temp Cal Autotest, no salt 13C S/N ASTM 19F S/N 15N S/N | Causes eye irritation. Causes serious eye irritation. No known significant effects or critical hazards. Causes serious eye irritation. Causes serious eye irritation. Causes serious eye irritation. |
| Inhalation | : <input checked="" type="checkbox"/> Hi Temp Cal Lo Temp Cal Autotest, no salt 13C S/N ASTM 19F S/N 15N S/N | No known significant effects or critical hazards. Toxic if inhaled. May cause respiratory irritation. No known significant effects or critical hazards. Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. May cause respiratory irritation. Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. May cause respiratory irritation. No known significant effects or critical hazards. |
| Skin contact | : <input checked="" type="checkbox"/> Hi Temp Cal Lo Temp Cal Autotest, no salt 13C S/N ASTM 19F S/N 15N S/N | No known significant effects or critical hazards. Toxic in contact with skin. Causes skin irritation. No known significant effects or critical hazards. Causes skin irritation. Defatting to the skin. Causes skin irritation. Defatting to the skin. No known significant effects or critical hazards. |
| Ingestion | : <input checked="" type="checkbox"/> Hi Temp Cal Lo Temp Cal Autotest, no salt 13C S/N ASTM 19F S/N 15N S/N | Harmful if swallowed. Toxic if swallowed. No known significant effects or critical hazards. Harmful if swallowed. Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways. Harmful if swallowed. Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways. No known significant effects or critical hazards. |

Over-exposure signs/symptoms

| | | |
|--------------------|---|---|
| Eye contact | : <input checked="" type="checkbox"/> Hi Temp Cal Lo Temp Cal Autotest, no salt 13C S/N ASTM 19F S/N 15N S/N | Adverse symptoms may include the following: irritation watering redness Adverse symptoms may include the following: pain or irritation watering redness No specific data. Adverse symptoms may include the following: pain or irritation watering redness Adverse symptoms may include the following: pain or irritation watering redness Adverse symptoms may include the following: pain or irritation watering redness |
|--------------------|---|---|

Section 4. First aid measures

Inhalation

| | |
|---|--|
| :  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 |
| Autotest, no salt | 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: respiratory tract irritation coughing nausea or vomiting headache drowsiness/fatigue dizziness/vertigo unconsciousness |
| 19F S/N | Adverse symptoms may include the following: respiratory tract irritation coughing nausea or vomiting headache drowsiness/fatigue dizziness/vertigo unconsciousness |
| 15N S/N | Adverse symptoms may include the following: reduced fetal weight increase in fetal deaths skeletal malformations |

Skin contact

| | |
|---|---|
| :  Temp Cal Lo Temp Cal | No specific data. Adverse symptoms may include the following: irritation redness reduced fetal weight increase in fetal deaths skeletal malformations |
| Autotest, no salt | 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: irritation redness dryness cracking |
| 19F S/N | Adverse symptoms may include the following: irritation redness dryness cracking |
| 15N S/N | Adverse symptoms may include the following: reduced fetal weight increase in fetal deaths skeletal malformations |

Section 4. First aid measures

| | | |
|------------------|------------------------------|--|
| Ingestion | : Hi Temp Cal Lo Temp Cal | No specific data. Adverse symptoms may include the following: reduced fetal weight increase in fetal deaths skeletal malformations |
| | Autotest, no salt | 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 |
| | 19F S/N | Adverse symptoms may include the following: nausea or vomiting |
| | 15N S/N | Adverse symptoms may include the following: reduced fetal weight increase in fetal deaths skeletal malformations |

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

| | | |
|-----------------------------------|---|---|
| Notes to physician | : 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. |
| | Autotest, no salt | Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. |
| | 13C S/N ASTM | Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. |
| | 19F S/N | Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. |
| | 15N 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. |
| Specific treatments | : Hi Temp Cal Lo Temp Cal Autotest, no salt 13C S/N ASTM 19F S/N 15N S/N | No specific treatment. No specific treatment. No specific treatment. No specific treatment. No specific treatment. No specific treatment. |
| Protection of first-aiders | : Hi Temp Cal | No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. |
| | Lo Temp Cal | No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. |
| | Autotest, no salt | No action shall be taken involving any personal risk or without suitable training. If it is suspected that |

Section 4. First aid measures

13C S/N ASTM

fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

19F S/N

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

15N S/N

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

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

See toxicological information (Section 11)

Section 5. Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media

: Hi Temp Cal

Use an extinguishing agent suitable for the surrounding fire.

Lo Temp Cal
Autotest, no salt

Use dry chemical, CO₂, water spray (fog) or foam.

Use an extinguishing agent suitable for the surrounding fire.

13C S/N ASTM
19F S/N
15N S/N

Use dry chemical, CO₂, water spray (fog) or foam.

Use dry chemical, CO₂, water spray (fog) or foam.

Use dry chemical, CO₂, water spray (fog) or foam.

Unsuitable extinguishing media

: Hi Temp Cal

None known.

Lo Temp Cal
Autotest, no salt

Do not use water jet.

None known.

13C S/N ASTM
19F S/N
15N S/N

Do not use water jet.

Do not use water jet.

Do not use water jet.

5.2 Special hazards arising from the substance or mixture

Section 5. Fire-fighting measures

Specific hazards arising from the chemical

: Hi Temp Cal

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

Lo Temp Cal

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.

Autotest, no salt

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

13C S/N ASTM

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.

19F S/N

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.

15N S/N

Combustible liquid. 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.

Hazardous thermal decomposition products

: Hi Temp Cal

Decomposition products may include the following materials:

Lo Temp Cal

carbon dioxide
carbon monoxide

Decomposition products may include the following materials:

Autotest, no salt
13C S/N ASTM

carbon dioxide
carbon monoxide
Formaldehyde.

