

SAFETY DATA SHEET

Universal Rat Reference RNA, Part Number 740200

Section 1. Identification

Product identifier : Universal Rat Reference RNA, Part Number 740200
Part no. (chemical kit) : 740200
Part no. : RNase Free Water 740000-42
 Universal Rat Reference RNA 740200-41

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)

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

Emergency telephone number (with hours of operation) : CHEMTREC®: 1-800-424-9300

Section 2. Hazard identification

Classification of the substance or mixture

Universal Rat Reference

RNA

H225

H319

FLAMMABLE LIQUIDS - Category 2

EYE IRRITATION - Category 2A

Health Hazards Not Otherwise Classified - Category 1

GHS label elements

Hazard pictograms

: Universal Rat Reference
 RNA



Signal word

: RNase Free Water
 Universal Rat Reference
 RNA

No signal word.
 Danger

Hazard statements

: RNase Free Water
 Universal Rat Reference
 RNA

No known significant effects or critical hazards.
 H225 - Highly flammable liquid and vapor.

H319 - Causes serious eye irritation.
 Prolonged or repeated contact may dry skin and cause irritation.

Precautionary statements

Prevention

: RNase Free Water
 Universal Rat Reference
 RNA

Not applicable.
 P280 - Wear eye or face protection.

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

Section 2. Hazard identification

Response	: <input checked="" type="checkbox"/> Nase Free Water Universal Rat Reference RNA	Not applicable. 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.
Storage	: <input checked="" type="checkbox"/> Nase Free Water Universal Rat Reference RNA	Not applicable. Not applicable.
Disposal	: <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.
Supplemental label elements	: <input checked="" type="checkbox"/> Nase Free Water Universal Rat Reference RNA	None known. Avoid contact with skin and clothing. Wash thoroughly after handling.
Other hazards which do not result in classification	: <input checked="" type="checkbox"/> Nase Free Water Universal Rat Reference RNA	None known. None known.

Section 3. Composition/information on ingredients

Substance/mixture	: <input checked="" type="checkbox"/> Nase Free Water Universal Rat Reference RNA	Substance Mixture
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Ingredient name	Synonyms	% (w/w)	CAS number
<input checked="" type="checkbox"/> Nase Free Water			
water	Water	100	7732-18-5
Universal Rat Reference RNA			
Ethanol	Ethanol	≥60 - ≤80	64-17-5

Ranges if listed above for hazardous ingredient(s) are prescribed ranges. The actual concentration(s) or actual concentration range(s) are being withheld as a trade secret.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified 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 Rat 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	: RNase Free Water Universal Rat 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	: RNase Free Water Universal Rat Reference RNA	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash skin thoroughly with soap and water or use recognized skin cleanser. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.
Ingestion	: RNase 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.





Most important symptoms/effects, acute and delayed

Potential acute health effects




Eye contact	: RNase Free Water Universal Rat Reference RNA	No known significant effects or critical hazards. Causes serious eye irritation.
Inhalation	: RNase Free Water Universal Rat Reference RNA	No known significant effects or critical hazards. No known significant effects or critical hazards.
Skin contact	: RNase Free Water Universal Rat Reference RNA	No known significant effects or critical hazards. Defatting to the skin. May cause skin dryness and irritation.
Ingestion	: RNase Free Water Universal Rat 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	:  Nose Free Water Universal Rat Reference RNA	No specific data. Adverse symptoms may include the following: pain or irritation watering redness
Inhalation	:  Nose Free Water Universal Rat Reference RNA	No specific data. No specific data.
Skin contact	:  Nose Free Water Universal Rat Reference RNA	No specific data. Adverse symptoms may include the following: irritation dryness cracking
Ingestion	:  Nose Free Water Universal Rat Reference RNA	No specific data. No specific data.




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

Notes to physician	:  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.
Specific treatments	:  Nose Free Water Universal Rat Reference RNA	No specific treatment. No specific treatment.
Protection of first-aiders	:  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.




See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media



Suitable extinguishing media	:  Nose Free Water Universal Rat Reference RNA	Use an extinguishing agent suitable for the surrounding fire. Use dry chemical, CO ₂ , water spray (fog) or foam.
Unsuitable extinguishing media	:  Nose Free Water Universal Rat Reference RNA	None known. Do not use water jet.
Specific hazards arising from the chemical	:  Nose 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. 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.

