

# SAFETY DATA SHEET



Universal Rat Reference RNA, Part Number 740200

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1 Product identifier

**Product name** : Universal Rat Reference RNA, Part Number 740200

**UK (GB) REACH Registration number**

Registration number	Legal entity
<p><input checked="" type="checkbox"/> RNase Free Water Exempt from REACH: According to the provisions of Article 2(7)(a) and Annex IV of REACH</p>	-

**CAS number** :  RNase Free Water 7732-18-5  
                   : Universal Rat Reference RNA Not applicable.

**Part no. (chemical kit)** : 740200

**Part no.** :  RNase Free Water 740000-42  
                   : Universal Rat Reference RNA 740200-41

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

**Identified uses** :  Analytical reagent.  
                           :  RNase Free Water 1.5 ml  
                           : Universal Rat Reference RNA 2 x 1.8 ml (200 µg ppt in EtOH)

**Uses advised against** : None known.

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

Agilent Technologies LDA UK Ltd.  
 5500 Lakeside Cheadle Royal Business Park,  
 Cheadle, Cheshire, SK8 3GR  
 United Kingdom  
 Tel: +44 (0) 345 712 5292  
**e-mail address of person responsible for this SDS** : pdl-msds\_author@agilent.com

### 1.4 Emergency telephone number

**Emergency telephone number (with hours of operation)** : CHEMTREC®: +(44)-870-8200418

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

**Product definition** :  RNase Free Water Mono-constituent substance  
                           : Universal Rat Reference Mixture  
                           : RNA

**Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]**

**Universal Rat Reference RNA**  
 H225 FLAMMABLE LIQUIDS Category 2  
 H319 SERIOUS EYE DAMAGE/EYE IRRITATION Category 2



RNase Free Water The product is not classified as hazardous according to UK CLP Regulation SI 2019/720 as amended.  
 Universal Rat Reference RNA The product is classified as hazardous according to UK CLP Regulation SI 2019/720 as amended.

## SECTION 2: Hazards identification

See Section 16 for the full text of the H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.

### 2.2 Label elements

<b>Hazard pictograms</b>	: <input checked="" type="checkbox"/> Universal Rat Reference RNA	 
<b>Signal word</b>	: <input checked="" type="checkbox"/> No signal word. <input checked="" type="checkbox"/> Universal Rat Reference RNA	: No signal word. Danger
<b>Hazard statements</b>	: <input checked="" type="checkbox"/> No known significant effects or critical hazards. <input checked="" type="checkbox"/> Universal Rat Reference RNA	: H225 - Highly flammable liquid and vapour. H319 - Causes serious eye irritation.
<b><u>Precautionary statements</u></b>		
<b>Prevention</b>	: <input checked="" type="checkbox"/> Not applicable. <input checked="" type="checkbox"/> Universal Rat Reference RNA	: P280 - Wear eye or face protection. P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
<b>Response</b>	: <input checked="" type="checkbox"/> Not applicable. <input checked="" type="checkbox"/> Universal Rat Reference RNA	: 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 advice or attention.
<b>Storage</b>	: <input checked="" type="checkbox"/> Not applicable. <input checked="" type="checkbox"/> Universal Rat Reference RNA	: Not applicable. Not applicable.
<b>Disposal</b>	: <input checked="" type="checkbox"/> Not applicable. <input checked="" type="checkbox"/> Universal Rat Reference RNA	: 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"/> Not applicable. <input checked="" type="checkbox"/> Universal Rat Reference RNA	: Not applicable. Not applicable.
<b>Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles</b>	: <input checked="" type="checkbox"/> Not applicable. <input checked="" type="checkbox"/> Universal Rat Reference RNA	: Not applicable. Not applicable.
<b><u>Special packaging requirements</u></b>		
<b>Containers to be fitted with child-resistant fastenings</b>	: <input checked="" type="checkbox"/> Not applicable. <input checked="" type="checkbox"/> Universal Rat Reference RNA	: Not applicable. Not applicable.
<b>Tactile warning of danger</b>	: <input checked="" type="checkbox"/> Not applicable. <input checked="" type="checkbox"/> Universal Rat Reference RNA	: Not applicable. Not applicable.

