



Revised: April 11, 2019

Safety Data Sheet

Section 1: Identification

1.1 Product Identifiers

Plant Name: Encon AQ120 Isotonic Saline Solution

Other Names: Encon AQ120 Bags, Encon Aquarion, Isotonic Saline Solution 141030A Product

Size: 3.96 Gallon Bag

Ingredients: Purified Water, Sodium Chloride, Boric Acid, Sodium Tetraborate, Chlorhexidine Digluconate

In Order By: Descending Order of Concentration

Emergency Contact: Poison Control Center 1 800 222 1222

Section 2: Hazards Identification

2.1 GHS Classification

Not classified

2.2 GHS Label Elements

No labeling applicable

2.3 Other Hazards

No additional information available

Section 3: Composition

3.1 Mixtures	Classification	Concentration	Hazard
Sodium Chloride CAS 7647-14-5 EC 231-598-3 NaCl	GRAS	<1%	None when used as directed. May cause eye and skin irritation. May cause respiratory tract irritation.
Boric Acid CAS 10043-35-3 EC 233-139-2 H ₃ BO ₃	R60, R61, S53, S45	<1%	None when used as directed. Large amounts of Boric Acid can be harmful to boron-sensitive plants and other ecological systems.
Sodium Tetraborate CAS 1303-96-4 EC 215-540-4 Na ₂ B ₄ O ₇ · 10H ₂ O	H360	<1%	None when used as directed.
D-Gluconic acid, compound with N,N''-bis(4-chlorophenyl)-3,12diimino-2,4,11,13-tetraazatetradecanediamidine (2:1) CAS 18472-51-0 EC 242-354-0 C ₂₂ H ₃₀ Cl ₂ N ₁₀ · 2C ₆ H ₁₂ O ₇	Acute Tox. 4; Aquatic Acute 1; Aquatic Chronic 1; H302, H410	100 ppm (0.01%)	None when used as directed. Mild irritation may occur on contact with large amounts of evaporated or condensed product. Inhalation danger on thermal decomposition of concentrated/ evaporated product.



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Section 4: First-Aid Measures

4.1 Description of first aid measures

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

In case of eye contact

Flush eyes with water as a precaution.

If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed

No data available

Section 5: Fire-Fighting Measures

5.1 Extinguishing media

Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Special hazards arising from the substance or mixture

Carbon oxides, nitrogen oxides (NO_x), Hydrogen chloride gas

5.3 Advice for firefighters

Wear self contained breathing apparatus for fire fighting if necessary.

5.4 Further information

No data available

Section 6: Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Avoid breathing vapor, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. For personal protection see section 8.

6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

6.3 Methods and materials for containment and cleaning up

Keep in suitable, closed containers for disposal.

6.4 Reference to other sections

For disposal see section 13.



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Section 7: Handling & Storage

7.1 Precautions for safe handling

For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Recommended storage temperature: 2 - 38 °C

Light sensitive.

7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

Section 8: Exposure Controls/Personal Protection

8.1 Control parameters

Components with workplace control parameters

Contains no substances with occupational exposure limit values.

8.2 Exposure controls Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment

Eye/face protection

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Full contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min

Material tested: Dermatril® (KCL 740 / Aldrich Z677272, Size M)

Splash contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min

Material tested: Dermatril® (KCL 740 / Aldrich Z677272, Size M)

Data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.



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Body Protection

Impervious clothing, the type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

Respiratory protection not required. For nuisance exposures use type OV/AG (US) or type ABEK (EU EN 14387) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

Section 9: Physical & Chemical Properties

9.1 Information on basic physical and chemical properties

- a) Appearance Form: liquid
- b) Odour: no data available
- c) Odour: Threshold no data available
- d) pH: 7.0-7.3
- e) Melting point/freezing point: no data available
- f) Initial boiling point and boiling range: no data available
- g) Flash point: no data available
- h) Evaporation rate: no data available
- i) Flammability (solid, gas): no data available
- j) Upper/lower flammability or explosive limits: no data available
- k) Vapour pressure: no data available
- l) Vapour density: no data available
- m) Relative density: 0.99-1.04 g/cm³ at 23 °C
- n) Water solubility: no data available
- o) Partition coefficient: n-octanol/ water: no data available
- p) Auto-ignition temperature: no data available
- q) Decomposition temperature: no data available
- r) Viscosity: no data available
- s) Explosive properties: no data available
- t) Oxidizing properties: no data available

9.2 Other safety information

No data available

Section 10: Stability & Reactivity

10.1 Reactivity

No data available

10.2 Chemical stability

Stable under recommended storage conditions. Boric Acid is a stable ingredient, but when heated it loses water, first forming Metaboric Acid (HBO₂), and on further heating it is converted into Boric Oxide (B₂O₃)

