



AquaVantage 815QR-NF

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations
Date of issue: 4/21/2017 Revision date: 6/27/2022 Supersedes: 9/29/2019 Version: 4.0

SECTION 1: Identification

1.1. Identification

Product form : Mixture
Product name : AquaVantage 815QR-NF
Product code : 301034; 301074; 301014

1.2. Recommended use and restrictions on use

Recommended use : Industrial, Cleaner
Restrictions on use : None known

1.3. Supplier

Brulin
P.O. Box 270
Indianapolis, IN 46206 - USA
T 1.800.776.7149 - F 317.925.4596
Regulatory@brulin.com - www.brulin.com

1.4. Emergency telephone number

Emergency number : CHEMTREC: 1.800.424.9300 or CHEMTREC (International) 1.703.527.3887

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS US classification

Skin corrosion/irritation Category 1	H314	Causes severe skin burns and eye damage
Serious eye damage/eye irritation Category 1	H318	Causes serious eye damage
Hazardous to the aquatic environment – Acute Hazard Category 3	H402	Harmful to aquatic life
Hazardous to the aquatic environment – Chronic Hazard Category 3	H412	Harmful to aquatic life with long lasting effects

Full text of H statements : see section 16

2.2. GHS Label elements, including precautionary statements

GHS US labeling

Hazard pictograms (GHS US) :



Signal word (GHS US) :

Danger

Hazard statements (GHS US) :

H314 - Causes severe skin burns and eye damage
H412 - Harmful to aquatic life with long lasting effects

Precautionary statements (GHS US) :

P260 - Do not breathe mist, vapors.
P264 - Wash hands, forearms and face thoroughly after handling.
P273 - Avoid release to the environment.
P280 - Wear protective gloves, protective clothing, eye protection, face protection.
P301+P330+P331 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting
P303+P361+P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower
P363 - Wash contaminated clothing before reuse.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

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P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing
P310 - Immediately call a POISON CENTER, a doctor.
P405 - Store locked up.
P501 - Dispose of contents/container to an approved waste disposal plant.

2.3. Other hazards which do not result in classification

Other hazards which do not result in classification : None known.

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/Information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%
2-aminoethanol	CAS-No.: 141-43-5	5 – 10
Alcohols, C9-11-ethoxylated	CAS-No.: 68439-46-3	1 – 5
tetrapotassium pyrophosphate	CAS-No.: 7320-34-5	1 – 5
sodium xylenesulfonate	CAS-No.: 1300-72-7	1 – 5

Full text of hazard classes and H-statements : see section 16

SECTION 4: First-aid measures

4.1. Description of first aid measures

First-aid measures general : Call a physician immediately.
First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. Immediately call a poison center or doctor/physician.
First-aid measures after skin contact : Rinse skin with water/shower. Remove/Take off immediately all contaminated clothing. Call a physician immediately.
First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician immediately.
First-aid measures after ingestion : Rinse mouth. Do not induce vomiting. Call a physician immediately.

4.2. Most important symptoms and effects (acute and delayed)

Symptoms/effects after inhalation : Inhalation may cause irritation (cough, short breathing, difficulty in breathing).
Symptoms/effects after skin contact : Burns.
Symptoms/effects after eye contact : Serious damage to eyes.
Symptoms/effects after ingestion : Burns or irritation of the linings of the mouth, throat, and gastrointestinal tract.
Chronic symptoms : None known.

4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

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SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Water fog. Water spray. Dry powder. Foam. Carbon dioxide.
Unsuitable extinguishing media : None known.

5.2. Specific hazards arising from the chemical

Fire hazard : Not flammable.
Hazardous decomposition products in case of fire : Toxic fumes may be released.

5.3. Special protective equipment and precautions for fire-fighters

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures : Ventilate spillage area. Avoid contact with skin and eyes. Do not breathe mist, vapors.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Avoid release to the environment. Do not allow to enter drains or water courses.

6.3. Methods and material for containment and cleaning up

For containment : Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.
Methods for cleaning up : Take up liquid spill into absorbent material.
Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Avoid contact with skin and eyes. Do not breathe vapors, mist. Wear personal protective equipment.
Hygiene measures : Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store locked up. Store in a well-ventilated place. Keep cool. Keep container tightly closed.
Incompatible materials : Refer to Section 10 on Incompatible Materials.