### 2.3 Other hazards

Universal Rat Reference RNA, Part Number 740200

## SECTION 2: Hazards identification

Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII	PBT	P	B	T	vPvB	vP	vB
	RNase Free Water Not applicable (Inorganic)				Not applicable (Inorganic)		
Other hazards which do not result in classification	Universal Rat Reference RNA	This mixture does not contain any substances that are assessed to be a PBT or a vPvB.					
	Universal Rat Reference RNA	None known.					

## SECTION 3: Composition/information on ingredients

3.1 Substances : RNase Free Water Mono-constituent substance  
 Universal Rat Reference RNA Mixture

Product/ingredient name	Identifiers	%	Classification	Type
RNase Free Water water	UK (GB) REACH #: Annex IV REACH #: Annex IV EC: 231-791-2 CAS: 7732-18-5	100	Not classified.	[1]
Universal Rat Reference RNA ethanol	EC: 200-578-6 CAS: 64-17-5 Index: 603-002-00-5	≥50 - ≤75	Flam. Liq. 2, H225 Eye Irrit. 2, H319  <b>See Section 16 for the full text of the H statements declared above.</b>	[1] [2]

There are no additional ingredients present which, within the current knowledge of the supplier, are classified and contribute to the classification of the substance and hence require reporting in this section.

Type	
RNase Free Water	[1] Constituent
Universal Rat Reference RNA	[1] Substance classified with a health or environmental hazard [2] Substance with a workplace exposure limit




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

## SECTION 4: First aid measures

### 4.1 Description of first aid measures





Eye contact	RNase Free Water	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.
	Universal Rat Reference RNA	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	RNase Free Water	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
	Universal Rat Reference RNA	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 adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately.

## SECTION 4: First aid measures



<b>Skin contact</b>	:  Nose Free Water  Universal Rat Reference RNA	Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.  Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.  Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.
<b>Ingestion</b>	:  Nose Free Water  Universal Rat Reference RNA	Wash out mouth with water. 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. 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 adverse health effects persist or are severe. 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.
<b>Protection of first-aiders</b>	:  Nose 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. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

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

#### Over-exposure signs/symptoms



<b>Eye contact</b>	:  Nose Free Water Universal Rat Reference RNA	No specific data. Adverse symptoms may include the following:  pain or irritation watering redness
<b>Inhalation</b>	:  Nose Free Water Universal Rat Reference RNA	No specific data. No specific data.
<b>Skin contact</b>	:  Nose Free Water Universal Rat Reference RNA	No specific data. No specific data.
<b>Ingestion</b>	:  Nose Free Water Universal Rat Reference RNA	No specific data. No specific data.

### 4.3 Indication of any immediate medical attention and special treatment needed



<b>Notes to physician</b>	:  Nose 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.
<b>Specific treatments</b>	:  Nose Free Water Universal Rat Reference RNA	No specific treatment. No specific treatment.

## SECTION 5: Firefighting measures



### 5.1 Extinguishing media

<b>Suitable extinguishing media</b>	:  <b>Nase Free Water</b> 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.
<b>Unsuitable extinguishing media</b>	:  <b>Nase Free Water</b> Universal Rat Reference RNA	None known. Do not use water jet.

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



<b>Hazards from the substance or mixture</b>	:  <b>Nase Free Water</b> Universal Rat Reference RNA	In a fire or if heated, a pressure increase will occur and the container may burst. Highly flammable liquid and vapour. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion.
<b>Hazardous combustion products</b>	:  <b>Nase Free Water</b> Universal Rat Reference RNA	No specific data. Decomposition products may include the following materials:  carbon dioxide carbon monoxide

### 5.3 Advice for firefighters


<b>Special protective actions for fire-fighters</b>	:  <b>Nase Free Water</b> 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 area if this can be done without risk. Use water spray to keep fire-exposed containers cool.
<b>Special protective equipment for fire-fighters</b>	:  <b>Nase Free Water</b> Universal Rat Reference RNA	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

<b>For non-emergency personnel</b>	:  <b>Nase Free Water</b> 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 spilt 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 spilt material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
<b>For emergency responders</b>	:  <b>Nase Free Water</b> Universal Rat Reference RNA	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel". If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

## SECTION 6: Accidental release measures

<b>6.2 Environmental precautions</b>	:  Nose Free Water	Avoid dispersal of spilt 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).
	Universal Rat Reference RNA	Avoid dispersal of spilt 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 material for containment and cleaning up

<b>Methods for cleaning up</b>	:  Nose 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.