10.3 Possibility of hazardous reactions

No data available



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10.4 Conditions to avoid

No data available

10.5 Incompatible materials

Strong oxidizing agents

10.6 Hazardous decomposition products

Other decomposition products - no data available

In the event of fire: see section 5

Section 11: Toxicological Information

11.1 Information on toxicological effects

Acute toxicity

No data available

Inhalation: no data available

Dermal: no data available

Skin corrosion/irritation

No data available

Serious eye damage/eye irritation

No data available

Respiratory or skin sensitisation

No data available

Germ cell mutagenicity

No data available

Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity

Dietary Boric Acid levels of 6,700 ppm in chronic feeding studies in rats and dogs produced testicular atrophy, while dogs and rats receiving 2000 ppm did not develop testicular changes (1Weir, Fisher, 1972). In chronic feeding studies of mice on diets containing 5000 ppm (550 mg/kg/d) Boric Acid testicular atrophy was present while mice fed 2500 ppm (275 mg/kg/d) Boric Acid showed no significant increase in testicular atrophy (2NTP, 1987). In another Boric Acid chronic study, in mice given 4500 ppm (636 mg/kg/d), degeneration of seminiferous tubules was present together with a reduction of germ cells, while at 1000 ppm (152 mg/kg/d) no effect was seen (3Fail et al., 1991). In a reproduction study on rats,



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2000 ppm of dietary Boric Acid had no adverse effect on lactation, litter size, weight and appearance (1Weir, Fisher, 1972). In a continuous breeding study in mice there was reduction in fertility rates for males receiving 4500 ppm (636 mg/kg/d) Boric Acid but not for females receiving 4500 ppm Boric Acid(3Fail et al., 1991)

Developmental toxicity

Boric Acid at dietary levels of 1000 ppm (78 mg/kg/d) administered to pregnant female rats throughout gestation caused a slight reduction in fetal weight, but was considered to be close to the LOAEL. Doses of 2000 ppm (163 mg/kg/d) and above caused fetal malformations and maternal toxicity. In mice the no effect level for fetal weight reduction and maternal toxicity was 1000 ppm (248 mg/kg/d) Boric Acid Fetal weight loss was noted at dietary Boric Acid levels of 2000 ppm (452 mg/kg/d) and above. Malformations (agenesis or shortening of the thirteenth rib) were seen at 4000 ppm (1003 mg/kg/d), (4Heindel et al., 1992).

1 (Weir, R.J. and Fisher, R.S., Toxicol. Appl. Pharmacol., 23:351-364 (1974))

2 (National Toxicology Program (NTP)-Technical Report Series No. TR324, NIH Publication NO. 88-2580 (1987),PB88-213475/XAB)

3 (Fail et al., Fund. Appl. Toxicol. 17, 225-239 (1991))

4 (Heindel et al., Fund Appl. Toxicol. 18, 266-277 (1992))

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

Additional Information

RTECS: Not available

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Section 12: Ecological Information

12.1 Toxicity

No data available

12.2 Persistence and degradability

No data available

12.3 Bioaccumulative potential

No data available

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

12.6 Other adverse effects

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Very toxic to aquatic life.



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Section 13: Disposal Considerations

13.1 Waste treatment methods Product

Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging

Dispose of as unused product.

Section 14: Transportation Information

US DOT, IATA, IMO:

U.S. Department of Transportation (DOT) shipping regulations: This product is classified (per 49 CFR 172.101) by the U.S. Department of Transportation, as follows:

14.1 Proper shipping name: Not Regulated

14.2 Hazard class number and description: N/A

14.3 UN identification number: N/A

14.4 Packing group: N/A

14.5 DOT label(s) required: N/A

14.6 Marine pollutant: The components of this product are not designated by the Department of Transportation to be Marine Pollutants (49 CFR 172.101, Appendix B).

14.7 Special precautions for user: None

14.8 International Transportation:

International Air Transport Association Shipping Information (IATA): This product is not considered as dangerous goods.

International Maritime Organization Shipping Information (IMO): This product is not considered as dangerous goods.

Section 15: Regulatory Information

15.1 United States Regulations:

U.S. SARA Reporting Requirements: The components of this product are subject to the reporting requirements of Sections 302, 304, and 313 of Title III of the Superfund Amendments and Reauthorization Act.

U.S. SARA Threshold Planning Quantity: There are no specific Threshold Planning Quantities for the components of this product. The default Federal SDS submission and inventory requirement filing threshold of 10,000 lbs (4,540 kg) therefore applies, per 40 CFR 370.20.

U.S. CERCLA Reportable Quantity (RQ): None

U.S. TSCA Inventory Status: The components of this product are listed on the TSCA Inventory or are exempted from listing.

Other U.S. Federal Regulation: None

California Safe Drinking Water and Toxic Enforcement Act (Proposition 65): Ingredients within this product are not on the Proposition 65 Lists.



15.2 Canadian Regulations

Canadian DSL/NDSL Inventory Status: The components of this product are on the DSL Inventory, or are exempted from listing.

Other Canadian Regulations: Not applicable.

Canadian Environmental Protection Act (CEPA) Priorities Substances Lists: This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the SDS contains all of the information required by those regulations.

Canadian WHMIS Classification and Symbols: Complies with WHMIS 2015.

Section 16: Other Information

HMIS Rating

Health hazard: 1

Chronic Health Hazard:

Flammability: 0

Physical Hazard 0

NFPA Rating

Health hazard: 1

Fire Hazard: 0

Reactivity Hazard: 0

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