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SECTION 8: Exposure controls/personal protection

8.1. Control parameters

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No additional information available

2-aminoethanol (141-43-5)

USA - ACGIH - Occupational Exposure Limits

Local name	Ethanolamine
ACGIH OEL TWA [ppm]	3 ppm
ACGIH OEL STEL [ppm]	6 ppm
Remark (ACGIH)	TLV® Basis: Eye & skin irr
Regulatory reference	ACGIH 2021

USA - OSHA - Occupational Exposure Limits

Local name	Ethanolamine
OSHA PEL (TWA) [1]	6 mg/m ³
OSHA PEL (TWA) [2]	3 ppm
Regulatory reference (US-OSHA)	OSHA Annotated Table Z-1

tetrapotassium pyrophosphate (7320-34-5)

No additional information available

sodium xylenesulfonate (1300-72-7)

No additional information available

Alcohols, C9-11-ethoxylated (68439-46-3)

No additional information available

8.2. Appropriate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station.
Environmental exposure controls : Avoid release to the environment.

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8.3. Individual protection measures/Personal protective equipment

Hand protection:

Chemically resistant protective gloves

Eye protection:

Chemical goggles. Face shield

Skin and body protection:

Wear suitable protective clothing

Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: clear.
Color	: Blue
Odor	: characteristic
Odor threshold	: No data available
pH	: 12.5
Melting point	: 32 °F (0°C)
Freezing point	: 0 °C
Boiling point	: 212 °F (100°C)
Flash point	: Does Not Flash
Relative evaporation rate (butyl acetate=1)	: No data available
Flammability (solid, gas)	: Not applicable.
Vapor pressure	: No data available
Relative vapor density at 20 °C	: No data available
Relative density	: 1.065
Solubility	: Water: 100 %
Partition coefficient n-octanol/water (Log Pow)	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosion limits	: No data available
Explosive properties	: Not explosive.
Oxidizing properties	: Non oxidizing material.

9.2. Other information

VOC content	: 7.355 %
Percent Solids	: 14.85 %

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

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10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

Strong acids. Strong oxidizing agents.

10.6. Hazardous decomposition products

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 (oral)	: Not classified
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified

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2-aminoethanol (141-43-5)	
LD50 oral rat	1515 mg/kg body weight (Equivalent or similar to OECD 401, Rat, Male/female, Experimental value, Oral)
LD50 dermal rabbit	2504 mg/kg body weight (Equivalent or similar to OECD 402, 24 week(s), Rabbit, Male, Experimental value, Dermal)
LC50 Inhalation - Rat	1.3 mg/l/4h
tetrapotassium pyrophosphate (7320-34-5)	
LD50 oral rat	2440 mg/kg body weight (Rat, Male, Experimental value, Oral, 14 day(s))
LD50 dermal rabbit	> 2000 mg/kg body weight (Equivalent or similar to OECD 402, 24 h, Rabbit, Male / female, Experimental value, Dermal, 14 day(s))
LC50 Inhalation - Rat	> 1.1 mg/l/4h (OECD 403: Acute Inhalation Toxicity, 4 h, Rat, Male / female, Experimental value, Inhalation (dust), 21 day(s))
sodium xylenesulfonate (1300-72-7)	
LD50 oral rat	> 7000 mg/kg body weight (OECD 401: Acute Oral Toxicity, Rat, Male / female, Experimental value, Oral, 14 day(s))
LD50 dermal rabbit	> 2000 mg/kg body weight (Equivalent or similar to OECD 402, Rabbit, Experimental value, Dermal, 14 day(s))
LC50 Inhalation - Rat	> 6.41 mg/l (Equivalent or similar to OECD 403, 232 minutes, Rat, Male / female, Experimental value, Inhalation (aerosol), 14 day(s))
Alcohols, C9-11-ethoxylated (68439-46-3)	
LD50 oral rat	3488 mg/kg (Rat, Oral)
LD50 dermal rabbit	> 2000 mg/kg (Rabbit, Dermal)
LC50 Inhalation - Rat	> 1.6 mg/l/4h (no mortality at highest attainable concentration)
Skin corrosion/irritation	: Causes severe skin burns. pH: 12.5
Serious eye damage/irritation	: Causes serious eye damage. pH: 12.5
Respiratory or skin sensitization	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified
2-aminoethanol (141-43-5)	
STOT-single exposure	May cause respiratory irritation.
STOT-repeated exposure	: Not classified
Aspiration hazard	: Not classified
Viscosity, kinematic	: No data available
Symptoms/effects after inhalation	: Inhalation may cause irritation (cough, short breathing, difficulty in breathing).
Symptoms/effects after skin contact	: Burns.
Symptoms/effects after eye contact	: Serious damage to eyes.
Symptoms/effects after ingestion	: Burns or irritation of the linings of the mouth, throat, and gastrointestinal tract.
Chronic symptoms	: None known.

