

SAFETY DATA SHEET

Universal Human Reference RNA, Part Number 740000

Section 1. Identification

Product identifier : Universal Human Reference RNA, Part Number 740000
Part No. (Chemical Kit) : 740000
Part No. : RNase Free Water 740000-42
 Universal Human Reference RNA 740000-41

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

Analytical reagent.

RNase Free Water 1.5 ml
 Universal Human Reference RNA 3.6 ml (2 x 1.8 ml)

Supplier/Manufacturer : Agilent Technologies Australia Pty Ltd
 679 Springvale Road
 Mulgrave
 Victoria 3170, Australia
 1800 802 402



Emergency telephone number (with hours of operation) : CHEMTREC®: +(61)-290372994

Section 2. Hazard(s) identification

Classification of the substance or mixture

Universal Human Reference RNA
 H225 FLAMMABLE LIQUIDS - Category 2
 H319 SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2A

GHS label elements

Hazard pictograms : Universal Human Reference RNA  

Signal word : RNase Free Water Universal Human Reference RNA No signal word.
 DANGER

Hazard statements : RNase Free Water Universal Human Reference RNA No known significant effects or critical hazards.
 H225 - Highly flammable liquid and vapour.
 H319 - Causes serious eye irritation.

Precautionary statements

Prevention : RNase Free Water Universal Human 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.

Section 2. Hazard(s) identification

Response	: <input checked="" type="checkbox"/> Nase Free Water Universal Human Reference RNA	P264 - Wash hands thoroughly after handling. Not applicable. 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.
Storage	: <input checked="" type="checkbox"/> Nase Free Water Universal Human Reference RNA	Not applicable. P403 - Store in a well-ventilated place.
Disposal	: <input checked="" type="checkbox"/> Nase Free Water Universal Human Reference RNA	P235 - Keep cool. Not applicable. P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
Supplemental label elements	: <input checked="" type="checkbox"/> Nase Free Water Universal Human Reference RNA	Not applicable. Not applicable.
Other hazards which do not result in classification	: <input checked="" type="checkbox"/> Nase Free Water Universal Human Reference RNA	None known. None known.

Section 3. Composition and ingredient information

Substance/mixture	: <input checked="" type="checkbox"/> Nase Free Water Universal Human Reference RNA	Substance Mixture
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CAS number/other identifiers

Ingredient name	% (w/w)	CAS number
<input checked="" type="checkbox"/> Nase Free Water Water	100	7732-18-5
Universal Human Reference RNA Ethanol	≥60 - ≤75	64-17-5

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




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

Section 4. First aid measures

Description of necessary first aid measures





Eye contact	: <input checked="" type="checkbox"/> Nase Free Water Universal Human Reference RNA	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. 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.
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Section 4. First aid measures

Inhalation	:  Nose Free Water Universal Human Reference RNA	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur. 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. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
Skin contact	:  Nose Free Water Universal Human Reference RNA	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.
Ingestion	:  Nose Free Water Universal Human 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 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.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact	:  Nose Free Water Universal Human Reference RNA	No known significant effects or critical hazards. Causes serious eye irritation.
Inhalation	:  Nose Free Water Universal Human Reference RNA	No known significant effects or critical hazards. No known significant effects or critical hazards.
Skin contact	:  Nose Free Water Universal Human Reference RNA	No known significant effects or critical hazards. No known significant effects or critical hazards.
Ingestion	:  Nose Free Water Universal Human Reference RNA	No known significant effects or critical hazards. No known significant effects or critical hazards.

Over-exposure signs/symptoms

Section 4. First aid measures

Eye contact	: <input checked="" type="checkbox"/> Nase Free Water Universal Human Reference RNA	No specific data. Adverse symptoms may include the following: pain or irritation watering redness
Inhalation	: <input checked="" type="checkbox"/> Nase Free Water Universal Human Reference RNA	No specific data. No specific data.
Skin contact	: <input checked="" type="checkbox"/> Nase Free Water Universal Human Reference RNA	No specific data. No specific data.
Ingestion	: <input checked="" type="checkbox"/> Nase Free Water Universal Human Reference RNA	No specific data. No specific data.