<b>6.4 Reference to other sections</b>	: See Section 1 for emergency contact information. See Section 8 for information on appropriate personal protective equipment. See Section 13 for additional waste treatment information.
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## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

<b>Protective measures</b>	:  Nose 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 ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapour 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. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.
<b>Advice on general occupational hygiene</b>	:  Nose 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.
	Universal Rat Reference RNA	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.


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

## SECTION 7: Handling and storage



<b>Storage</b>	:  Nose 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 to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.
	Universal Rat Reference RNA	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. Eliminate all ignition sources. Separate from oxidising 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 unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

### Seveso Directive - Reporting thresholds

#### Danger criteria

Category	Notification and MAPP threshold	Safety report threshold
 Universal Rat Reference RNA P5c	5000 tonne	50000 tonne


### 7.3 Specific end use(s)

<b>Recommendations</b>	:  Nose Free Water Universal Rat Reference RNA	Industrial applications, Professional applications. Industrial applications, Professional applications.
<b>Industrial sector specific solutions</b>	:  Nose Free Water Universal Rat Reference RNA	Not available. Not available.

## SECTION 8: Exposure controls/personal protection


### 8.1 Control parameters

#### Occupational exposure limits

Product/ingredient name	Exposure limit values
 Universal Rat Reference RNA ethanol	<b>EH40/2005 WELs (United Kingdom (UK), 1/2020).</b> TWA: 1000 ppm 8 hours. TWA: 1920 mg/m <sup>3</sup> 8 hours.

#### Biological exposure indices

No exposure indices known.

<b>Recommended monitoring procedures</b>	:  Reference should be made to appropriate monitoring standards. Reference to national guidance documents for methods for the determination of hazardous substances will also be required.
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#### DNELs/DMELs

## SECTION 8: Exposure controls/personal protection

Product/ingredient name	Type	Exposure	Value	Population	Effects
Universal Rat Reference RNA ethanol	DNEL	Long term Inhalation	380 mg/m <sup>3</sup>	Workers	Systemic
	DNEL	Long term Oral	87 mg/kg bw/day	General population	Systemic
	DNEL	Long term Inhalation	114 mg/m <sup>3</sup>	General population	Systemic
	DNEL	Long term Dermal	206 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	343 mg/kg bw/day	Workers	Systemic
	DNEL	Short term Inhalation	950 mg/m <sup>3</sup>	General population	Local
	DNEL	Short term Inhalation	1900 mg/m <sup>3</sup>	Workers	Local