No specific data.

19F S/N

Decomposition products may include the following materials:

carbon dioxide
carbon monoxide

Decomposition products may include the following materials:

carbon dioxide
carbon monoxide

15N S/N

Decomposition products may include the following materials:

carbon dioxide
carbon monoxide
nitrogen oxides
sulfur oxides

5.3 Advice for firefighters

Section 5. Fire-fighting measures

Special protective actions for fire-fighters

: 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.

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.

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.

19F 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. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

15N 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. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

Special protective equipment for fire-fighters

: 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.

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.

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 pressure mode.

19F 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.

15N 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.

Section 6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

:  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 personal protective equipment.

Lo 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. 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.

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.

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.

19F 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. 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.

15N 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. 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

Section 6. Accidental release measures

| | |
|--|---|
| <p>For emergency responders :  Temp Cal</p> <p>Lo Temp Cal</p> <p>Autotest, no salt</p> <p>13C S/N ASTM</p> <p>19F S/N</p> <p>15N S/N</p> | <p>appropriate personal protective equipment.</p> <p>If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".</p> <p>If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".</p> <p>If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".</p> <p>If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".</p> <p>If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".</p> <p>If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".</p> |
| <p>6.2 Environmental precautions :  Temp Cal</p> <p>Lo Temp Cal</p> <p>Autotest, no salt</p> <p>13C S/N ASTM</p> <p>19F S/N</p> <p>15N S/N</p> | <p>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).</p> <p>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).</p> <p>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).</p> <p>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).</p> <p>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).</p> <p>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).</p> |

6.3 Methods and materials for containment and cleaning up

Section 6. Accidental release measures

| | | |
|--------------------------------|---|--|
| Methods for cleaning up | :  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. |
| | Autotest, no salt | 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. |
| | 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. |
| | 19F S/N | 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. |
| | 15N S/N | 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 | :  Hi Temp Cal | Put on appropriate personal protective equipment (see Section 8). Do not breathe vapor or mist. Do not ingest. Avoid contact with eyes, skin and clothing. 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 |

Section 7. Handling and storage

| | |
|-------------------|--|
| | 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. |
| 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. |
| 13C S/N ASTM | 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. |
| 19F S/N | 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 |

Section 7. Handling and storage

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.

15N S/N

Put on appropriate personal protective equipment (see Section 8). Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapor or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene

:  Temp Cal

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.

Lo Temp Cal

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.

Autotest, no salt

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.

13C S/N ASTM

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.

19F S/N

Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face

Section 7. Handling and storage

| | | |
|--|--|--|
| | 15N S/N | <p>before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures. Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.</p> |
| <p>7.2 Conditions for safe storage, including any incompatibilities</p> | :  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. 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 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> |
| | 13C S/N ASTM | <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 containers. Use appropriate containment to avoid environmental contamination.</p> |
| | 19F S/N | <p>Store in accordance with local regulations. Store in</p> |

Section 7. Handling and storage

15N S/N

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.

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)

Recommendations

: Hi Temp Cal
 Lo Temp Cal
 Autotest, no salt
 13C S/N ASTM
 19F S/N
 15N S/N

Industrial applications, Professional applications.
 Industrial applications, Professional applications.

Industrial sector specific solutions

: Hi Temp Cal
 Lo Temp Cal
 Autotest, no salt
 13C S/N ASTM
 19F S/N
 15N S/N

Not applicable.
 Not applicable.
 Not applicable.
 Not applicable.
 Not applicable.
 Not applicable.

Section 8. Exposure controls/personal protection

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

8.1 Control parameters

Occupational exposure limits

| Ingredient name | Exposure limits |
|---|---|
| <input checked="" type="checkbox"/> Hi Temp Cal Ethanediol | ACGIH TLV (United States, 3/2015). C: 100 mg/m ³ Form: Aerosol OSHA PEL 1989 (United States, 3/1989). CEIL: 50 ppm CEIL: 125 mg/m ³ |
| Lo Temp Cal Methanol | ACGIH TLV (United States, 3/2015). Absorbed through skin. |

Section 8. Exposure controls/personal protection

Autotest, no salt
Methanol (¹³C)

13C S/N ASTM
(²H₆)benzene

TWA: 200 ppm 8 hours.
TWA: 262 mg/m³ 8 hours.
STEL: 250 ppm 15 minutes.
STEL: 328 mg/m³ 15 minutes.
OSHA PEL 1989 (United States, 3/1989).
Absorbed through skin.
TWA: 200 ppm 8 hours.
TWA: 260 mg/m³ 8 hours.
STEL: 250 ppm 15 minutes.
STEL: 325 mg/m³ 15 minutes.
NIOSH REL (United States, 10/2013).
Absorbed through skin.
TWA: 200 ppm 10 hours.
TWA: 260 mg/m³ 10 hours.
STEL: 250 ppm 15 minutes.
STEL: 325 mg/m³ 15 minutes.
OSHA PEL (United States, 2/2013).
TWA: 200 ppm 8 hours.
TWA: 260 mg/m³ 8 hours.

ACGIH TLV (United States, 3/2015).
Absorbed through skin.
TWA: 200 ppm 8 hours.
TWA: 262 mg/m³ 8 hours.
STEL: 250 ppm 15 minutes.
STEL: 328 mg/m³ 15 minutes.
OSHA PEL 1989 (United States, 3/1989).
Absorbed through skin.
TWA: 200 ppm 8 hours.
TWA: 260 mg/m³ 8 hours.
STEL: 250 ppm 15 minutes.
STEL: 325 mg/m³ 15 minutes.
NIOSH REL (United States, 10/2013).
Absorbed through skin.
TWA: 200 ppm 10 hours.
TWA: 260 mg/m³ 10 hours.
STEL: 250 ppm 15 minutes.
STEL: 325 mg/m³ 15 minutes.
OSHA PEL (United States, 2/2013).
TWA: 200 ppm 8 hours.
TWA: 260 mg/m³ 8 hours.