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

Notes to physician	: <input checked="" type="checkbox"/> Nase Free Water Universal Human 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	: <input checked="" type="checkbox"/> Nase Free Water Universal Human Reference RNA	No specific treatment. No specific treatment.
Protection of first-aiders	: <input checked="" type="checkbox"/> Nase Free Water Universal Human 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.




See toxicological information (Section 11)

Section 5. Firefighting measures

Extinguishing media




Suitable extinguishing media	: <input checked="" type="checkbox"/> Nase Free Water Universal Human Reference RNA	Use an extinguishing agent suitable for the surrounding fire. Use dry chemical, CO ₂ , water spray (fog) or foam.
Unsuitable extinguishing media	: <input checked="" type="checkbox"/> Nase Free Water Universal Human Reference RNA	None known. Do not use water jet.
Specific hazards arising from the chemical	: <input checked="" type="checkbox"/> Nase Free Water Universal Human Reference RNA	In a fire or if heated, a pressure increase will occur and the container may burst. Highly flammable liquid and vapour. 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	: <input checked="" type="checkbox"/> Nase Free Water Universal Human Reference RNA	No specific data. Decomposition products may include the following materials: carbon dioxide carbon monoxide

Section 5. Firefighting measures

Special protective actions for fire-fighters	:  N ase Free Water	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.
	Universal Human 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. 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	:  N ase Free Water	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
	Universal Human 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.
Hazchem code	:  N ase Free Water	Not available.
	Universal Human Reference RNA	Not available.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel	:  N ase Free Water	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.
	Universal Human 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. 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.
For emergency responders	:  N ase Free Water	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".
	Universal Human 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".
Environmental precautions	:  N ase 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 Human 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).

Section 6. Accidental release measures

Methods and material for containment and cleaning up

Methods for cleaning up : ☒Nase Free Water

Universal Human Reference
RNA

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.

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

Precautions for safe handling

Protective measures : ☒Nase Free Water

Universal Human Reference
RNA

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

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.

Advice on general occupational hygiene : ☒Nase Free Water

Universal Human 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.

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

Conditions for safe storage, including any incompatibilities : ☒Nase Free Water

Universal Human Reference

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.

Store in accordance with local regulations. Store in a

Section 7. Handling and storage

RNA

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 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 unlabelled containers. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls and personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Universal Human Reference RNA Ethanol	Safe Work Australia (Australia, 1/2014). TWA: 1880 mg/m ³ 8 hours. TWA: 1000 ppm 8 hours.

Appropriate engineering controls : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapour or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

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

Individual protection measures

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

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

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.

Section 8. Exposure controls and personal protection

- 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

Appearance

- Physical state** : Nase Free Water Liquid.
Universal Human Reference RNA Liquid.
- Colour** : Nase Free Water Colourless.
Universal Human Reference RNA Not available.
- Odour** : Nase Free Water Odourless.
Universal Human Reference RNA Not available.
- Odour threshold** : Nase Free Water Not available.
Universal Human Reference RNA Not available.
- pH** : Nase Free Water 7
Universal Human Reference RNA Not available.
- Melting point** : Nase Free Water 0°C (32°F)
Universal Human Reference RNA Not available.
- Boiling point** : Nase Free Water 100°C (212°F)
Universal Human Reference RNA 78°C (172.4°F)
- Flash point** : Nase Free Water Not applicable.
Universal Human Reference RNA Closed cup: 20 to 23°C (68 to 73.4°F)
- Evaporation rate** : Nase Free Water Not available.
Universal Human Reference RNA Not available.
- Flammability (solid, gas)** : Nase Free Water Not applicable.
Universal Human Reference RNA Not applicable.
- Lower and upper explosive (flammable) limits** : Nase Free Water Not available.
Universal Human Reference RNA Not available.
- Vapour pressure** : Nase Free Water 3.2 kPa (23.8 mm Hg) [room temperature]
Universal Human Reference RNA Not available.
- Vapour density** : Nase Free Water 0.62 [Air = 1]
Universal Human Reference RNA Not available.
- Relative density** : Nase Free Water 1
Universal Human Reference RNA Not available.
- Solubility** : Nase Free Water Easily soluble in the following materials: cold water and hot water.
Universal Human Reference RNA Easily soluble in the following materials: cold water and hot water.

