Safety Data Sheet
acc. to OSHA HCS

Printing date 06/13/2024 Reviewed on 06/13/2024

1 Identification

· **Product identifier**

· **Trade name: 1,000 ppm w/v 5 Component Stock (DEA, MPA, NH4, MEA, MDEA)**

· **Article number:** TOT015

· **Details of the supplier of the safety data sheet**
· **Manufacturer/Supplier:**
Aqua Solutions, Inc.
6913 Highway 225
DEER PARK, TX 77536
USA
800-256-2586

· **Information department:**
Technical Coordinator
Sherman Nelson shermann@aquasolutions.org
· **Emergency telephone number:**
Chemtrec: 800-424-9300
Canutec: 613-996-6666

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2 Hazard(s) identification

· **Classification of the substance or mixture**

GHS08 Health hazard

Carcinogenicity 2 H351 Suspected of causing cancer.

GHS07

Sensitization - Skin 1 H317 May cause an allergic skin reaction.

· **Label elements**
· **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).
· **Hazard pictograms**

GHS07 GHS08

· **Signal word** Warning

· **Hazard-determining components of labeling:**
Diethanolamine
3-methoxypropylamine
· **Hazard statements**
May cause an allergic skin reaction.
Suspected of causing cancer.
· **Precautionary statements**
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Avoid breathing dust/fume/gas/mist/vapors/spray
Contaminated work clothing must not be allowed out of the workplace.

(Contd. on page 2)

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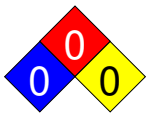
Trade name: 1,000 ppm w/v 5 Component Stock (DEA, MPA, NH4, MEA, MDEA)

(Contd. of page 1)

Wear protective gloves/protective clothing/eye protection/face protection.
If on skin: Wash with plenty of water.
IF exposed or concerned: Get medical advice/attention.
Specific treatment (see on this label).
If skin irritation or rash occurs: Get medical advice/attention.
Wash contaminated clothing before reuse.
Store locked up.
Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Classification system:**
· **NFPA ratings (scale 0 - 4)**



Health = 0
Fire = 0
Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**

Health = 0
Fire = 0
Reactivity = 0

· **Other hazards**
· **Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.

3 Composition/information on ingredients

· **Chemical characterization: Mixtures**
· **Description:** Mixture of the substances listed below with nonhazardous additions.

· **Dangerous components:**		
CAS: 111-42-2	Diethanolamine	0.1%
CAS: 5332-73-0	3-methoxypropylamine	0.1%

· **Table of Nonhazardous Ingredients**		
CAS: 7732-18-5	Water	99.304%
CAS: 12125-02-9	Ammonium Chloride, Reagent ACS Grade	0.297%
CAS: 105-59-9	N-Methyldiethanolamine, 99%	0.1%
CAS: 141-43-5	2-Aminoethanol (Monoethanolamine), Reagent Grade	0.1%

4 First-aid measures

· **Description of first aid measures**
· **After inhalation:**
Supply fresh air and to be sure call for a doctor.
In case of unconsciousness place patient stably in side position for transportation.
· **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
· **After eye contact:** Rinse opened eye for several minutes under running water.
· **After swallowing:** If symptoms persist consult doctor.
· **Information for doctor:**
· **Most important symptoms and effects, both acute and delayed** No further relevant information available.

(Contd. on page 3)

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Trade name: 1,000 ppm w/v 5 Component Stock (DEA, MPA, NH4, MEA, MDEA)

(Contd. of page 2)

· **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Fire-fighting measures

· **Extinguishing media**
· **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.
· **Special hazards arising from the substance or mixture** No further relevant information available.
· **Advice for firefighters**
· **Protective equipment:** No special measures required.

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6 Accidental release measures

· **Personal precautions, protective equipment and emergency procedures** Not required.
· **Environmental precautions:** Dilute with plenty of water.
· **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to section 13.
Ensure adequate ventilation.
· **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.
· **Protective Action Criteria for Chemicals**

· **PAC-1:**		
CAS: 12125-02-9	Ammonium Chloride, Reagent ACS Grade	20 mg/m³
CAS: 111-42-2	Diethanolamine	3 mg/m³
CAS: 141-43-5	2-Aminoethanol (Monoethanolamine), Reagent Grade	6 ppm
CAS: 5332-73-0	3-methoxypropylamine	15 ppm

· **PAC-2:**		
CAS: 12125-02-9	Ammonium Chloride, Reagent ACS Grade	25 ppm
CAS: 111-42-2	Diethanolamine	28 mg/m³
CAS: 141-43-5	2-Aminoethanol (Monoethanolamine), Reagent Grade	170 ppm
CAS: 5332-73-0	3-methoxypropylamine	94 ppm

· **PAC-3:**		
CAS: 12125-02-9	Ammonium Chloride, Reagent ACS Grade	150 ppm
CAS: 111-42-2	Diethanolamine	130 mg/m³
CAS: 141-43-5	2-Aminoethanol (Monoethanolamine), Reagent Grade	1,000 ppm
CAS: 5332-73-0	3-methoxypropylamine	560 ppm

7 Handling and storage

· **Handling:**
· **Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Open and handle receptacle with care.