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SECTION 12: Ecological information

12.1. Toxicity

Ecology - general

: Harmful to aquatic life. Harmful to aquatic life with long lasting effects.

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2-aminoethanol (141-43-5)	
LC50 - Fish [1]	150 mg/l (96 h, Salmo gairdneri, Fresh water)
EC50 - Crustacea [1]	140 mg/l (24 h, Daphnia magna)
tetrapotassium pyrophosphate (7320-34-5)	
LC50 - Fish [1]	> 100 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Oncorhynchus mykiss, Semi-static system, Fresh water, Experimental value, Nominal concentration)
EC50 - Crustacea [1]	> 100 mg/l (EPA OTS 797.1300, 48 h, Daphnia magna, Static system, Fresh water, Experimental value, Locomotor effect)
ErC50 algae	> 100 mg/l (OECD 201: Alga, Growth Inhibition Test, 72 h, Desmodesmus subspicatus, Static system, Fresh water, Experimental value, GLP)
sodium xylenesulfonate (1300-72-7)	
LC50 - Fish [1]	> 1000 mg/l (EPA OTS 797.1400, 96 h, Oncorhynchus mykiss, Static system, Fresh water, Experimental value)
EC50 - Crustacea [1]	> 1000 mg/l (EPA OTS 797.1300, 48 h, Daphnia magna, Static system, Fresh water, Experimental value)
Alcohols, C9-11-ethoxylated (68439-46-3)	
LC50 - Fish [1]	6 mg/l
EC50 - Crustacea [1]	2.686 mg/l Source: ECOTOX
ErC50 algae	1.4 mg/l

12.2. Persistence and degradability

2-aminoethanol (141-43-5)	
Persistence and degradability	Biodegradable in the soil. Readily biodegradable in water.
Biochemical oxygen demand (BOD)	0.8 g O ₂ /g substance
Chemical oxygen demand (COD)	1.34 g O ₂ /g substance
ThOD	2.49 g O ₂ /g substance
BOD (% of ThOD)	0.32
tetrapotassium pyrophosphate (7320-34-5)	
Persistence and degradability	Biodegradability: not applicable.
Chemical oxygen demand (COD)	Not applicable (inorganic)
ThOD	Not applicable (inorganic)
sodium xylenesulfonate (1300-72-7)	
Persistence and degradability	Readily biodegradable in water.
Alcohols, C9-11-ethoxylated (68439-46-3)	
Persistence and degradability	Readily biodegradable in water.

12.3. Bioaccumulative potential

2-aminoethanol (141-43-5)	
BCF - Other aquatic organisms [1]	2.3 – 9.2 (BCFWIN, Calculated value)

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2-aminoethanol (141-43-5)	
Partition coefficient n-octanol/water (Log Pow)	-1.91
Bioaccumulative potential	Not bioaccumulative.
tetrapotassium pyrophosphate (7320-34-5)	
Bioaccumulative potential	Not bioaccumulative.
sodium xylenesulfonate (1300-72-7)	
Partition coefficient n-octanol/water (Log Pow)	-3.12 (Experimental value, EU Method A.8: Partition Coefficient, 20 °C)
Bioaccumulative potential	Not bioaccumulative.
Alcohols, C9-11-ethoxylated (68439-46-3)	
Bioaccumulative potential	No bioaccumulation data available.

12.4. Mobility in soil

2-aminoethanol (141-43-5)	
Surface tension	0.05 N/m
Partition coefficient n-octanol/water (Log Koc)	1.16 (log Koc, Calculated value)
Ecology - soil	No (test)data on mobility of the substance available.
tetrapotassium pyrophosphate (7320-34-5)	
Surface tension	No data available in the literature
Partition coefficient n-octanol/water (Log Koc)	2.17 (log Koc, Read-across)
Ecology - soil	Low potential for adsorption in soil.
sodium xylenesulfonate (1300-72-7)	
Surface tension	71 mN/m (20 °C, 90 %, EU Method A.5: Surface tension)
Partition coefficient n-octanol/water (Log Koc)	1.42 (log Koc, SRC PCKOCWIN v2.0, Calculated value)
Ecology - soil	Highly mobile in soil.

12.5. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Disposal methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.