### PNECs

No PNECs available

### 8.2 Exposure controls

**Appropriate engineering controls** : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

#### 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: safety glasses with side-shields.

#### 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.

**Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

**Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

**Respiratory protection** : 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.

**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.



## SECTION 9: Physical and chemical properties

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

### 9.1 Information on basic physical and chemical properties

#### Appearance

<b>Physical state</b>	:	<input checked="" type="checkbox"/> Nase Free Water	Liquid.
		Universal Rat Reference	Liquid.
		RNA	
<b>Colour</b>	:	<input checked="" type="checkbox"/> Nase Free Water	Colourless.
		Universal Rat Reference	Not available.
		RNA	
<b>Odour</b>	:	<input checked="" type="checkbox"/> Nase Free Water	Odourless.
		Universal Rat Reference	Not available.
		RNA	
<b>Odour threshold</b>	:	<input checked="" type="checkbox"/> Nase Free Water	Not available.
		Universal Rat Reference	Not available.
		RNA	
<b>Melting point/freezing point</b>	:	<input checked="" type="checkbox"/> Nase Free Water	0°C
		Universal Rat Reference	Not available.
		RNA	
<b>Initial boiling point and boiling range</b>	:	<input checked="" type="checkbox"/> Nase Free Water	100°C
		Universal Rat Reference	Not available.
		RNA	
<b>Flammability</b>	:	<input checked="" type="checkbox"/> Nase Free Water	Not applicable.
		Universal Rat Reference	Not applicable.
		RNA	
<b>Upper/lower flammability or explosive limits</b>	:	<input checked="" type="checkbox"/> Nase Free Water	Not available.
		Universal Rat Reference	Not available.
		RNA	
<b>Flash point</b>	:	<input checked="" type="checkbox"/> Nase Free Water	Not available.
		Universal Rat Reference	Closed cup: -18 to 23°C [Based on solvent.]
		RNA	
<b>Auto-ignition temperature</b>	:	<input checked="" type="checkbox"/> Nase Free Water	Not applicable.

Ingredient name	°C	Method
<input checked="" type="checkbox"/> Universal Rat Reference RNA		
ethanol	455	DIN 51794

<b>Decomposition temperature</b>	:	<input checked="" type="checkbox"/> Nase Free Water	Not available.
		Universal Rat Reference	Not available.
		RNA	

<b>pH</b>	:	<input checked="" type="checkbox"/> Nase Free Water	7
		Universal Rat Reference	Not available.
		RNA	

<b>Viscosity</b>	:	<input checked="" type="checkbox"/> Nase Free Water	Not available.
		Universal Rat Reference	Not available.
		RNA	

Solubility(ies)	Media	Result
<input checked="" type="checkbox"/> Nase Free Water	water	Soluble
Universal Rat Reference RNA	water	Soluble

<b>Partition coefficient: n-octanol/water</b>	:	<input checked="" type="checkbox"/> Nase Free Water	-1.38
		Universal Rat Reference	Not applicable.
		RNA	

<b>Vapour pressure</b>	:	<input checked="" type="checkbox"/> Nase Free Water	2.3 kPa (17.5 mm Hg) [room temperature] 12.3 kPa (92.258 mm Hg) [50°C]
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## SECTION 9: Physical and chemical properties

Ingredient name	Vapour Pressure at 20°C			Vapour pressure at 50°C		
	mm Hg	kPa	Method	mm Hg	kPa	Method
<b>Universal Rat Reference RNA</b>						
ethanol	42.94865	5.7	-	-	-	-
water	17.5	2.3	-	92.258	12.3	-

**Evaporation rate** : Nase Free Water Not available.  
 Universal Rat Reference RNA Not available.

**Relative density** : Nase Free Water 1  
 Universal Rat Reference RNA Not available.

**Vapour density** : Nase Free Water 0.62 [Air = 1]  
 Universal Rat Reference RNA Not available.

**Explosive properties** : Nase Free Water Not available.  
 Universal Rat Reference RNA Not available.

**Oxidising properties** : Nase Free Water Not available.  
 Universal Rat Reference RNA Not available.

### Particle characteristics

**Median particle size** : Nase Free Water Not applicable.  
 Universal Rat Reference RNA Not applicable.

### 9.2 Other information

No additional information.

## SECTION 10: Stability and reactivity

**10.1 Reactivity** : Nase Free Water No specific test data related to reactivity available for this product or its ingredients.  
 Universal Rat Reference RNA No specific test data related to reactivity available for this product or its ingredients.

**10.2 Chemical stability** : Nase Free Water The product is stable.  
 Universal Rat Reference RNA The product is stable.


**10.3 Possibility of hazardous reactions** : Nase Free Water Under normal conditions of storage and use, hazardous reactions will not occur.  
 Universal Rat Reference RNA Under normal conditions of storage and use, hazardous reactions will not occur.

**10.4 Conditions to avoid** : Nase Free Water No specific data.  
 Universal Rat Reference RNA Avoid all possible sources of ignition (spark or flame). Do not pressurise, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.