Section 5. Fire-fighting measures

Hazardous thermal decomposition products	:  Nose Free Water Universal Rat Reference RNA	No specific data. Decomposition products may include the following materials: carbon dioxide carbon monoxide
Special protective actions for fire-fighters	:  Nose 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 area if this can be done without risk. Use water spray to keep fire-exposed containers cool.
Special protective equipment for fire-fighters	:  Nose Free Water 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

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".

Section 6. Accidental release measures

Environmental precautions : ☒Nase Free Water

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).

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).

Methods and materials for containment and cleaning up

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

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 ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. 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.

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

Section 7. Handling and storage

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

Universal Rat Reference RNA

before entering eating areas. See also Section 8 for additional information on hygiene measures.

Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

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 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. See Section 10 for incompatible materials before handling or use.

Section 8. Exposure controls/personal protection

[Control parameters](#)

[Occupational exposure limits](#)

Ingredient name	Exposure limits
☑Universal Rat Reference RNA Ethanol	<p>CA Alberta Provincial (Canada, 6/2018). OEL: 1000 ppm 8 hours. OEL: 1880 mg/m³ 8 hours.</p> <p>CA British Columbia Provincial (Canada, 6/2023). STEL: 1000 ppm 15 minutes.</p> <p>CA Ontario Provincial (Canada, 6/2019). STEL: 1000 ppm 15 minutes.</p> <p>CA Saskatchewan Provincial (Canada, 7/2013). STEL: 1250 ppm 15 minutes. TWA: 1000 ppm 8 hours.</p> <p>CA Quebec Provincial (Canada, 6/2022). STEV: 1000 ppm 15 minutes.</p>

[Biological exposure indices](#)

No exposure indices known.

Appropriate engineering controls

: ☑Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

Section 8. Exposure controls/personal protection

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: 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. 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.

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 and safety characteristics

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

Appearance

Physical state	: RNase Free Water Universal Rat Reference RNA	Liquid. Liquid.
Color	: RNase Free Water Universal Rat Reference RNA	Colorless. Not available.
Odor	: RNase Free Water Universal Rat Reference RNA	Odorless. Not available.
Odor threshold	: RNase Free Water Universal Rat Reference RNA	Not available. Not available.
pH	:	

Section 9. Physical and chemical properties and safety characteristics

	☒Nase Free Water	7
	Universal Rat Reference RNA	Not available.
Melting point/freezing point	☒Nase Free Water	0°C (32°F)
	Universal Rat Reference RNA	Not available.
Boiling point, initial boiling point, and boiling range	☒Nase Free Water	100°C (212°F)
	Universal Rat Reference RNA	Not available.
Flash point	☒Nase Free Water	Not available.
	Universal Rat Reference RNA	Closed cup: -18 to 23°C (-0.4 to 73.4°F) [Based on solvent.]
Evaporation rate	☒Nase Free Water	Not available.
	Universal Rat Reference RNA	Not available.
Flammability	☒Nase Free Water	Not applicable.
	Universal Rat Reference RNA	Not applicable.
Lower and upper explosion limit/flammability limit	☒Nase Free Water	Not available.
	Universal Rat Reference RNA	Not available.
Vapor pressure	☒Nase Free Water	2.3 kPa (17.5 mm Hg) [room temperature] 12.3 kPa (92.258 mm Hg) [50°C (122°F)]

Ingredient name	Vapor Pressure at 20°C			Vapor pressure at 50°C		
	mm Hg	kPa	Method	mm Hg	kPa	Method
☒Nase Free Water Universal Rat Reference RNA						
ethanol	42.94865	5.7	-	-	-	-
water	17.5	2.3	-	92.258	12.3	-

Relative vapor density	☒Nase Free Water	0.62 [Air = 1]
	Universal Rat Reference RNA	Not available.
Relative density	☒Nase Free Water	1
	Universal Rat Reference RNA	Not available.

Solubility(ies)	Media	Result
☒Nase Free Water	water	Soluble
Universal Rat Reference RNA	water	Soluble

Partition coefficient: n-octanol/water	☒Nase Free Water	-1.38
	Universal Rat Reference RNA	Not applicable.