SECTION 14: Transport information




In accordance with Department of Transport / IMDG / IATA

DOT	IMDG	IATA
14.1. UN number		
UN2491	2491	2491

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DOT	IMDG	IATA
14.2. Proper Shipping Name		
Ethanolamine solutions	ETHANOLAMINE SOLUTION	Ethanolamine (SOLUTION)
14.3. Transport hazard class(es)		
8	8	8
		
14.4. Packing group		
III	III	III
14.5. Environmental hazards		
Dangerous for the environment: No	Dangerous for the environment: No Marine pollutant: No	Dangerous for the environment: No
No supplementary information available		

14.6. Special precautions for user

DOT	
DOT NA No	: UN2491
DOT Special Provisions (49 CFR 172.102)	: IB3 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1 and 31HA2, 31HB2, 31HN2, 31HD2 and 31HH2). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized, except for UN2672 (also see Special Provision IP8 in Table 2 for UN2672). T4 - 2.65 178.274(d)(2) Normal..... 178.275(d)(3) TP1 - The maximum degree of filling must not exceed the degree of filling determined by the following: Degree of filling = $97 / 1 + a (tr - tf)$ Where: tr is the maximum mean bulk temperature during transport, and tf is the temperature in degrees celsius of the liquid during filling.
DOT Packaging Exceptions (49 CFR 173.xxx)	: 154
DOT Packaging Non Bulk (49 CFR 173.xxx)	: 203
DOT Packaging Bulk (49 CFR 173.xxx)	: 241
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27)	: 5 L
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75)	: 60 L
DOT Vessel Stowage Location	: A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel.
DOT Vessel Stowage Other	: 52 - Stow "separated from" acids
IMDG	
Special provision (IMDG)	: 223
Packing instructions (IMDG)	: P001, LP01
IBC packing instructions (IMDG)	: IBC03
Tank instructions (IMDG)	: T4
Tank special provisions (IMDG)	: TP1
EmS-No. (Fire)	: F-A - FIRE SCHEDULE Alfa - GENERAL FIRE SCHEDULE
EmS-No. (Spillage)	: S-B - SPILLAGE SCHEDULE Bravo - CORROSIVE SUBSTANCES
Stowage category (IMDG)	: A

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Properties and observations (IMDG) : Colourless. Miscible with water. Corrosive to copper, copper compounds, copper alloys and rubber. Reacts violently with acids. Liquid and vapour cause burns to skin, eyes and mucous membranes.

IATA

PCA Excepted quantities (IATA) : E1
PCA Limited quantities (IATA) : Y841
PCA limited quantity max net quantity (IATA) : 1L
PCA packing instructions (IATA) : 852
PCA max net quantity (IATA) : 5L
CAO packing instructions (IATA) : 856
CAO max net quantity (IATA) : 60L
Special provision (IATA) : A3, A803
ERG code (IATA) : 8L

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15: Regulatory information

15.1. US Federal regulations

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SARA Section 311/312 Hazard Classes	Refer to Section 2 for the OSHA Hazard Classification.
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All components of this product are present and listed as Active on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

This product or mixture is not known to contain a toxic chemical or chemicals in excess of the applicable de minimis concentration as specified in 40 CFR §372.38(a) subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

Alcohols, C9-11-ethoxylated (68439-46-3)

EPA TSCA Regulatory Flag	XU - XU - indicates a substance exempt from reporting under the Chemical Data Reporting Rule, (40 CFR 711).
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15.2. International regulations

CANADA

2-aminoethanol (141-43-5)

Listed on the Canadian DSL (Domestic Substances List)

tetrapotassium pyrophosphate (7320-34-5)

Listed on the Canadian DSL (Domestic Substances List)

sodium xylenesulfonate (1300-72-7)

Listed on the Canadian DSL (Domestic Substances List)

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Alcohols, C9-11-ethoxylated (68439-46-3)

Listed on the Canadian DSL (Domestic Substances List)

EU-Regulations


No additional information available

National regulations

2-aminoethanol (141-43-5)

Listed introduction on Australian Industrial Chemicals Introduction Scheme (AICIS Inventory)
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
Listed on KECL/KECI (Korean Existing Chemicals Inventory)
Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)
Listed on the TCSI (Taiwan Chemical Substance Inventory)

15.3. US State regulations

 **WARNING:** This product can expose you to diethanolamine, which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

Component	State or local regulations
2-aminoethanol(141-43-5)	U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - Pennsylvania - RTK (Right to Know) List

SECTION 16: Other information

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Revision date : 06/27/2022

Full text of H-phrases	
H314	Causes severe skin burns and eye damage
H318	Causes serious eye damage
H402	Harmful to aquatic life
H412	Harmful to aquatic life with long lasting effects

Safety Data Sheet (SDS), USA

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.