

Safety Data Sheet

AQUARIAN M314D



1. Identification

Product identifier	AQUARIAN M314D
Product code	M314D
Other means of identification	None.
Recommended use of the chemical and restrictions on use	Miscellaneous.
Manufacturer	AQUARIAN CHEMICALS INC. 768 Westgate Road Oakville, Ontario Canada L6L 5N2 Tel. 905-825-3711 Fax 905-825-0177 www.aquarianchemicals.com info@aquarianchemicals.com
Emergency phone number	Canutec: 613-996-6666

2. Hazard identification

Summary	CORROSIVE! Use only in well ventilated area. Avoid all contact with skin, eyes and clothing. Do not breathe vapors, mists or aerosols. Do not ingest. If ingested consult physician immediately and show this Safety Data Sheet. Wear eye protection, gloves, respiratory protection and other protective clothing that are adapted to the task being performed and the risks involved.
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WHMIS 2015/OSHA HCS 2012/GHS

Oxidizing liquids (Category 3)
 Acute toxicity, oral (Category 4)
 Skin corrosion/irritation (Category 1)
 Serious eye damage (Category 1)
 Specific target organ toxicity, single exposure (Category 1)
 Specific target organ toxicity, single exposure, Respiratory tract irritation (Category 3)
 Specific target organ toxicity, repeated exposure (Category 2)



Other hazards which do not result in classification :
 Acute hazard to the aquatic environment (Category 1).
 Long-term hazard to the aquatic environment (Category 1).

DANGER

H272: May intensify fire; oxidizer
 H314: Causes severe skin burns and eye damage
 H370: Causes damage to organs
 H302: Harmful if swallowed
 H335: May cause respiratory irritation
 H373: May cause damage to organs through prolonged or repeated exposure
 H410: Very toxic to aquatic life with long lasting effects
 P210: Keep away from heat, sparks, open flames and hot surfaces. No smoking.

P220: Keep and store away from clothing, flammable and combustible materials.
P260: Do not breathe mist, vapors and spray.
P264: Wash face, hands and any exposed skin thoroughly after handling.
P270: Do not eat, drink or smoke when using this product.
P271: Use only in a well-ventilated area.
P273: Avoid release to the environment.
P280: Wear protective gloves, protective clothing and eye protection.
P301+330+331+P310: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER or doctor/physician.
P303+361+353: IF ON SKIN (or hair): Remove immediately all contaminated clothing. Rinse skin with water and soap or take a shower if necessary.
P363: Wash contaminated clothing before reuse.
P304+340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305+351+338: IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
P310: Immediately call a doctor/physician.
P370+378: In case of fire: Use suitable extinguishing medium for extinction.
P391: Collect spillage.
P403+233: Store in a well ventilated place. Keep container tightly closed.
P405: Store locked up.
P501: Dispose of contents and container to a licensed chemical disposal agency in accordance with local, regional and national regulations.

3. Composition/information on ingredients

Common name	CAS	Weight % content
Sodium nitrite	7632-00-0	15 - 20 %
Sodium metaborate tetrahydrate	10555-76-7	4 - 6 %
Sodium metasilicate	6834-92-0	1 - 5 %
Sodium tolyltriazole	64665-57-2	0.1 - 1 %

4. First-aid measures

Inhalation	Move person to fresh air. If breathing is difficult, give oxygen by trained personnel. If not breathing, give artificial respiration. Do not use mouth-to-mouth resuscitation unless you use a buccal protective device. If a problem develops or persists, seek medical attention.
Skin contact	Flush with water for at least 15 minutes. Remove contaminated clothing and wash before reuse. If a problem develops or persists, seek medical attention.
Eye contact	IMMEDIATELY flush with plenty of water. Remove contact lenses after the first 5 minutes. Flush with water for at least 30 minutes. Hold eyelids apart to rinse properly. Do not rub your eyes. Consult a physician, preferably an ophthalmologist. Do not transport the victim until the recommended flushing period is completed.
Ingestion	DO NOT induce vomiting, unless recommended by medical personnel. If victim is conscious wash out mouth with water and give 1-2 glasses of water to drink. Never give anything by mouth if victim is unconscious or convulsing. If spontaneous vomiting occurs, keep head below hips level to prevent aspiration into the lungs. Seek medical attention or contact a Poison Centre immediately.
Other	No information available.
Symptoms	Causes skin burns and eye damage. May cause respiratory tract irritation.
Notes to the physician	Treat according to person's condition and specifics of exposure. If lavage is performed, suggest endotracheal and/or esophageal control. Danger from lung aspiration must be weighed against toxicity when considering emptying the stomach. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient. Probable mucosal damage may contraindicate the use of gastric

lavage.