ACGIH TLV (United States, 3/2015).
Absorbed through skin.
TWA: 0.5 ppm 8 hours.
TWA: 1.6 mg/m³ 8 hours.
STEL: 2.5 ppm 15 minutes.
STEL: 8 mg/m³ 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.

Section 8. Exposure controls/personal protection

1,4-Dioxane

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/m³ 8 hours.

NIOSH REL (United States, 10/2013).

CEIL: 1 ppm 30 minutes.

CEIL: 3.6 mg/m³ 30 minutes.

ACGIH TLV (United States, 3/2015).

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/m³ 8 hours.

19F S/N^{(2)H₆}benzene

ACGIH TLV (United States, 3/2015).

Absorbed through skin.

TWA: 0.5 ppm 8 hours.

TWA: 1.6 mg/m³ 8 hours.

STEL: 2.5 ppm 15 minutes.

STEL: 8 mg/m³ 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.

15N S/N

Formamide

ACGIH TLV (United States, 3/2015).

Absorbed through skin.

TWA: 10 ppm 8 hours.

TWA: 18 mg/m³ 8 hours.

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

TWA: 20 ppm 8 hours.

TWA: 30 mg/m³ 8 hours.

STEL: 30 ppm 15 minutes.

STEL: 45 mg/m³ 15 minutes.

NIOSH REL (United States, 10/2013).

Absorbed through skin.

TWA: 10 ppm 10 hours.

TWA: 15 mg/m³ 10 hours.

di[(^{2)H₃)Methyl] sulphoxide}

AIHA WEEL (United States, 10/2011).

Section 8. Exposure controls/personal protection

TWA: 250 ppm 8 hours.

8.2 Exposure controls

- Appropriate engineering controls** : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.
- 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** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

- Physical state** : Temp Cal Liquid. [Viscous liquid.]
 Lo Temp Cal Liquid. [Clear.]
 Autotest, no salt Liquid.
 13C S/N ASTM Liquid.
 19F S/N Liquid.
 15N S/N Liquid.

Section 9. Physical and chemical properties

| | | |
|----------------------------------|-------------------|--|
| Color | : Hi Temp Cal | Colorless. |
| | Lo Temp Cal | Colorless. |
| | Autotest, no salt | Not available. |
| | 13C S/N ASTM | Colorless. |
| | 19F S/N | Not available. |
| Odor | 15N S/N | Not available. |
| | : Hi Temp Cal | Slight |
| | Lo Temp Cal | Characteristic. |
| | Autotest, no salt | Not available. |
| | 13C S/N ASTM | Not available. |
| Odor threshold | 19F S/N | Not available. |
| | 15N S/N | Not available. |
| | : Hi Temp Cal | Not available. |
| | Lo Temp Cal | Not available. |
| | Autotest, no salt | Not available. |
| pH | 13C S/N ASTM | Not available. |
| | 19F S/N | Not available. |
| | 15N S/N | Not available. |
| | : Hi Temp Cal | Not available. |
| | Lo Temp Cal | Not available. |
| Melting point | Autotest, no salt | Not available. |
| | 13C S/N ASTM | Not available. |
| | 19F S/N | Not available. |
| | 15N S/N | Not available. |
| | : Hi Temp Cal | -13°C (8.6°F) |
| Boiling point | Lo Temp Cal | -97.8°C (-144°F) |
| | Autotest, no salt | 3.81°C (38.9°F) |
| | 13C S/N ASTM | 6.8°C (44.2°F) |
| | 19F S/N | 5°C (41°F) |
| | 15N S/N | Not available. |
| Flash point | : Hi Temp Cal | Closed cup: 111°C (231.8°F) |
| | Lo Temp Cal | Open cup: 115°C (239°F) |
| | Autotest, no salt | Closed cup: 15°C (59°F) [Setaflash.] |
| | 13C S/N ASTM | Not available. |
| | 19F S/N | Closed cup: -18 to 23°C (-0.4 to 73.4°F) |
| Evaporation rate | 15N S/N | Closed cup: -11.11°C (12°F) |
| | : Hi Temp Cal | Closed cup: 87.8°C (190°F) |
| | Lo Temp Cal | 0.01 (butyl acetate = 1) |
| | Autotest, no salt | 2.1 (butyl acetate = 1) |
| | 13C S/N ASTM | Not available. |
| Flammability (solid, gas) | 19F S/N | Not available. |
| | 15N S/N | Not available. |
| | : Hi Temp Cal | Not applicable. |
| | Lo Temp Cal | Not applicable. |
| | Autotest, no salt | Not applicable. |
| | 13C S/N ASTM | Not applicable. |
| | 19F S/N | Not applicable. |
| | 15N S/N | Not applicable. |

