

# SAFETY DATA SHEET

Universal Rat Reference RNA, Part Number 740200

## Section 1. Identification

**1.1 Product identifier**

**Product name** : Universal Rat Reference RNA, Part Number 740200  
**Part No. (Chemical Kit)** : 740200  
**Part No.** : Nase Free Water 740000-42  
                   : Universal Rat Reference RNA 740200-41  
**Validation date** : 9/30/2016

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

**Material uses** : Analytical reagent.  
                   : Nase Free Water 1.5 mL  
                   : Universal Rat Reference RNA 2 x 1.8 mL (200 µg ppt in EtOH)

**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

**2.1 Classification of the substance or mixture**

<p><b>OSHA/HCS status</b> : <input checked="" type="checkbox"/>Nase Free Water</p> <p style="margin-left: 150px;">Universal Rat Reference RNA</p>	<p>While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.</p> <p>This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).</p>
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**Classification of the substance or mixture**

<p><input checked="" type="checkbox"/>Universal Rat Reference RNA</p> <p>H225</p> <p>H319</p> <p>H335</p> <p>H336</p> <p>H373</p>	<p>FLAMMABLE LIQUIDS - Category 2</p> <p>EYE IRRITATION - Category 2A</p> <p>SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3</p> <p>SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3</p> <p>SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (liver) - Category 2</p>
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**2.2 GHS label elements**

**Hazard pictograms** :





**Signal word** :

## Section 2. Hazards identification

<b>Hazard statements</b>	: <input checked="" type="checkbox"/> Nase Free Water Universal Rat Reference RNA <input checked="" type="checkbox"/> Nase Free Water Universal Rat Reference RNA	No signal word. Danger No known significant effects or critical hazards. GHS SYMBOL - <b>Flame</b> - <b>Exclamation mark</b> - <b>Health hazard</b> - H225 - Highly flammable liquid and vapor. H319 - Causes serious eye irritation. H335 - May cause respiratory irritation. H336 - May cause drowsiness or dizziness. H373 - May cause damage to organs through prolonged or repeated exposure. (liver)
<b>Precautionary statements</b>		
<b>Prevention</b>		
	: <input checked="" type="checkbox"/> Nase Free Water Universal Rat Reference RNA	Not applicable. P280 - Wear protective gloves. Wear eye or face protection. P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P241 - Use explosion-proof electrical, ventilating, lighting and all material-handling equipment. P242 - Use only non-sparking tools. P243 - Take precautionary measures against static discharge. P233 - Keep container tightly closed. P271 - Use only outdoors or in a well-ventilated area. P260 - Do not breathe vapor. P264 - Wash hands thoroughly after handling.
<b>Response</b>	: <input checked="" type="checkbox"/> Nase Free Water Universal Rat Reference RNA	Not applicable. P314 - Get medical attention if you feel unwell. P304 + P340 + P312 - IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or physician if you feel unwell. P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337 + P313 - If eye irritation persists: Get medical attention.
<b>Storage</b>	: <input checked="" type="checkbox"/> Nase Free Water Universal Rat Reference RNA	Not applicable. P405 - Store locked up. P403 - Store in a well-ventilated place. P235 - Keep cool.
<b>Disposal</b>	: <input checked="" type="checkbox"/> Nase Free Water Universal Rat Reference RNA	Not applicable. P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
<b>Supplemental label elements</b>	: <input checked="" type="checkbox"/> Nase Free Water Universal Rat Reference RNA	None known. None known.
<b>2.3 Other hazards</b>		
<b>Hazards not otherwise classified</b>	: <input checked="" type="checkbox"/> Nase Free Water Universal Rat Reference RNA	None known. None known.