5. Fire-fighting measures

Suitable extinguishing media	Dried powder, water spray, carbon dioxide (CO ₂), chemical foam.
Specific hazards arising from the chemical	This product decomposes under fire conditions to release oxygen that intensifies the fire. In a fire or if heated, a pressure increase will occur and the container may burst.
Special protective equipment	Firefighting suit may not be efficient against chemicals. Firefighters must wear self contained breathing apparatus with full face mask.
Special protective actions for fire-fighters	Water spray can be used to cool equipment exposed to heat and flame. Prevent run-off from fire control or dilution from entering streams, sewers or drinking water supply.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Do not touch spilled material. Make sure to wear personal protective equipment mentioned in this Safety Data Sheet.
Environmental precautions	Prevent entry in sewer and other enclosed area. For a large spillage, consult the Department of Environment or the relevant authorities.
Methods and materials for containment and cleaning up	Ventilate well the area. Stop leak, if it's possible to do so without risk. Move containers from spill area. Absorb with inert material (soil, sand, vermiculite) or wipe up with a damp mop and place in an appropriate waste disposal clearly identified. Finish cleaning by rinsing with soapy water the contaminated surface. Dispose via a licensed waste disposal contractor.

7. Handling and storage

Precautions for safe handling	Use only in well ventilated area. Do not breathe vapors and mists. Avoid all contact with skin, eyes and clothing. Make sure to wear personal protective equipment mentioned in this Safety Data Sheet. Avoid contact with flammable or combustible materials. Keep containers tightly closed when not used. Do not eat, do not drink and do not smoke during use. Wash hands, forearms and face thoroughly after handling this compound. Remove contaminated clothing and wash before reuse.
Conditions for safe storage, including any incompatibilities	Store tightly closed and in properly labelled container in a dry, cool and well ventilated place. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Store away from acids and from incompatible materials (see section 10). Keep away from direct sunlight and heat. Keep off freezing.
Storage temperature	10 to 40°C (50 to 104°F)

8. Exposure controls/personal protection

Immediately Dangerous to Life or Health	No IDLH value is reported.			
Sodium metaborate tetrahydrate	STEL TWA (8h)	Inhalable Fraction Inhalable Fraction	6 mg/m ³ 2 mg/m ³	ACGIH , BC, ON ACGIH , BC, ON

Appropriate engineering controls	Provide sufficient mechanical ventilation (general and/or local exhaust) to keep the airborne concentrations of vapors, mists, aerosols or dust below their respective occupational exposure limits. Ensure that eyewash stations and safety showers are close to the workstation.
Individual protection measures	
Eye	Wear chemical splash goggles. Depending on conditions of use, a face shield may be necessary.
Hands	Chemical-resistant, impervious gloves should be worn at all times when handling this chemical product. Wear nitrile or neoprene gloves. Before using, user should confirm impermeability. Discard gloves that show tears, pinholes, or signs of wear. Gloves must only be worn on clean hands. Wash gloves with water before removing them. After using gloves, hands should be washed and dried thoroughly.
Skin	Personal protective equipment for the body should be selected based on the task being performed and the risks involved. Wear an apron or long-sleeve protective coverall suit. To clean up a spill, if necessary, wear a synthetic polyethylene coveralls such as the Tychem (DuPont) or equivalent coveralls manufactured to provide protection against liquid chemical.
Respiratory	Respiratory protection equipment (PPE) must be selected, fitted, maintained and inspected in accordance with regulations and CSA Standard Z 94.4 and approved by NIOSH / MSHA. In case of insufficient ventilation or in confined or enclosed space and for an assigned protection factor (APF) up to 10 times the exposure limit: wear a half mask respirator with appropriate cartridges fitted with P100 filters. For an APF until maximum 100 times of exposure limit, wear a full face respirator mask with appropriate cartridges and P100 filters.
Feet	Wear rubber boots to clean up a spill.
   Apron Goggles Nitrile gloves	

9. Physical and chemical properties

Physical state	Liquid	Flammability	Non-flammable.
Colour	Yellow	Flammability limits	N/Ap.
Odour	Mild alcohol	Flash point	N/Ap.
Odour threshold	N/Av.	Auto-ignition temperature	N/Ap.
pH	11.5 to 13.5	Sensibility to electrostatic charges	No
Melting point	0°C (32°F)	Sensibility aux sparks and/or friction	No
Freezing point	0°C (32°F)	Vapour density	N/Av. (Air = 1)
Boiling point	<110°C (230°F)	Relative density	1.05 kg/L (Water = 1)
Solubility	Fully soluble in water.	Partition coefficient n-octanol/water	N/Av.
Evaporation rate	N/Av.	Decomposition temperature	N/Av.
Vapour pressure	N/Av.	Viscosity	N/Av.
Percent Volatile	89%	Molecular mass	N/Ap.
N/Av.: Not Available N/Ap.: Not Applicable Und.: Undetermined N/E: Not Established			