Section 9. Physical and chemical properties

| | | |
|---|--|--|
| Lower and upper explosive (flammable) limits | Hi Temp Cal | Lower: 3.2% |
| | | Upper: 15.3% |
| | Lo Temp Cal | Lower: 6% |
| | | Upper: 44% |
| | Autotest, no salt | Not available. |
| Vapor pressure | 13C S/N ASTM | Lower: 1.3% |
| | | Upper: 8% |
| | 19F S/N | Not available. |
| | 15N S/N | 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] | |
| Autotest, no salt | Not available. | |
| 13C S/N ASTM | 22.1 kPa (166 mm Hg) [room temperature] | |
| 19F S/N | Not available. | |
| 15N S/N | Not available. | |
| Vapor density | Hi Temp Cal | 2.1 [Air = 1] |
| | Lo Temp Cal | 1.1 [Air = 1] |
| | Autotest, no salt | Not available. |
| | 13C S/N ASTM | 2.77 [Air = 1] |
| | 19F S/N | Not available. |
| Relative density | 15N S/N | Not available. |
| | Hi Temp Cal | 1.1 |
| | Lo Temp Cal | 0.79 |
| | Autotest, no salt | 1.1 [(D2O)] |
| | 13C S/N ASTM | 0.95 |
| Solubility | 19F S/N | Not available. |
| | 15N S/N | Not available. |
| | 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. |
| | Autotest, no salt | Easily soluble in the following materials: cold water and hot water. |
| Partition coefficient: n-octanol/water | 13C S/N ASTM | Easily soluble in the following materials: cold water and hot water. |
| | 19F S/N | Insoluble in the following materials: cold water and hot water. |
| | 15N S/N | Soluble in the following materials: cold water and hot water. |
| | Hi Temp Cal | -1.93 |
| | Lo Temp Cal | -0.77 |
| Auto-ignition temperature | Autotest, no salt | Not available. |
| | 13C S/N ASTM | Not available. |
| | 19F S/N | Not available. |
| | 15N S/N | Not available. |
| | Hi Temp Cal | 398°C (748.4°F) |
| Decomposition temperature | Lo Temp Cal | 455°C (851°F) |
| | Autotest, no salt | Not available. |
| | 13C S/N ASTM | Not available. |
| | 19F S/N | Not available. |
| | 15N S/N | Not available. |

Section 9. Physical and chemical properties

| | | |
|------------------|---|--|
| Viscosity | : <input checked="" type="checkbox"/> 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) |
| | Autotest, no salt | Not available. |
| | 13C S/N ASTM | Not available. |
| | 19F S/N | Not available. |
| | 15N S/N | Not available. |

Section 10. Stability and reactivity

| | | |
|------------------------|---|--|
| 10.1 Reactivity | : <input checked="" type="checkbox"/> Hi Temp Cal | No specific test data related to reactivity available for this product or its ingredients. |
| | Lo Temp Cal | No specific test data related to reactivity available for this product or its ingredients. |
| | Autotest, no salt | No specific test data related to reactivity available for this product or its ingredients. |
| | 13C S/N ASTM | No specific test data related to reactivity available for this product or its ingredients. |
| | 19F S/N | No specific test data related to reactivity available for this product or its ingredients. |
| | 15N S/N | No specific test data related to reactivity available for this product or its ingredients. |

| | | |
|--------------------------------|---|------------------------|
| 10.2 Chemical stability | : <input checked="" type="checkbox"/> Hi Temp Cal | The product is stable. |
| | Lo Temp Cal | The product is stable. |
| | Autotest, no salt | The product is stable. |
| | 13C S/N ASTM | The product is stable. |
| | 19F S/N | The product is stable. |
| | 15N S/N | The product is stable. |

| | | |
|--|---|---|
| 10.3 Possibility of hazardous reactions | : <input checked="" type="checkbox"/> Hi Temp Cal | Under normal conditions of storage and use, hazardous reactions will not occur. |
| | Lo Temp Cal | Under normal conditions of storage and use, hazardous reactions will not occur. |
| | Autotest, no salt | Under normal conditions of storage and use, hazardous reactions will not occur. |
| | 13C S/N ASTM | Under normal conditions of storage and use, hazardous reactions will not occur. |
| | 19F S/N | Under normal conditions of storage and use, hazardous reactions will not occur. |
| | 15N S/N | Under normal conditions of storage and use, hazardous reactions will not occur. |

| | | |
|---------------------------------|---|--|
| 10.4 Conditions to avoid | : <input checked="" type="checkbox"/> Hi Temp Cal | No specific data. |
| | Lo Temp Cal | 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. |
| | Autotest, no salt | No specific data. |
| | 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. |
| | 19F S/N | 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 |

Section 10. Stability and reactivity

| | |
|--|---|
| <p>15N S/N</p> <p>10.5 Incompatible materials :  Temp Cal</p> <p>Lo Temp Cal</p> <p>Autotest, no salt</p> <p>13C S/N ASTM</p> <p>19F S/N</p> <p>15N S/N</p> <p>10.6 Hazardous decomposition products :  Temp Cal</p> <p>Lo Temp Cal</p> <p>Autotest, no salt</p> <p>13C S/N ASTM</p> <p>19F S/N</p> <p>15N S/N</p> | <p>of ignition. 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.</p> <p>May react or be incompatible with oxidizing materials. Reactive or incompatible with the following materials: oxidizing materials May react or be incompatible with oxidizing materials. Reactive or incompatible with the following materials: oxidizing materials Reactive or incompatible with the following materials: oxidizing materials Reactive or incompatible with the following materials: oxidizing materials</p> <p>Under normal conditions of storage and use, hazardous decomposition products should not be produced. Under normal conditions of storage and use, hazardous decomposition products should not be produced. Under normal conditions of storage and use, hazardous decomposition products should not be produced. Under normal conditions of storage and use, hazardous decomposition products should not be produced. Under normal conditions of storage and use, hazardous decomposition products should not be produced. Under normal conditions of storage and use, hazardous decomposition products should not be produced.</p> |
|--|---|

Section 11. Toxicological information

11.1 Information on toxicological effects

Acute toxicity

| Product/ingredient name | Result | Species | Dose | Exposure |
|--|-----------------------|---------|-------------|----------|
|  Temp Cal Ethanediol | LD50 Oral | Rat | 4700 mg/kg | - |
| Lo Temp Cal 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 | - |
| Autotest, no salt | | | | |