### Section 3. Composition/information on ingredients

**Substance/mixture** : RNase Free Water Substance  
 Universal Rat Reference RNA Mixture

Ingredient name	%	CAS number
RNase Free Water Water	100	7732-18-5
Universal Rat Reference RNA Ethanol	≥50 - ≤75	64-17-5

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

<p><b>Eye contact</b></p>	<p>: RNase Free Water</p> <p>Universal Rat Reference RNA</p>	<p>Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.</p> <p>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.</p>
<p><b>Inhalation</b></p>	<p>: RNase Free Water</p> <p>Universal Rat Reference RNA</p>	<p>Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.</p> <p>Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.</p>
<p><b>Skin contact</b></p>	<p>: RNase Free Water</p> <p>Universal Rat Reference RNA</p>	<p>Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.</p> <p>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.</p>

## Section 4. First aid measures

<b>Ingestion</b>	: <input checked="" type="checkbox"/> Nase Free Water  Universal Rat Reference RNA	Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur. 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.
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### 4.2 Most important symptoms/effects, acute and delayed

#### Potential acute health effects

<b>Eye contact</b>	: <input checked="" type="checkbox"/> Nase Free Water Universal Rat Reference RNA	No known significant effects or critical hazards. Causes serious eye irritation.
<b>Inhalation</b>	: <input checked="" type="checkbox"/> Nase Free Water Universal Rat Reference RNA	No known significant effects or critical hazards. Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. May cause respiratory irritation.
<b>Skin contact</b>	: <input checked="" type="checkbox"/> Nase Free Water Universal Rat Reference RNA	No known significant effects or critical hazards. No known significant effects or critical hazards.
<b>Ingestion</b>	: <input checked="" type="checkbox"/> Nase Free Water Universal Rat Reference RNA	No known significant effects or critical hazards. Can cause central nervous system (CNS) depression.

#### Over-exposure signs/symptoms

<b>Eye contact</b>	: <input checked="" type="checkbox"/> Nase Free Water Universal Rat Reference RNA	No specific data. Adverse symptoms may include the following: pain or irritation watering redness
<b>Inhalation</b>	: <input checked="" type="checkbox"/> Nase Free Water Universal Rat Reference RNA	No specific data. Adverse symptoms may include the following: respiratory tract irritation coughing nausea or vomiting headache drowsiness/fatigue dizziness/vertigo unconsciousness
<b>Skin contact</b>	: <input checked="" type="checkbox"/> Nase Free Water Universal Rat Reference RNA	No specific data. No specific data.

## Section 4. First aid measures

**Ingestion** : ☒Nase Free Water  
 Universal Rat Reference RNA No specific data.  
 No specific data.

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

**Notes to physician** : ☒Nase Free Water  
 Universal Rat Reference RNA  
 Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.  
 Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

**Specific treatments** : ☒Nase Free Water  
 Universal Rat Reference RNA  
 No specific treatment.  
 No specific treatment.

**Protection of first-aiders** : ☒Nase Free Water  
 Universal Rat Reference RNA  
 No action shall be taken involving any personal risk or without suitable training.  
 No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (Section 11)

## Section 5. Fire-fighting measures

### 5.1 Extinguishing media

**Suitable extinguishing media** : ☒Nase Free Water  
 Universal Rat Reference RNA  
 Use an extinguishing agent suitable for the surrounding fire.  
 Use dry chemical, CO<sub>2</sub>, water spray (fog) or foam.

**Unsuitable extinguishing media** : ☒Nase Free Water  
 Universal Rat Reference RNA  
 None known.  
 Do not use water jet.

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

**Specific hazards arising from the chemical** : ☒Nase Free Water  
 Universal Rat Reference RNA  
 In a fire or if heated, a pressure increase will occur and the container may burst.  
 Highly flammable liquid and vapor. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Runoff to sewer may create fire or explosion hazard.

**Hazardous thermal decomposition products** : ☒Nase Free Water  
 Universal Rat Reference RNA  
 No specific data.  
 Decomposition products may include the following materials:  
 carbon dioxide  
 carbon monoxide

### 5.3 Advice for firefighters

**Special protective actions for fire-fighters** : ☒Nase Free Water  
 Universal Rat Reference RNA  
 Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.  
 Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire

## Section 5. Fire-fighting measures

### Special protective equipment for fire-fighters

:  Nose Free Water

Universal Rat Reference RNA

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

Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

## Section 6. Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

#### For non-emergency personnel

:  Nose Free Water

Universal Rat Reference RNA

No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment. No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

#### For emergency responders

:  Nose Free Water

Universal Rat Reference RNA

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". 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".