Auto-ignition temperature	Ingredient name	°C	°F	Method
	☒Nase Free Water Universal Rat Reference RNA			
	ethanol	455	851	DIN 51794

Section 9. Physical and chemical properties and safety characteristics

Decomposition temperature	: <input checked="" type="checkbox"/> Nase Free Water Universal Rat Reference RNA	Not available. Not available.
Viscosity	: <input checked="" type="checkbox"/> Nase Free Water Universal Rat Reference RNA	Not available. Not available.
<u>Particle characteristics</u>		
Median particle size	: <input checked="" type="checkbox"/> Nase Free Water Universal Rat Reference RNA	Not applicable. Not applicable.

Section 10. Stability and reactivity

Reactivity	: <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.
Chemical stability	: <input checked="" type="checkbox"/> Nase Free Water Universal Rat Reference RNA	The product is stable. The product is stable.
Possibility of hazardous reactions	: <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.
Conditions to avoid	: <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.
Incompatible materials	: <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
Hazardous decomposition products	: <input checked="" type="checkbox"/> Nase Free Water Universal Rat 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
<input checked="" type="checkbox"/> Universal Rat Reference RNA Ethanol	LC50 Inhalation Vapor 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
<input checked="" type="checkbox"/> 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	-

Sensitization

Not available.

Mutagenicity

Conclusion/Summary : Not available.

Carcinogenicity

Conclusion/Summary : Not available.

Classification

Product/ingredient name	IARC	NTP	ACGIH
<input checked="" type="checkbox"/> Universal Rat Reference RNA Ethanol	1	-	A3

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 the likely routes of exposure : Nose Free Water Universal Rat Reference RNA Not available.
Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes.

Potential acute health effects

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

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

Skin contact : Nose Free Water Universal Rat Reference RNA No known significant effects or critical hazards.
Defatting to the skin. May cause skin dryness and irritation.

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

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects


General	: <input checked="" type="checkbox"/> Nose Free Water Universal Rat Reference RNA	No known significant effects or critical hazards. Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis.
Carcinogenicity	: <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.
Mutagenicity	: <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.
Reproductive toxicity	: <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.

Numerical measures of toxicity

Acute toxicity estimates


Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapors) (mg/l)	Inhalation (dusts and mists) (mg/l)
<input checked="" type="checkbox"/> Universal Rat Reference RNA Ethanol	7000	N/A	N/A	124.7	N/A

Section 11. Toxicological information


Other information :  Universal Rat Reference RNA Adverse symptoms may include the following: Repeated exposure may cause skin dryness or cracking.

Section 12. Ecological information


Toxicity

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

Persistence and degradability

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

Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
 RNase Free Water water	-1.38	-	Low
Universal Rat 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 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

Section 13. Disposal considerations

container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

	TDG Classification	IMDG	IATA
UN number	UN3316	UN3316	UN3316
UN proper shipping name	CHEMICAL KIT	CHEMICAL KIT	Chemical kit
Transport hazard class(es)	9 	9 	9 
Packing group	II	II	II
Environmental hazards	No.	No.	No.

Proof of classification statement : Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.43-2.45 (Class 9).

Additional information

Remarks: Excepted Quantity

TDG Classification : Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.43-2.45 (Class 9).

Passenger Carrying Road or Rail Index 10

Special provisions 65, 141

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

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 IMO instruments : Not available.

Section 15. Regulatory information

Canadian lists

Canadian NPRI : The following components are listed: ethanol

CEPA Toxic substances : None of the components are listed.

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Section 15. Regulatory information

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](#)

- Canada** : All components are listed or exempted.
- United States** : All components are active or exempted.

Section 16. Other information

[History](#)

Date of issue/Date of revision : 03/28/2024

Date of previous issue : 03/30/2021

Version : 8

[Key to abbreviations](#)

- : ATE = Acute Toxicity Estimate
- : BCF = Bioconcentration Factor
- : GHS = Globally Harmonized System of Classification and Labelling of Chemicals
- : HPR = Hazardous Products Regulations
- : 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)
- : N/A = Not available
- : UN = United Nations

[Procedure used to derive the classification](#)

Classification	Justification
Universal Rat Reference RNA FLAMMABLE LIQUIDS - Category 2 EYE IRRITATION - Category 2A Health Hazards Not Otherwise Classified - Category 1	Expert judgment Calculation method On basis of test data

 Indicates information that has changed from previously issued version.

[Notice to reader](#)

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