Section 11. Toxicological information

| | | | | |
|--|--|-----------------------------|--|------------------------------|
| Methanol (¹³ C) | LC50 Inhalation Gas. LC50 Inhalation Gas. LD50 Dermal LD50 Oral | Rat Rat Rabbit Rat | 145000 ppm 64000 ppm 15800 mg/kg 5600 mg/kg | 1 hours 4 hours - - |
| 13C S/N ASTM (² H ₆)benzene 1,4-Dioxane | LD50 Oral LD50 Oral | Rat Rat | 930 mg/kg 4200 mg/kg | - - |
| 19F S/N (² H ₆)benzene | LD50 Oral | Rat | 930 mg/kg | - |
| 15N S/N Formamide | LD50 Dermal LD50 Oral | Rabbit Rat | 17 g/kg 4000 mg/kg | - - |
| di[(² H ₃)Methyl] sulphoxide | LD50 Dermal LD50 Oral | Rat Rat | 40000 mg/kg 14500 mg/kg | - - |

Irritation/Corrosion

| Product/ingredient name | Result | Species | Score | Exposure | Observation |
|---|--------------------------|---------|-------|-------------------------|-------------|
| Hi Temp Cal Ethanediol | Eyes - Mild irritant | Rabbit | - | 24 hours 500 milligrams | - |
| | Eyes - Mild irritant | Rabbit | - | 1 hours 100 milligrams | - |
| | Eyes - Moderate irritant | Rabbit | - | 6 hours 1440 milligrams | - |
| | Skin - Mild irritant | Rabbit | - | 555 milligrams | - |
| Lo Temp Cal Methanol | Eyes - Moderate irritant | Rabbit | - | 24 hours 100 milligrams | - |
| | Eyes - Moderate irritant | Rabbit | - | 40 milligrams | - |
| | Skin - Moderate irritant | Rabbit | - | 24 hours 20 milligrams | - |
| Autotest, no salt Methanol (¹³ C) | Eyes - Moderate irritant | Rabbit | - | 24 hours 100 milligrams | - |
| | Eyes - Moderate irritant | Rabbit | - | 40 milligrams | - |
| | Skin - Moderate irritant | Rabbit | - | 24 hours 20 milligrams | - |
| 13C S/N ASTM (² H ₆)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 | - |

Section 11. Toxicological information

| | | | | | |
|--|--------------------------|--------|---|-------------------------|---|
| 19F S/N (² H ₆)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 | - |
| 15N S/N Formamide | Skin - Moderate irritant | Rabbit | - | 24 hours 20 milligrams | - |
| | Eyes - Severe irritant | Rabbit | - | 100 milligrams | - |
| | Eyes - Mild irritant | Rabbit | - | 24 hours 500 milligrams | - |
| | Eyes - Mild irritant | Rabbit | - | 100 milligrams | - |
| di[(² H ₃)Methyl] sulphoxide | Skin - Mild irritant | Rabbit | - | 24 hours 500 milligrams | - |
| | Skin - Mild irritant | Rabbit | - | 100 milligrams | - |
| | Skin - Mild irritant | Rabbit | - | 100 milligrams | - |

Sensitization

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Classification

| Product/ingredient name | OSHA | IARC | NTP |
|---|------|------|---|
| 13C S/N ASTM (² H ₆)benzene | + | 1 | Known to be a human carcinogen. Reasonably anticipated to be a human carcinogen. |
| 1,4-Dioxane | - | 2B | |
| 19F S/N (² H ₆)benzene | + | 1 | Known to be a human carcinogen. |

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

| Name | Category | Route of exposure | Target organs |
|------|----------|-------------------|---------------|
| | | | |

Section 11. Toxicological information

| | | | |
|---|------------|-----------------|---|
| Lo Temp Cal Methanol | Category 1 | Not determined | central nervous system (CNS) |
| | Category 3 | Not applicable. | Respiratory tract irritation |
| Autotest, no salt Methanol (¹³ C) | Category 1 | Not determined | central nervous system (CNS) |
| | Category 3 | Not applicable. | Respiratory tract irritation |
| 13C S/N ASTM (² H ₆)benzene | Category 3 | Not applicable. | Respiratory tract irritation and Narcotic effects |
| | Category 3 | Not applicable. | Respiratory tract irritation |
| 1,4-Dioxane | Category 3 | Not applicable. | Respiratory tract irritation |
| | Category 3 | Not applicable. | Respiratory tract irritation and Narcotic effects |

Specific target organ toxicity (repeated exposure)

| Name | Category | Route of exposure | Target organs |
|---|------------|--------------------|---|
| Hi Temp Cal Ethanediol | Category 2 | Not determined | kidneys |
| | Category 1 | Oral Inhalation | blood system blood system kidneys and liver |
| 13C S/N ASTM (² H ₆)benzene | Category 1 | Oral Inhalation | blood system blood system kidneys and liver |
| | Category 1 | Oral Inhalation | blood system blood system |

Aspiration hazard

| Name | Result |
|---|--|
| 13C S/N ASTM 13C S/N ASTM (² H ₆)benzene | ASPIRATION HAZARD - Category 1 ASPIRATION HAZARD - Category 1 |
| 19F S/N 19F S/N (² H ₆)benzene | ASPIRATION HAZARD - Category 1 ASPIRATION HAZARD - Category 1 |

Information on the likely routes of exposure

: **Hi Temp Cal**

Lo Temp Cal

Autotest, no salt

13C S/N ASTM

Routes of entry anticipated: Oral, Dermal, Inhalation.