### 6.2 Environmental precautions

:  Nose Free Water

Universal Rat Reference RNA

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).

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

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

## Section 6. Accidental release measures

**Methods for cleaning up** : ☑Nase Free Water

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.

Universal Rat Reference RNA

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** : ☑Nase Free Water

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

Universal Rat Reference RNA

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

**Advice on general occupational hygiene** : ☑Nase Free Water

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

Universal Rat Reference RNA

**7.2 Conditions for safe storage, including any incompatibilities** : ☑Nase Free Water

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

## Section 7. Handling and storage

Universal Rat Reference RNA

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)

<b>Recommendations</b>	: <input checked="" type="checkbox"/> Nase Free Water Universal Rat Reference RNA	Industrial applications, Professional applications. Industrial applications, Professional applications.
<b>Industrial sector specific solutions</b>	: <input checked="" type="checkbox"/> Nase Free Water Universal Rat Reference RNA	Not applicable. Not applicable.

## Section 8. Exposure controls/personal protection

### 8.1 Control parameters

#### Occupational exposure limits

Ingredient name	Exposure limits
<input checked="" type="checkbox"/> Nase Free Water Water  Universal Rat Reference RNA Ethanol	None.  <b>ACGIH TLV (United States, 3/2016).</b> STEL: 1000 ppm 15 minutes. <b>OSHA PEL 1989 (United States, 3/1989).</b> TWA: 1000 ppm 8 hours. TWA: 1900 mg/m <sup>3</sup> 8 hours. <b>NIOSH REL (United States, 10/2013).</b> TWA: 1000 ppm 10 hours. TWA: 1900 mg/m <sup>3</sup> 10 hours. <b>OSHA PEL (United States, 2/2013).</b> TWA: 1000 ppm 8 hours. TWA: 1900 mg/m <sup>3</sup> 8 hours.

### 8.2 Exposure controls

<b>Appropriate engineering controls</b>	: Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.
<b>Environmental exposure controls</b>	: Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.



## Section 8. Exposure controls/personal protection

### 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

<b>Physical state</b>	: <input checked="" type="checkbox"/> Nase Free Water Universal Rat Reference RNA	Liquid. Liquid.
<b>Color</b>	: <input checked="" type="checkbox"/> Nase Free Water Universal Rat Reference RNA	Colorless. Not available.
<b>Odor</b>	: <input checked="" type="checkbox"/> Nase Free Water Universal Rat Reference RNA	Odorless. Not available.
<b>Odor threshold</b>	: <input checked="" type="checkbox"/> Nase Free Water Universal Rat Reference RNA	Not available. Not available.
<b>pH</b>	: <input checked="" type="checkbox"/> Nase Free Water Universal Rat Reference RNA	7 Not available.
<b>Melting point</b>	: <input checked="" type="checkbox"/> Nase Free Water Universal Rat Reference RNA	0°C (32°F) Not available.
<b>Boiling point</b>	: <input checked="" type="checkbox"/> Nase Free Water Universal Rat Reference RNA	100°C (212°F) Not available.
<b>Flash point</b>	: <input checked="" type="checkbox"/> Nase Free Water Universal Rat Reference RNA	Not applicable. Closed cup: -18 to 23°C (-0.4 to 73.4°F)
<b>Evaporation rate</b>	: <input checked="" type="checkbox"/> Nase Free Water Universal Rat Reference RNA	Not available. Not available.