Section 9. Physical and chemical properties

Partition coefficient: n-octanol/water	: <input checked="" type="checkbox"/> Nase Free Water Universal Human Reference RNA	-1.38 Not available.
Auto-ignition temperature	: <input checked="" type="checkbox"/> Nase Free Water Universal Human Reference RNA	Not applicable. Not available.
Decomposition temperature	: <input checked="" type="checkbox"/> Nase Free Water Universal Human Reference RNA	>1200°C (>2192°F) Not available.
Viscosity	: <input checked="" type="checkbox"/> Nase Free Water Universal Human Reference RNA	Not available. Not available.

Section 10. Stability and reactivity

Reactivity	: <input checked="" type="checkbox"/> Nase Free Water Universal Human 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.
Chemical stability	: <input checked="" type="checkbox"/> Nase Free Water Universal Human Reference RNA	The product is stable. The product is stable.
Possibility of hazardous reactions	: <input checked="" type="checkbox"/> Nase Free Water Universal Human 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.
Conditions to avoid	: <input checked="" type="checkbox"/> Nase Free Water Universal Human Reference RNA	No specific data. 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.
Incompatible materials	: <input checked="" type="checkbox"/> Nase Free Water Universal Human Reference RNA	May react or be incompatible with oxidising materials. Reactive or incompatible with the following materials: oxidizing materials
Hazardous decomposition products	: <input checked="" type="checkbox"/> Nase Free Water Universal Human Reference RNA	Under normal conditions of storage and use, hazardous decomposition products should not be produced. Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Universal Human Reference RNA Ethanol	LC50 Inhalation Vapour LD50 Oral	Rat Rat	124700 mg/m ³ 7 g/kg	4 hours -

Irritation/Corrosion

Section 11. Toxicological information

Product/ingredient name	Result	Species	Score	Exposure	Observation
Universal Human 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	-

Sensitisation

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Reproductive toxicity

Not available.

Teratogenicity

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 : Nose Free Water Universal Human Reference RNA Not available. Routes of entry anticipated: Oral, Dermal, Inhalation.

Potential acute health effects

Eye contact : Nose Free Water Universal Human Reference RNA No known significant effects or critical hazards. Causes serious eye irritation.

Inhalation : Nose Free Water Universal Human Reference RNA No known significant effects or critical hazards. No known significant effects or critical hazards.

Skin contact : Nose Free Water Universal Human Reference RNA No known significant effects or critical hazards. No known significant effects or critical hazards.

Ingestion : Nose Free Water Universal Human Reference RNA No known significant effects or critical hazards. No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Section 11. Toxicological information

Eye contact	: <input checked="" type="checkbox"/> Nase Free Water Universal Human Reference RNA	No specific data. Adverse symptoms may include the following: pain or irritation watering redness
Inhalation	: <input checked="" type="checkbox"/> Nase Free Water Universal Human Reference RNA	No specific data. No specific data.
Skin contact	: <input checked="" type="checkbox"/> Nase Free Water Universal Human Reference RNA	No specific data. No specific data.
Ingestion	: <input checked="" type="checkbox"/> Nase Free Water Universal Human Reference RNA	No specific data. No specific data.

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

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Not available.

General	: <input checked="" type="checkbox"/> Nase Free Water Universal Human Reference RNA	No known significant effects or critical hazards. No known significant effects or critical hazards.
Carcinogenicity	: <input checked="" type="checkbox"/> Nase Free Water Universal Human Reference RNA	No known significant effects or critical hazards. No known significant effects or critical hazards.
Mutagenicity	: <input checked="" type="checkbox"/> Nase Free Water Universal Human Reference RNA	No known significant effects or critical hazards. No known significant effects or critical hazards.
Teratogenicity	: <input checked="" type="checkbox"/> Nase Free Water Universal Human Reference RNA	No known significant effects or critical hazards. No known significant effects or critical hazards.
Developmental effects	: <input checked="" type="checkbox"/> Nase Free Water Universal Human Reference RNA	No known significant effects or critical hazards. No known significant effects or critical hazards.
Fertility effects	: <input checked="" type="checkbox"/> Nase Free Water Universal Human 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.