**10.5 Incompatible materials** : Nase Free Water May react or be incompatible with oxidising materials.  
 Universal Rat Reference RNA Reactive or incompatible with the following materials:  
 oxidising materials

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## SECTION 10: Stability and reactivity

**10.6 Hazardous decomposition products** :  **N**ase 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
 Universal Rat Reference RNA ethanol	LC50 Inhalation Vapour LD50 Oral	Rat Rat	124700 mg/m <sup>3</sup> 7 g/kg	4 hours -

#### Acute toxicity estimates

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapours) (mg/l)	Inhalation (dusts and mists) (mg/l)
 Universal Rat Reference RNA ethanol	7000	N/A	N/A	124.7	N/A

#### Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
 Universal Rat Reference RNA ethanol	Eyes - Mild irritant	Rabbit	-	24 hours 500 mg	-
	Eyes - Moderate irritant	Rabbit	-	0.066666667 minutes 100 mg	-
	Eyes - Moderate irritant	Rabbit	-	100 uL	-

#### Sensitiser

**Conclusion/Summary** : Not available.

#### Mutagenicity

**Conclusion/Summary** : Not available.

#### Carcinogenicity

**Conclusion/Summary** : Not available.

#### Reproductive toxicity

**Conclusion/Summary** : Not available.

#### Teratogenicity

**Conclusion/Summary** : Not available.

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


Not available.

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

Not available.

#### Aspiration hazard

Not available.

**Information on likely routes of exposure** :  **N**ase Free Water Not available.  
 Universal Rat Reference RNA Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes.

#### Potential acute health effects

## SECTION 11: Toxicological information

<b>Inhalation</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. No known significant effects or critical hazards.
<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>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.

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

<b>Inhalation</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.
<b>Skin contact</b>	: <input checked="" type="checkbox"/> Nose Free Water Universal Rat Reference RNA	No specific data. No specific data.
<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

### Delayed and immediate effects as well as chronic effects from short and long-term exposure

#### Short term exposure

<b>Potential immediate effects</b>	: Not available.
<b>Potential delayed effects</b>	: Not available.

#### Long term exposure

<b>Potential immediate effects</b>	: Not available.
<b>Potential delayed effects</b>	: Not available.

### Potential chronic health effects

<b>Conclusion/Summary</b>	: Not available.	
<b>General</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>Carcinogenicity</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>Mutagenicity</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>Reproductive toxicity</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>Other information</b>	: <input checked="" type="checkbox"/> Universal Rat Reference RNA	Adverse symptoms may include the following: Repeated exposure may cause skin dryness or cracking.

## SECTION 12: Ecological information

### 12.1 Toxicity

Product/ingredient name	Result	Species	Exposure
Universal Rat Reference RNA ethanol	Acute EC50 3306 mg/l Marine water	Algae - Green algae - <i>Ulva pertusa</i>	96 hours
	Acute EC50 1074 mg/l Fresh water	Crustaceans - Ostracod - <i>Cypris subglobosa</i>	48 hours
	Acute EC50 2 mg/l Fresh water	Daphnia - Water flea - <i>Daphnia magna</i>	48 hours
	Acute LC50 11000000 µg/l Marine water	Fish - Bleak - <i>Alburnus alburnus</i>	96 hours
	Chronic NOEC 4.995 mg/l Marine water	Algae - Green algae - <i>Ulva pertusa</i>	96 hours
	Chronic NOEC 100 µl/L Fresh water	Daphnia - Water flea - <i>Daphnia magna</i> - Neonate	21 days

**Conclusion/Summary** : Not available.

### 12.2 Persistence and degradability

**Conclusion/Summary** : Not available.

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
RNase Free Water water	-	-	Readily
Universal Rat Reference RNA ethanol	-	-	Readily

### 12.3 Bioaccumulative potential

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
RNase Free Water water	-1.38	-	Low
Universal Rat Reference RNA ethanol	-0.35	0.5	Low

### 12.4 Mobility in soil

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

**Mobility** : Not available.

### 12.5 Results of PBT and vPvB assessment

Product/ingredient name	PBT	P	B	T	vPvB	vP	vB
RNase Free Water water	Not applicable (Inorganic)	N/A	N/A	N/A	Not applicable (Inorganic)	N/A	N/A

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

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

#### Product

**Methods of disposal** : The generation of waste should be avoided or minimised 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.