## Section 9. Physical and chemical properties

<b>Flammability (solid, gas)</b>	: <input checked="" type="checkbox"/> Nase Free Water Universal Rat Reference RNA	Not applicable. Not applicable.
<b>Lower and upper explosive (flammable) limits</b>	: <input checked="" type="checkbox"/> Nase Free Water Universal Rat Reference RNA	Not available. Not available.
<b>Vapor pressure</b>	: <input checked="" type="checkbox"/> Nase Free Water Universal Rat Reference RNA	3.2 kPa (23.8 mm Hg) [room temperature] Not available.
<b>Vapor density</b>	: <input checked="" type="checkbox"/> Nase Free Water Universal Rat Reference RNA	0.62 [Air = 1] Not available.
<b>Relative density</b>	: <input checked="" type="checkbox"/> Nase Free Water Universal Rat Reference RNA	1 Not available.
<b>Solubility</b>	: <input checked="" type="checkbox"/> Nase Free Water  Universal Rat Reference RNA	Easily soluble in the following materials: cold water and hot water. Easily soluble in the following materials: cold water and hot water.
<b>Partition coefficient: n-octanol/water</b>	: <input checked="" type="checkbox"/> Nase Free Water Universal Rat Reference RNA	-1.38 Not available.
<b>Auto-ignition temperature</b>	: <input checked="" type="checkbox"/> Nase Free Water Universal Rat Reference RNA	Not applicable. Not available.
<b>Decomposition temperature</b>	: <input checked="" type="checkbox"/> Nase Free Water Universal Rat Reference RNA	>1200°C (>2192°F) Not available.
<b>Viscosity</b>	: <input checked="" type="checkbox"/> Nase Free Water Universal Rat Reference RNA	Not available. Not available.

## Section 10. Stability and reactivity

<b>10.1 Reactivity</b>	: <input checked="" type="checkbox"/> Nase Free Water  Universal Rat Reference RNA	No specific test data related to reactivity available for this product or its ingredients. No specific test data related to reactivity available for this product or its ingredients.
<b>10.2 Chemical stability</b>	: <input checked="" type="checkbox"/> Nase Free Water Universal Rat Reference RNA	The product is stable. The product is stable.
<b>10.3 Possibility of hazardous reactions</b>	: <input checked="" type="checkbox"/> Nase Free Water  Universal Rat Reference RNA	Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous reactions will not occur.
<b>10.4 Conditions to avoid</b>	: <input checked="" type="checkbox"/> Nase Free Water Universal Rat Reference RNA	No specific data. Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.
<b>10.5 Incompatible materials</b>	: <input checked="" type="checkbox"/> Nase Free Water  Universal Rat Reference RNA	May react or be incompatible with oxidizing materials. Reactive or incompatible with the following materials: oxidizing materials

## Section 10. Stability and reactivity

### 10.6 Hazardous decomposition products

:  Nose Free Water

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Universal Rat Reference RNA

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## Section 11. Toxicological information

### 11.1 Information on toxicological effects

#### Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
<input checked="" type="checkbox"/> Universal Rat Reference RNA Ethanol	LC50 Inhalation Vapor LD50 Oral	Rat Rat	124700 mg/m <sup>3</sup> 7 g/kg	4 hours -

#### Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
<input checked="" type="checkbox"/> Universal Rat Reference RNA Ethanol	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Eyes - Moderate irritant	Rabbit	-	0.066666667 minutes 100 milligrams	-
	Eyes - Moderate irritant	Rabbit	-	100 microliters	-
	Skin - Mild irritant	Rabbit	-	400 milligrams	-
	Skin - Moderate irritant	Rabbit	-	24 hours 20 milligrams	-

#### Sensitization

Not available.

#### Mutagenicity

Not available.

#### Carcinogenicity

Not available.

#### Classification

Product/ingredient name	OSHA	IARC	NTP
<input checked="" type="checkbox"/> Universal Rat Reference RNA Ethanol	-	1	-

#### Reproductive toxicity

Not available.

#### Teratogenicity

Not available.

#### Specific target organ toxicity (single exposure)

## Section 11. Toxicological information

Name	Category	Route of exposure	Target organs
Universal Rat Reference RNA Ethanol	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects

### Specific target organ toxicity (repeated exposure)

Name	Category	Route of exposure	Target organs
Universal Rat Reference RNA Ethanol	Category 2	Not determined	liver

### Aspiration hazard

Not available.