Section 11. Toxicological information

| | | |
|---------------------------------------|---|--|
| | 19F S/N | Routes of entry anticipated: Oral, Dermal, Inhalation. |
| | 15N S/N | Routes of entry anticipated: Oral, Dermal, Inhalation. |
| Potential acute health effects | | |
| Eye contact | : <input checked="" type="checkbox"/> Hi Temp Cal Lo Temp Cal Autotest, no salt 13C S/N ASTM 19F S/N 15N S/N | Causes eye irritation. Causes serious eye irritation. No known significant effects or critical hazards. Causes serious eye irritation. Causes serious eye irritation. Causes serious eye irritation. |
| Inhalation | : <input checked="" type="checkbox"/> Hi Temp Cal Lo Temp Cal Autotest, no salt 13C S/N ASTM 19F S/N 15N S/N | No known significant effects or critical hazards. Toxic if inhaled. May cause respiratory irritation. No known significant effects or critical hazards. Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. May cause respiratory irritation. Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. May cause respiratory irritation. No known significant effects or critical hazards. |
| Skin contact | : <input checked="" type="checkbox"/> Hi Temp Cal Lo Temp Cal Autotest, no salt 13C S/N ASTM 19F S/N 15N S/N | No known significant effects or critical hazards. Toxic in contact with skin. Causes skin irritation. No known significant effects or critical hazards. Causes skin irritation. Defatting to the skin. Causes skin irritation. Defatting to the skin. No known significant effects or critical hazards. |
| Ingestion | : <input checked="" type="checkbox"/> Hi Temp Cal Lo Temp Cal Autotest, no salt 13C S/N ASTM 19F S/N 15N S/N | Harmful if swallowed. Toxic if swallowed. No known significant effects or critical hazards. Harmful if swallowed. Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways. Harmful if swallowed. Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways. No known significant effects or critical hazards. |

Symptoms related to the physical, chemical and toxicological characteristics

| | | |
|--------------------|---|---|
| Eye contact | : <input checked="" type="checkbox"/> Hi Temp Cal | Adverse symptoms may include the following: irritation watering redness |
| | Lo Temp Cal | Adverse symptoms may include the following: pain or irritation watering redness |
| | Autotest, no salt 13C S/N ASTM | No specific data. Adverse symptoms may include the following: pain or irritation watering redness |
| | 19F S/N | Adverse symptoms may include the following: pain or irritation watering redness |
| | 15N S/N | Adverse symptoms may include the following: |

Section 11. Toxicological information

| | | |
|---------------------|---|--|
| Inhalation | :  Temp Cal Lo Temp Cal | <p>pain or irritation watering redness</p> <p>No specific data. Adverse symptoms may include the following: respiratory tract irritation coughing reduced fetal weight increase in fetal deaths skeletal malformations</p> |
| | Autotest, no salt | <p>Adverse symptoms may include the following: reduced fetal weight increase in fetal deaths skeletal malformations</p> |
| | 13C S/N ASTM | <p>Adverse symptoms may include the following: respiratory tract irritation coughing nausea or vomiting headache drowsiness/fatigue dizziness/vertigo unconsciousness</p> |
| | 19F S/N | <p>Adverse symptoms may include the following: respiratory tract irritation coughing nausea or vomiting headache drowsiness/fatigue dizziness/vertigo unconsciousness</p> |
| | 15N S/N | <p>Adverse symptoms may include the following: reduced fetal weight increase in fetal deaths skeletal malformations</p> |
| Skin contact | :  Temp Cal Lo Temp Cal | <p>No specific data. Adverse symptoms may include the following: irritation redness reduced fetal weight increase in fetal deaths skeletal malformations</p> |
| | Autotest, no salt | <p>Adverse symptoms may include the following: reduced fetal weight increase in fetal deaths skeletal malformations</p> |
| | 13C S/N ASTM | <p>Adverse symptoms may include the following: irritation redness dryness cracking</p> |
| | 19F S/N | <p>Adverse symptoms may include the following: irritation redness dryness cracking</p> |
| | 15N S/N | <p>Adverse symptoms may include the following: reduced fetal weight increase in fetal deaths skeletal malformations</p> |

Section 11. Toxicological information

| | | |
|------------------|-------------------|---|
| Ingestion | : Hi Temp Cal | No specific data. |
| | Lo Temp Cal | Adverse symptoms may include the following: reduced fetal weight increase in fetal deaths skeletal malformations |
| | Autotest, no salt | 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 |
| | 19F S/N | Adverse symptoms may include the following: nausea or vomiting |
| | 15N S/N | Adverse symptoms may include the following: reduced fetal weight increase in fetal deaths skeletal malformations |

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

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

| | | |
|------------------------|-------------------|--|
| General | : Hi Temp Cal | May cause damage to organs through prolonged or repeated exposure. |
| | Lo Temp Cal | No known significant effects or critical hazards. |
| | Autotest, no salt | No known significant effects or critical hazards. |
| | 13C S/N ASTM | 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. |
| | 19F S/N | 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. |
| | 15N S/N | No known significant effects or critical hazards. |
| Carcinogenicity | : Hi Temp Cal | No known significant effects or critical hazards. |
| | Lo Temp Cal | No known significant effects or critical hazards. |
| | Autotest, no salt | No known significant effects or critical hazards. |
| | 13C S/N ASTM | May cause cancer. Risk of cancer depends on duration and level of exposure. |
| | 19F S/N | May cause cancer. Risk of cancer depends on duration and level of exposure. |
| | 15N S/N | No known significant effects or critical hazards. |
| Mutagenicity | : Hi Temp Cal | No known significant effects or critical hazards. |
| | Lo Temp Cal | No known significant effects or critical hazards. |
| | Autotest, no salt | No known significant effects or critical hazards. |
| | 13C S/N ASTM | May cause genetic defects. |
| | 19F S/N | May cause genetic defects. |
| | 15N S/N | No known significant effects or critical hazards. |