(Contd. on page 4)

Safety Data Sheet
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Printing date 06/13/2024 Reviewed on 06/13/2024

Trade name: 1,000 ppm w/v 5 Component Stock (DEA, MPA, NH4, MEA, MDEA)

(Contd. of page 3)

Prevent formation of aerosols.
· **Information about protection against explosions and fires:** Keep respiratory protective device available.

· **Conditions for safe storage, including any incompatibilities**
· **Storage:**
· **Requirements to be met by storerooms and receptacles:** No special requirements.
· **Information about storage in one common storage facility:** Not required.
· **Further information about storage conditions:** Keep receptacle tightly sealed.
· **Specific end use(s)** No further relevant information available.

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8 Exposure controls/personal protection

· **Additional information about design of technical systems:** No further data; see section 7.

· **Control parameters**

· **Components with limit values that require monitoring at the workplace:**	
CAS: 111-42-2 Diethanolamine	
REL	Long-term value: 15 mg/m³, 3 ppm
TLV	Long-term value: 1* mg/m³ Skin; *inhalable fraction and vapor, A3
CAS: 5332-73-0 3-methoxypropylamine	
WEEL	Short-term value: 15 ppm Long-term value: 5 ppm

· **Additional information:** The lists that were valid during the creation were used as basis.

· **Exposure controls**
· **Personal protective equipment:**
· **General protective and hygienic measures:**
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing.
Wash hands before breaks and at the end of work.
Store protective clothing separately.
· **Breathing equipment:**
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.
· **Protection of hands:**

Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
· **Material of gloves**
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
· **Penetration time of glove material**
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

(Contd. on page 5)

Safety Data Sheet
acc. to OSHA HCS

Printing date 06/13/2024 Reviewed on 06/13/2024

Trade name: 1,000 ppm w/v 5 Component Stock (DEA, MPA, NH4, MEA, MDEA)

(Contd. of page 4)

· **Eye protection:** Goggles recommended during refilling.
· **Body protection:** Protective work clothing

9 Physical and chemical properties

· **Information on basic physical and chemical properties**	
· **General Information**	
· **Appearance:**	
Form:	Liquid
Color:	Colorless
· **Odor:**	Odorless
· **Odor threshold:**	Not determined.
· **pH-value:**	Not determined.
· **Change in condition**	
Melting point/Melting range:	0 °C (32 °F)
Boiling point/Boiling range:	100 °C (212 °F)
· **Flash point:**	Not applicable.
· **Flammability (solid, gaseous):**	Not applicable.
· **Decomposition temperature:**	Not determined.
· **Ignition temperature:**	Product is not selfigniting.
· **Danger of explosion:**	Product does not present an explosion hazard.
· **Explosion limits:**	
Lower:	Not determined.
Upper:	Not determined.
· **Vapor pressure at 20 °C (68 °F):**	23 hPa (17.3 mm Hg)
· **Density at 20 °C (68 °F):**	1.00158 g/cm³ (8.35819 lbs/gal)
· **Relative density**	Not determined.
· **Vapor density**	Not determined.
· **Evaporation rate**	Not determined.
· **Solubility in / Miscibility with**	
Water:	Fully miscible.
· **Partition coefficient (n-octanol/water):**	Not determined.
· **Viscosity:**	
Dynamic:	Not determined.
Kinematic:	Not determined.
· **Solvent content:**	
Organic solvents:	0.2 %
Water:	99.3 %
VOC content:	0.20 % 2.0 g/l / 0.02 lb/gal
Solids content:	0.4 %

(Contd. on page 6)

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Printing date 06/13/2024 Reviewed on 06/13/2024

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(Contd. of page 5)

· **Other information** No further relevant information available.

10 Stability and reactivity

· **Reactivity** No further relevant information available.
· **Chemical stability**
· **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
· **Possibility of hazardous reactions** No dangerous reactions known.
· **Conditions to avoid** No further relevant information available.
· **Incompatible materials:** No further relevant information available.
· **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

· **Information on toxicological effects**
· **Acute toxicity:**
· **Primary irritant effect:**
· **on the skin:** No irritant effect.
· **on the eye:** No irritating effect.
· **Sensitization:** Sensitization possible through skin contact.
· **Additional toxicological information:**
The product shows the following dangers according to internally approved calculation methods for preparations:
Irritant

· **Carcinogenic categories**

· **IARC (International Agency for Research on Cancer)**		
CAS: 111-42-2	Diethanolamine	2B

· **NTP (National Toxicology Program)**
None of the ingredients is listed.