<b>Information on the likely routes of exposure</b>	: <input checked="" type="checkbox"/> Nose Free Water Universal Rat Reference RNA	Not available. Routes of entry anticipated: Oral, Dermal, Inhalation.
<b>Potential acute health effects</b>		
<b>Eye contact</b>	: <input checked="" type="checkbox"/> Nose Free Water Universal Rat Reference RNA	No known significant effects or critical hazards. Causes serious eye irritation.
<b>Inhalation</b>	: <input checked="" type="checkbox"/> Nose Free Water Universal Rat Reference RNA	No known significant effects or critical hazards. Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. May cause respiratory irritation.
<b>Skin contact</b>	: <input checked="" type="checkbox"/> Nose Free Water Universal Rat Reference RNA	No known significant effects or critical hazards. No known significant effects or critical hazards.
<b>Ingestion</b>	: <input checked="" type="checkbox"/> Nose Free Water Universal Rat Reference RNA	No known significant effects or critical hazards. Can cause central nervous system (CNS) depression.

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

<b>Eye contact</b>	: <input checked="" type="checkbox"/> Nose Free Water Universal Rat Reference RNA	No specific data. Adverse symptoms may include the following: pain or irritation watering redness
<b>Inhalation</b>	: <input checked="" type="checkbox"/> Nose Free Water Universal Rat Reference RNA	No specific data. Adverse symptoms may include the following: respiratory tract irritation coughing nausea or vomiting headache drowsiness/fatigue dizziness/vertigo unconsciousness
<b>Skin contact</b>	: <input checked="" type="checkbox"/> Nose Free Water Universal Rat Reference RNA	No specific data. No specific data.
<b>Ingestion</b>	: <input checked="" type="checkbox"/> Nose Free Water Universal Rat Reference RNA	No specific data. No specific data.

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

## Section 11. Toxicological information

### Short term exposure

**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

### Long term exposure

**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

### Potential chronic health effects

<b>General</b>	: <input checked="" type="checkbox"/> Nase Free Water Universal Rat Reference RNA	No known significant effects or critical hazards. May cause damage to organs through prolonged or repeated exposure.
<b>Carcinogenicity</b>	: <input checked="" type="checkbox"/> Nase Free Water Universal Rat Reference RNA	No known significant effects or critical hazards. No known significant effects or critical hazards.
<b>Mutagenicity</b>	: <input checked="" type="checkbox"/> Nase Free Water Universal Rat Reference RNA	No known significant effects or critical hazards. No known significant effects or critical hazards.
<b>Teratogenicity</b>	: <input checked="" type="checkbox"/> Nase Free Water Universal Rat Reference RNA	No known significant effects or critical hazards. No known significant effects or critical hazards.
<b>Developmental effects</b>	: <input checked="" type="checkbox"/> Nase Free Water Universal Rat Reference RNA	No known significant effects or critical hazards. No known significant effects or critical hazards.
<b>Fertility effects</b>	: <input checked="" type="checkbox"/> Nase Free Water Universal Rat Reference RNA	No known significant effects or critical hazards. No known significant effects or critical hazards.

### Numerical measures of toxicity

#### Acute toxicity estimates

Not available.

<b>Other information</b>	: <input checked="" type="checkbox"/> Nase Free Water Universal Rat Reference RNA	Not available. Adverse symptoms may include the following: Repeated exposure may cause skin dryness or cracking.
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## Section 12. Ecological information

### 12.1 Toxicity

Product/ingredient name	Result	Species	Exposure
<input checked="" type="checkbox"/> Universal Rat Reference RNA Ethanol	Acute EC50 17.921 mg/l Marine water	Algae - Ulva pertusa	96 hours
	Acute EC50 2000 µg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 25500 µg/l Marine water	Crustaceans - Artemia franciscana - Larvae	48 hours
	Acute LC50 42000 µg/l Fresh water	Fish - Oncorhynchus mykiss	4 days
	Chronic NOEC 4.995 mg/l Marine water	Algae - Ulva pertusa	96 hours
	Chronic NOEC 100 ul/L Fresh water	Daphnia - Daphnia magna - Neonate	21 days
	Chronic NOEC 0.375 ul/L Fresh water	Fish - Gambusia holbrooki - Larvae	12 weeks

### 12.2 Persistence and degradability

## Section 12. Ecological information

Product/ingredient name	Test	Result	Dose	Inoculum
<input checked="" type="checkbox"/> RNase Free Water Water	-	100 % - 28 days	-	-
Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability	
<input checked="" type="checkbox"/> RNase Free Water Water	-	-	Readily	
<b>Universal Rat Reference RNA</b> Ethanol	-	-	Readily	