10. Stability and reactivity

Reactivity	No information available for this product.
Chemical stability	Stable under recommended storage conditions.
Possibility of hazardous reactions (including polymerizations)	Hazardous polymerization will not occur.
Conditions to avoid	Avoid high temperatures and intense heat. Avoid contact with incompatible materials.
Incompatible materials	Acids, catalytic metals, flammable materials, combustibles materials.
Hazardous decomposition products	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

11. Toxicological information

Numerical measures of toxicity	Sodium nitrite Ingestion 180 mg/kg Rat LD50 Inhalation 5.5 mg/m³/4h Rat LC50 Sodium metaborate tetrahydrate Ingestion 2330 mg/kg Rat LD50 Sodium metasilicate Ingestion 280 mg/kg Rat LD50 Sodium tolyltriazole Ingestion 920 mg/kg Rat LD50 Skin >2000 mg/kg Rabbit LD50
Likely routes of exposure	Skin, eyes, inhalation, ingestion.
Delayed, immediate and chronic effects	Eye contact May cause severe eye irritation or eye damage. Eye Irritation/Corrosion, Rabbit: tests performed with each ingredient of this mixture gave from irritating to corrosive results. Skin contact May cause severe skin irritation and burns. Severity is generally determined by concentration of solution and duration of contact. Contact with skin may aggravate an existing skin condition. Skin Irritation/Corrosion, Rabbit : tests performed with each ingredient of this mixture gave from mild irritating to corrosive results. Inhalation Inhalation of vapors or mists can cause severe irritation to nose, throat and respiratory tract. Overexposure may cause cause burns and lungs damages. Ingestion Harmful if swallowed. May cause burns to mouth, throat and stomach. Swallowing will causes digestive tract disturbances resulting in nausea, vomiting, cramps and diarrhea. Ingestion of large amounts may cause methemoglobinemia (damage to the blood) that can cause cyanosis (blue-grey skin discoloration), headache, weakness, dizziness, ataxia, exercise intolerance, drowsiness which may progress to coma and possible death. Respiratory or skin sensitization Ingredients present at levels greater than or equal to 0.1% of this product are skin or respiratory sensitizers. IRAC/NTP No ingredients listed. Classification Carcinogenicity Ingredients present at levels greater than or equal to 0.1% of this product are not listed as a carcinogen by IARC, ACGIH, NIOSH, NTP or OSHA. Sodium nitrite is not considered a carcinogen. However, there is sufficient evidence that ingested nitrate or nitrite in combination with amines or amides (nitrosation) is probably carcinogenic to humans (Group 2A, IRAC). Mutagenicity Ingredients in this product present at levels greater than or equal to 0.1% are not known to cause mutagenic effect. Reproductive toxicity Animal ingestion studies in several species, at high doses, indicate that borates cause reproductive and developmental effects. A human study of occupational exposure to borate dust showed no adverse effect on reproduction. This material is not known to cause effects on reproduction. Specific target organ toxicity - single exposure Respiratory system, blood, cardiovascular system.

	Specific target organ toxicity - repeated exposure Blood, cardiovascular system, liver, kidneys.
Interactive effects	No information available for this product.
Other information	The oral acute toxicity estimate (ATE) of the mixture was calculated to be greater than 300 mg/Kg but lower than 2000 mg/kg. This value is classified according to GHS: Acute toxicity, oral (Category 4). The skin acute toxicity estimate (ATE) of the mixture was calculated to be greater than 2000 mg/kg. This value is not classified according to WHMIS and OSHA HCS 2012.

12. Ecological information

Ecological toxicity	Fish - Rainbow trout - <i>Salmo gairdneri</i> LC50 25 mg/L; 96h (Sodium tolyltriazole) Green Algae - <i>Selenastrum capricornutum</i> EC50 26.2 mg/L; 96h (Sodium tolyltriazole) Fish Common dab LC50 74 mg/L; 96h (Sodium tetraborate) Zebrafish (<i>Danio rerio</i>) LC50 210 mg/L; 96h (Sodium metasilicate) Fish - <i>Oncorhynchus mykiss</i> - Rainbow trout LC50 0.36 mg/L; 96h (Sodium nitrite) Aquatic Invertebrate - <i>Daphnia Magna</i>, Water flea, fresh water EC50 12.5 mg/L; 48h (Sodium nitrite)
Persistence	No information available for this product. Inorganic compounds persist in the environment indefinitely or incorporate into biological systems.
Degradability	No information available for this product. The term biodegradability, as such, is not applicable to inorganic compounds. Inherent Biodegradability test Zahn-Wellens (OECD 302B) gave 70% in 35 days for Sodium tolyltriazole.
Bioaccumulative potential	No information available for this product. Sodium nitrite has a partition factors Log Kow of -3.7 indicating that it should not accumulate in the food chain.
Mobility in soil	No information available for this product. The mixture's ingredients are from slightly soluble to very soluble in water. Then, the distribution of them in the environment should be between water and the soil with little partition in air.
Other adverse effects	The observed ecological toxicity presented by this product for the environment was considered a result of pH effects. This chemical does not deplete the ozone layer.