**Hazardous waste** : Within the present knowledge of the supplier, this product is not regarded as hazardous waste, as defined by EU Directive 2008/98/EC.

#### Packaging

**Methods of disposal** : The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

**Special precautions** : This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

## SECTION 14: Transport information

	ADR/RID	IMDG	IATA
14.1 UN number	UN3316	UN3316	UN3316
14.2 UN proper shipping name	CHEMICAL KIT	CHEMICAL KIT	Chemical kit
14.3 Transport hazard class(es)	9 	9 	9 
14.4 Packing group	II	II	II
14.5 Environmental hazards	No.	No.	No.

### Additional information

Remarks: Excepted Quantity

**ADR/RID** : **Hazard identification number** 90  
**Limited quantity** See SP 251  
**Special provisions** 251, 340, 671  
**Tunnel code** (E)

**IMDG** : **Emergency schedules** F-A, \_S-P\_  
**Special provisions** 251, 340

**IATA** : **Quantity limitation** Passenger and Cargo Aircraft: 10 kg. Packaging instructions: 960. Cargo Aircraft Only: 10 kg. Packaging instructions: 960. Limited Quantities - Passenger Aircraft: 1 kg. Packaging instructions: Y960.  
**Special provisions** A44, A163

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

**14.7 Transport in bulk according to IMO instruments** : Not available.

## SECTION 15: Regulatory information

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

#### UK (GB)/REACH

##### Annex XIV - List of substances subject to authorisation

###### Annex XIV

None of the components are listed.

###### Substances of very high concern

None of the components are listed.

###### Ozone depleting substances

Not listed.

###### Prior Informed Consent (PIC)

Not listed.

###### Persistent Organic Pollutants

Not listed.

#### Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

Product / Ingredient name	Identifiers	Status
<input checked="" type="checkbox"/> Universal Rat Reference RNA Universal Rat Reference RNA		3

**Label** :  Nose Free Water Not applicable.  
Universal Rat Reference RNA Not applicable.

#### Seveso Directive

This product is not controlled under the Seveso Directive.

#### Danger criteria

Category
<input checked="" type="checkbox"/> Universal Rat Reference RNA P5c

#### EU regulations

**Industrial emissions (integrated pollution prevention and control) - Air** : Not listed

**Industrial emissions (integrated pollution prevention and control) - Water** : Not listed

**15.2 Chemical safety assessment** : This product contains substances for which Chemical Safety Assessments might still be required.

#### International regulations

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

Not listed.

##### Montreal Protocol

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

Universal Rat Reference RNA, Part Number 740200

## SECTION 15: Regulatory information

Not listed.

### Inventory list

**United States** : All components are active or exempted.

## SECTION 16: Other information

✔ Indicates information that has changed from previously issued version.

**Abbreviations and acronyms** :

- ATE = Acute Toxicity Estimate
- CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
- DMEL = Derived Minimal Effect Level
- DNEL = Derived No Effect Level
- EUH statement = CLP-specific Hazard statement
- N/A = Not available
- PBT = Persistent, Bioaccumulative and Toxic
- PNEC = Predicted No Effect Concentration
- RRN = REACH Registration Number
- vPvB = Very Persistent and Very Bioaccumulative

### Procedure used to derive the classification

Classification	Justification
✔ <b>Universal Rat Reference RNA</b> Flam. Liq. 2, H225 Eye Irrit. 2, H319	Expert judgment Calculation method

### Full text of abbreviated H statements

✔ <b>Universal Rat Reference RNA</b> H225 Highly flammable liquid and vapour. H319 Causes serious eye irritation.
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### Full text of classifications

✔ <b>Universal Rat Reference RNA</b> Eye Irrit. 2 SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2 Flam. Liq. 2 FLAMMABLE LIQUIDS - Category 2
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