### 12.3 Bioaccumulative potential

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
<input checked="" type="checkbox"/> RNase Free Water Water	-1.38	-	low
<b>Universal Rat Reference RNA</b> Ethanol	-0.35	0.5	low

### 12.4 Mobility in soil

**Soil/water partition coefficient (K<sub>oc</sub>)** : Not available.

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

## Section 13. Disposal considerations

### 13.1 Waste treatment methods

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

**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

**Additional information** : **Special provisions**  
251, 340

**Remarks**  
Excepted Quantity

Regulatory information	UN number	Proper shipping name	Classes	PG*	Label	Additional information
DOT	UN3316	Chemical kits	9	II		<p><b>Limited quantity</b> Yes.</p> <p><b>Packaging instruction</b> <b>Passenger aircraft</b> Quantity limitation: 10 kg</p> <p><b>Cargo aircraft</b> Quantity limitation: 10 kg</p> <p><b>Special provisions</b> 15</p>
TDG	UN3316	CHEMICAL KIT	9	II		<p>Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.43-2.45 (Class 9).</p>
Mexico	UN3316	EQUIPO QUIMICO	9	II		<p><b>Special provisions</b> 251, 340</p>
IMDG	UN3316	CHEMICAL KIT	9	II		<p><b>Emergency schedules (EmS)</b> F-A, _S-P_</p> <p><b>Special provisions</b> 251, 340</p>

## Section 14. Transport information

IATA	UN3316	Chemical kit	9	II		<p><b><u>Passenger and Cargo Aircraft</u></b>                  Quantity limitation: 10 kg                  Packaging instructions: 960</p> <p><b><u>Cargo Aircraft Only</u></b>                  Quantity limitation: 10 kg                  Packaging instructions: 960</p> <p><b><u>Limited Quantities - Passenger Aircraft</u></b>                  Quantity limitation: 1 kg                  Packaging instructions: Y960</p> <p><b><u>Special provisions</u></b>                  A44, A163</p> <p><b><u>Remarks</u></b>                  Excepted Quantity</p>
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PG\* : Packing group

## Section 15. Regulatory information

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

**U.S. Federal regulations** : **United States inventory (TSCA 8b)**: All components are listed or exempted.  
**Clean Water Act (CWA) 311**: Edetic acid

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

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

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

**DEA List I Chemicals (Precursor Chemicals)** : Not listed

**DEA List II Chemicals (Essential Chemicals)** : 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](#)



## Section 15. Regulatory information

Name	%	Fire hazard	Sudden release of pressure	Reactive	Immediate (acute) health hazard	Delayed (chronic) health hazard
Universal Rat Reference RNA Ethanol	≥50 - ≤75	Yes.	No.	No.	Yes.	Yes.

### State regulations

- Massachusetts** : The following components are listed: ETHYL ALCOHOL; DENATURED ALCOHOL
- New York** : None of the components are listed.
- New Jersey** : The following components are listed: ETHYL ALCOHOL; ALCOHOL
- Pennsylvania** : The following components are listed: DENATURED ALCOHOL; ETHANOL
- California Prop. 65**

No products were found.

### International regulations

#### Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

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

Not listed.

#### Stockholm Convention on Persistent Organic Pollutants

Not listed.

#### Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

#### UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

### Inventory list

- Australia** : All components are listed or exempted.
- Canada inventory** : All components are listed or exempted.
- China** : All components are listed or exempted.
- Europe** : All components are listed or exempted.
- Japan** : **Japan inventory (ENCS)**: All components are listed or exempted.  
**Japan inventory (ISHL)**: Not determined.
- Malaysia** : Not determined.
- New Zealand** : All components are listed or exempted.
- Philippines** : All components are listed or exempted.
- Republic of Korea** : All components are listed or exempted.
- Taiwan** : All components are listed or exempted.
- Turkey** : Not determined.

## Section 16. Other information

### History

**Date of issue** : 09/30/2016  
**Date of previous issue** : 09/08/2014.  
**Version** : 5

✔ Indicates information that has changed from previously issued version.

### Notice to reader

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