· **OSHA-Ca (Occupational Safety & Health Administration)**
None of the ingredients is listed.

12 Ecological information

· **Toxicity**
· **Aquatic toxicity:** No further relevant information available.
· **Persistence and degradability** No further relevant information available.
· **Behavior in environmental systems:**
· **Bioaccumulative potential** No further relevant information available.
· **Mobility in soil** No further relevant information available.
· **Additional ecological information:**
· **General notes:** Not hazardous for water.
· **Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.

(Contd. on page 7)

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(Contd. of page 6)

· **Other adverse effects** No further relevant information available.

13 Disposal considerations

· **Waste treatment methods**
· **Recommendation:**
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

· **Uncleaned packagings:**
· **Recommendation:** Disposal must be made according to official regulations.
· **Recommended cleansing agent:** Water, if necessary with cleansing agents.

14 Transport information

· **UN-Number**	
· **DOT, IMDG, IATA**	Not regulated
· **UN proper shipping name**	
· **DOT, IMDG, IATA**	Not regulated
· **Transport hazard class(es)**	
· **DOT, ADN, IMDG, IATA**	
· **Class**	Not regulated
· **Packing group**	
· **DOT, IMDG, IATA**	Not regulated
· **Environmental hazards:**	Not applicable.
· **Special precautions for user**	Not applicable.
· **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**	Not applicable.
· **UN "Model Regulation":**	Not regulated

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15 Regulatory information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture**
No further relevant information available.
· **Sara**

· **Section 355 (extremely hazardous substances):**
None of the ingredients is listed.

· **Section 313 (Specific toxic chemical listings):**

CAS: 111-42-2	Diethanolamine

· **TSCA (Toxic Substances Control Act):**

Water	ACTIVE
Ammonium Chloride, Reagent ACS Grade	ACTIVE
N-Methyldiethanolamine, 99%	ACTIVE
Diethanolamine	ACTIVE

(Contd. on page 8)

Safety Data Sheet
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Trade name: 1,000 ppm w/v 5 Component Stock (DEA, MPA, NH4, MEA, MDEA)

(Contd. of page 7)

2-Aminoethanol (Monoethanolamine), Reagent Grade	ACTIVE
3-methoxypropylamine	ACTIVE

· **Hazardous Air Pollutants**

CAS: 111-42-2	Diethanolamine

· **Proposition 65**

· **Chemicals known to cause cancer:**

CAS: 111-42-2	Diethanolamine

· **Chemicals known to cause reproductive toxicity for females:**
None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for males:**
None of the ingredients is listed.

· **Chemicals known to cause developmental toxicity:**
None of the ingredients is listed.

· **Carcinogenic categories**

· **EPA (Environmental Protection Agency)**
None of the ingredients is listed.

· **TLV (Threshold Limit Value)**

CAS: 111-42-2	Diethanolamine	A3

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**
None of the ingredients is listed.

· **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).
· **Hazard pictograms**

GHS07 GHS08

· **Signal word** Warning

· **Hazard-determining components of labeling:**
Diethanolamine
3-methoxypropylamine
· **Hazard statements**
May cause an allergic skin reaction.
Suspected of causing cancer.
· **Precautionary statements**
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Avoid breathing dust/fume/gas/mist/vapors/spray
Contaminated work clothing must not be allowed out of the workplace.
Wear protective gloves/protective clothing/eye protection/face protection.
If on skin: Wash with plenty of water.
IF exposed or concerned: Get medical advice/attention.
Specific treatment (see on this label).
If skin irritation or rash occurs: Get medical advice/attention.
Wash contaminated clothing before reuse.
Store locked up.

(Contd. on page 9)

Safety Data Sheet
acc. to OSHA HCS

Trade name: 1,000 ppm w/v 5 Component Stock (DEA, MPA, NH4, MEA, MDEA)

(Contd. of page 8)

Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

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16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Department issuing SDS:** Environment protection department.

· **Contact:**

Date of Preparation / Last Revision:

· **Date of preparation / last revision**

Revision 1.2, 06/13/2024: Reviewed SDS for accuracy. MH/STN

06/13/2024 / 1.0

· **Abbreviations and acronyms:**

IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
VOC: Volatile Organic Compounds (USA, EU)
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
NIOSH: National Institute for Occupational Safety
OSHA: Occupational Safety & Health
TLV: Threshold Limit Value
PEL: Permissible Exposure Limit
REL: Recommended Exposure Limit
Sensitization - Skin 1: Skin sensitisation – Category 1
Carcinogenicity 2: Carcinogenicity – Category 2

· *** Data compared to the previous version altered.**