Other information	: <input checked="" type="checkbox"/> Nase Free Water Universal Human 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

Toxicity

Product/ingredient name	Result	Species	Exposure
Universal Human 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 µl/L Fresh water	Daphnia - Daphnia magna - Neonate	21 days
	Chronic NOEC 0.375 µl/L Fresh water	Fish - Gambusia holbrooki - Larvae	12 weeks

Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
RNase Free Water Water	-	100 % - 28 days	-	-

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
RNase Free Water Water	-	-	Readily
Universal Human Reference RNA Ethanol	-	-	Readily

Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
RNase Free Water Water	-1.38	-	low
Universal Human Reference RNA Ethanol	-0.35	0.5	low

Mobility in soil

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

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




Section 13. Disposal considerations

Disposal methods : 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. 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. Vapour from product

Section 13. Disposal considerations

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 spilt material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

	ADG	IMDG	IATA
UN number	UN1170	UN1170	UN1170
UN proper shipping name	ETHANOL SOLUTION	ETHANOL SOLUTION	Ethanol solution
Transport hazard class(es)	3 	3 	3 
Packing group	II	II	II
Environmental hazards	No.	No.	No.

Additional information

ADG

: **Hazchem code**

•2YE

Special provisions

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IMDG

: **Emergency schedules (EmS)**

F-E, S-D

Special provisions

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IATA

: **Passenger and Cargo Aircraft** Quantity limitation: 5 L

Packaging instructions: 353

Cargo Aircraft Only Quantity limitation: 60 L

Packaging instructions: 364

Limited Quantities - Passenger Aircraft Quantity limitation: 1 L

Packaging instructions: Y341

Special provisions

A3, A58, A180

Remarks

Excepted Quantity

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.

Transport in bulk according to Annex II of Marpol and the IBC Code : Not available.

Section 15. Regulatory information

Standard Uniform Schedule of Medicine and Poisons

Not regulated.

Model Work Health and Safety Regulations - Scheduled Substances

No listed substance

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	: All components are listed or exempted.
China	: All components are listed or exempted.
Europe	: All components are listed or exempted.
Japan	: <input checked="" type="checkbox"/> Japan inventory (ENCS) : All components are listed or exempted. Japan inventory (ISHL) : All components are listed or exempted.
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.
Thailand	: <input checked="" type="checkbox"/> Not determined.
Turkey	: <input checked="" type="checkbox"/> Not determined.
United States	: All components are listed or exempted.
Viet Nam	: <input checked="" type="checkbox"/> Not determined.

Section 16. Any other relevant information

History

Date of issue/Date of revision : 22/05/2017

Date of previous issue : 15/10/2015.

Version : 5

Key to abbreviations

: ADG = Australian Dangerous Goods
 ATE = Acute Toxicity Estimate
 BCF = Bioconcentration Factor
 GHS = Globally Harmonized System of Classification and Labelling of Chemicals
 IATA = International Air Transport Association
 IBC = Intermediate Bulk Container
 IMDG = International Maritime Dangerous Goods
 LogPow = logarithm of the octanol/water partition coefficient
 MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
 NOHSC = National Occupational Health and Safety Commission

Section 16. Any other relevant information

SUSMP = Standard Uniform Schedule of Medicine and Poisons
 UN = United Nations

Procedure used to derive the classification

Classification	Justification
<input checked="" type="checkbox"/> Universal Human Reference RNA Flam. Liq. 2, H225 Eye Irrit. 2A, H319	On basis of test data Calculation method

References : Not available.

Indicates information that has changed from previously issued version.

Notice to reader

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