Section 11. Toxicological information

| | | |
|------------------------------|---|--|
| Teratogenicity | : <input checked="" type="checkbox"/> Hi Temp Cal Lo Temp Cal Autotest, no salt 13C S/N ASTM 19F S/N 15N S/N | No known significant effects or critical hazards. May damage the unborn child. May damage the unborn child. No known significant effects or critical hazards. No known significant effects or critical hazards. May damage the unborn child. |
| Developmental effects | : <input checked="" type="checkbox"/> Hi Temp Cal Lo Temp Cal Autotest, no salt 13C S/N ASTM 19F S/N 15N S/N | No known significant effects or critical hazards. No known significant effects or critical hazards. |
| Fertility effects | : <input checked="" type="checkbox"/> Hi Temp Cal Lo Temp Cal Autotest, no salt 13C S/N ASTM 19F S/N 15N S/N | No known significant effects or critical hazards. May damage fertility. May damage fertility. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. |

Numerical measures of toxicity

Acute toxicity estimates

| Route | ATE value |
|---|--------------|
| <input checked="" type="checkbox"/> Hi Temp Cal Oral | 500 mg/kg |
| 13C S/N ASTM Oral | 1356.8 mg/kg |
| 19F S/N Oral | 930.5 mg/kg |
| 15N S/N Oral | 4444.4 mg/kg |

| | | |
|--------------------------|---|--|
| Other information | : <input checked="" type="checkbox"/> Hi Temp Cal Lo Temp Cal Autotest, no salt 13C S/N ASTM 19F S/N 15N S/N | Not available. Adverse symptoms may include the following: blurred or double vision, Eye contact can result in corneal damage or blindness. Repeated or prolonged exposure to the substance can produce liver damage. Not available. Not available. Not available. Not available. |
|--------------------------|---|--|

Section 12. Ecological information

12.1 Toxicity

Section 12. Ecological information

| Product/ingredient name | Result | Species | Exposure |
|--|---|---|----------|
| Hi Temp Cal Ethanediol | Acute LC50 10000000 µg/l Fresh water | Crustaceans - Ceriodaphnia dubia - Neonate | 48 hours |
| | Acute LC50 41000000 µg/l Fresh water | Daphnia - Daphnia magna - Neonate | 48 hours |
| | Acute LC50 8050000 µg/l Fresh water | Fish - Pimephales promelas | 96 hours |
| Lo Temp Cal Methanol | Acute EC50 24500000 µg/l Fresh water | Daphnia - Daphnia magna - Larvae | 48 hours |
| | Acute LC50 2500000 µg/l Marine water | Crustaceans - Crangon crangon - Adult | 48 hours |
| | Acute LC50 290 mg/l Fresh water | Fish - Danio rerio - Egg | 96 hours |
| | Chronic NOEC 9.96 mg/l Marine water | Algae - Ulva pertusa | 96 hours |
| Autotest, no salt Methanol (¹³ C) | Acute EC50 16.912 mg/l Marine water | Algae - Ulva pertusa | 96 hours |
| | Acute LC50 2500000 µg/l Marine water | Crustaceans - Crangon crangon - Adult | 48 hours |
| | Acute LC50 3289 mg/l Fresh water | Daphnia - Daphnia magna - Neonate | 48 hours |
| | Acute LC50 290 mg/l Fresh water | Fish - Danio rerio - Egg | 96 hours |
| | Chronic NOEC 9.96 mg/l Marine water | Algae - Ulva pertusa | 96 hours |
| 13C S/N ASTM (² H ₆)benzene | Acute EC50 29000 µg/l Fresh water | Algae - Pseudokirchneriella subcapitata | 72 hours |
| | Acute EC50 1600000 µg/l Fresh water | Algae - Selenastrum sp. | 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 98 mg/l Fresh water | Daphnia - Daphnia magna | 21 days |
| | Chronic NOEC 1.5 to 5.4 ul/L Marine water | Fish - Morone saxatilis - Juvenile (Fledgling, Hatchling, Weanling) | 4 weeks |
| 1,4-Dioxane | Acute LC50 6700000 µg/l Marine water | Fish - Menidia beryllina | 96 hours |
| 19F S/N (² H ₆)benzene | Acute EC50 29000 µg/l Fresh water | Algae - Pseudokirchneriella subcapitata | 72 hours |
| | Acute EC50 1600000 µg/l Fresh water | Algae - Selenastrum sp. | 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 98 mg/l Fresh water | Daphnia - Daphnia magna | 21 days |
| Chronic NOEC 1.5 to 5.4 ul/L Marine water | Fish - Morone saxatilis - Juvenile (Fledgling, Hatchling, Weanling) | 4 weeks | |
| 15N S/N di[(² H ₃)Methyl] sulphoxide | Acute LC50 25000 ppm Fresh water | Daphnia - Daphnia magna - Neonate | 48 hours |
| | Acute LC50 34000000 µg/l Fresh water | Fish - Pimephales promelas | 96 hours |

Section 12. Ecological information

| | | |
|------------------------------------|----------------------|----------|
| Chronic NOEC 100 µl/L Marine water | Algae - Ulva lactuca | 72 hours |
|------------------------------------|----------------------|----------|

12.2 Persistence and degradability

| Product/ingredient name | Aquatic half-life | Photolysis | Biodegradability |
|----------------------------------|-------------------|------------|------------------|
| Hi Temp Cal Ethenediol | - | - | Readily |
| Lo Temp Cal Methanol | - | - | Readily |

12.3 Bioaccumulative potential

| Product/ingredient name | LogP _{ow} | BCF | Potential |
|---|--------------------|------------|-----------|
| Hi Temp Cal Hi Temp Cal | -1.93 | - | low |
| Ethenediol | -1.36 | - | low |
| Lo Temp Cal Methanol | -0.77 | <10 | low |
| Autotest, no salt Methanol (¹³ C) | -0.77 | <10 | low |
| 13C S/N ASTM (² H ₆)benzene | 2.13 | 11 | low |
| 1,4-Dioxane | -0.42 | 0.3 to 0.7 | low |
| 19F S/N (² H ₆)benzene | 2.13 | 11 | low |
| 15N S/N Formamide | -0.82 | - | low |
| di[(² H ₃)Methyl] sulphoxide | -1.35 | 3.16 | low |

12.4 Mobility in soil

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

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

Section 13. Disposal considerations

13.1 Waste treatment methods

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

Section 13. Disposal considerations

| | | |
|----------------------------|---|--|
| | and sewers. | |
| RCRA classification | : <input checked="" type="checkbox"/> Hi Temp Cal Lo Temp Cal Autotest, no salt 13C S/N ASTM 19F S/N 15N S/N | Not available. F003, D001, U154 Not available. Not available. Not available. Not available. |

United States - RCRA Toxic hazardous waste "U" List

| Ingredient | CAS # | Status | Reference number |
|---|----------|--------|------------------|
| <input checked="" type="checkbox"/> Lo Temp Cal Methanol (I); Methyl alcohol (I) | 67-56-1 | Listed | U154 |
| 13C S/N ASTM 1,4-Dioxane; 1,4-Diethyleneoxide | 123-91-1 | Listed | U108 |

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

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

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

Section 14. Transport information

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

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 (¹⁵N); Formamide
 United States inventory (TSCA 8b): All components are listed or exempted.
 Clean Water Act (CWA) 307: Acetonitrile (¹⁵N)

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

Section 15. Regulatory information

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 302/304

Composition/information on ingredients

No products were found.

SARA 304 RQ : Not applicable.

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 |
|---|-----------|-------------|----------------------------|----------|---------------------------------|---------------------------------|
| Hi Temp Cal Ethanediol | 100 | No. | No. | No. | Yes. | Yes. |
| Lo Temp Cal Methanol | 100 | Yes. | No. | No. | Yes. | Yes. |
| Autotest, no salt Methanol (¹³ C) | ≤0.3 | Yes. | No. | No. | Yes. | Yes. |
| 13C S/N ASTM (² H ₆)benzene | ≥50 - ≤75 | Yes. | No. | No. | Yes. | Yes. |
| 1,4-Dioxane | ≥25 - ≤50 | Yes. | No. | No. | Yes. | Yes. |
| 19F S/N (² H ₆)benzene | ≥90 | Yes. | No. | No. | Yes. | Yes. |
| 15N S/N Formamide | ≥90 | No. | No. | No. | Yes. | Yes. |
| di[(² H ₃)Methyl] sulphoxide | ≥10 - ≤25 | Yes. | No. | No. | Yes. | No. |

SARA 313

| | Product name | CAS number | % |
|--|---|------------|-----------|
| Form R - Reporting requirements | Hi Temp Cal Ethanediol | 107-21-1 | 100 |
| | Lo Temp Cal Methanol | 67-56-1 | 100 |
| | 13C S/N ASTM (² H ₆)benzene | 1076-43-3 | ≥50 - ≤75 |
| | 1,4-Dioxane | 123-91-1 | ≥25 - ≤50 |
| | 19F S/N (² H ₆)benzene | 1076-43-3 | ≥90 |

Section 15. Regulatory information

| | | | |
|------------------------------|--|-----------------------|------------------------|
| Supplier notification | Hi Temp Cal Ethenediol | 107-21-1 | 100 |
| | Lo Temp Cal Methanol | 67-56-1 | 100 |
| | 13C S/N ASTM (² H ₆)benzene 1,4-Dioxane | 1076-43-3 123-91-1 | ≥50 - ≤75 ≥25 - ≤50 |
| | 19F S/N (² H ₆)benzene | 1076-43-3 | ≥90 |

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: ETHYLENE GLYCOL; METHANOL; FORMAMIDE; BENZENE; 1,4-DIOXANE
- New York** : The following components are listed: Ethylene glycol; Methanol; Benzene; 1,4-Dioxane
- New Jersey** : The following components are listed: ETHYLENE GLYCOL; 1,2-ETHANEDIOL; METHYL ALCOHOL; METHANOL; DIMETHYL SULFOXIDE; METHANE, SULFINYLBI-; FORMAMIDE; BENZENE; 1,4-DIOXANE; 1,4-DIETHYLENE DIOXIDE
- Pennsylvania** : The following components are listed: 1,2-ETHANEDIOL; METHANOL; di[(²H₃)Methyl] sulphoxide; FORMAMIDE; BENZENE; 1,4-DIOXANE

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 |
|---|--------|--------------|--|---|
| Hi Temp Cal Ethenediol | No. | Yes. | No. | No. |
| Lo Temp Cal Methanol | No. | Yes. | No. | 23000 µg/day (ingestion) 47000 µg/day (inhalation) |
| Autotest, no salt Methanol (¹³ C) | No. | Yes. | No. | 23000 µg/day (ingestion) 47000 µg/day (inhalation) |
| 13C S/N ASTM (² H ₆)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. |
| 19F S/N (² H ₆)benzene | Yes. | Yes. | 6.4 µg/day (ingestion) 13 µg/day | 24 µg/day (ingestion) 49 µg/day (inhalation) |

Section 15. Regulatory information

(inhalation)

Canada inventory : Not determined.

International regulations

International lists :

- Australia inventory (AICS)**: Not determined.
- China inventory (IECSC)**: All components are listed or exempted.
- Japan inventory (ENCS)**: All components are listed or exempted.
- Japan inventory (ISHL)**: 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 Chemical Substances Inventory (TCSI)**: All components are listed or exempted.
- Turkey inventory**: Not determined.

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

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

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

Section 16. Other information

History

Date of issue : 12/31/2015

Date of previous issue : 10/17/2013.

Version : 2

Indicates information that has changed from previously issued version.

Notice to reader

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