13. Disposal considerations

Container 	Important! Prevent waste generation. Use in full. DO NOT throw residual to sewer, streams, sewers or drinking water supply. Residues and empty containers must be considered as hazardous waste. Dispose via a licensed waste disposal contractor. Observe all federal, state/provincial and municipal regulations. If necessary consult the Department of Environment or the relevant authorities.
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14. Transport information

UN Number	UN 3139
UN Proper Shipping Name	OXIDIZING LIQUID, N.O.S.
Environmental hazards	This material does not contain marine pollutant.
Special precautions for user	Permit required for transportation with proper placards displayed on vehicle.
TDG - Transportation of Dangerous Goods (Canada)	

Transport hazard class(es)	 Class 5.1
Packing group	III
Emergency response guidebook 2012	<u>140</u>
IMO/IMDG - International Maritime Transport	
Classification	UN 3139. OXIDIZING LIQUID, N.O.S. Classe 5.1, GE III. Emergency schedules (EmS-No) F-A, S-Q
IATA - International Air Transport Association	
Classification	UN 3139. OXIDIZING LIQUID, N.O.S. Classe 5.1, GE III.
These transportation classifications are provided as a customer service. As the shipper YOU remain responsible for complying with all applicable laws and regulations, including proper transportation classification and packaging. In addition, if a domestic exemption exists, it is the responsibility of the shipper to define the application of it.	

15. Regulatory information

Other regulations	UNITED STATE OF AMERICA: - Toxic Substance Control Act (TSCA) : All ingredients are listed in the TSCA Inventory or otherwise comply with TSCA requirements. - EPCRA Section 313 Toxic Chemicals: Sodium nitrite (CAS no 7632-00-0). - CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act): Sodium nitrite (CAS no 7632-00-0). - EPCRA Section 302/304 Extremely Hazardous Substances: No material is listed. - Clean Water Act (CWA) 311 Hazardous Substances: No material is listed. - Clean Water Act (CWA) Priority Pollutants: No material is listed. - Clean Air Act (CAA) 111: No material is listed. - California Proposition 65: No material is listed. CANADA : - Canada DSL and NDSL: All ingredients are listed in the Domestic Substances List (DSL). - Canadian National Pollutant Release Inventory Substances (NPRI): Sodium nitrite (CAS no 7632-00-0). WHMIS 1988     C D1B D2A E Class C : Oxidizing Material Class D1B : Toxic material causing immediate and serious toxic effects Class D2A : Very toxic material causing other toxic effects Class E : Corrosive material HMIS NFPA
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16. Other information

Date (YYYY-MM-DD)	AQUARIAN CHEMICALS INC. 2015-10-02
Version	01
Other information	REFERENCES: - Haz-Map, Information on Hazardous Chemicals and Occupational Diseases, http://hazmap.nlm.nih.gov/index.php - Service du répertoire toxicologique de la Commission de la santé et de la sécurité du travail (CSST), http://www.reptox.csst.qc.ca - TOXNET Databases, Toxicology Data Network, NIH U.S. National Library of Medicine, http://toxnet.nlm.nih.gov/ - OECD Existing Chemicals Database, Chemicals Screening Information DataSet (SIDS) for High Volume Chemicals, UNEP publications, http://webnet.oecd.org/HPV/UI/Search.aspx - Database, Institut National de Recherche et de Sécurité, http://www.inrs.fr/accueil/produits/bdd.html - NIOSH Pocket Guide to Chemical Hazards, Centers for Disease Control and Prevention, NIOSH Publications, 2007, http://www.cdc.gov/niosh/npg/npg.html ACGIH: American Conference of Governmental Industrial Hygienists AIHA: American Industrial Hygiene Association HMIS: Hazardous Materials Identification System NFPA: National Fire Protection Association OSHA: Occupational Safety and Health Administration (USA) NIOSH: National Institute for Occupational Safety and Health NTP: National Toxicology Program RSST: Règlement sur la santé et la sécurité du travail (Québec) GHS: Globally Harmonized System IARC: International Agency for Research on Cancer IDLH: Immediately Dangerous to Life or Health STEL: Short Term Exposure Limit (15 min) TWA: Time Weighted Averages WHMIS: Workplace Hazardous Materials Information System To the best of our knowledge, the information contained herein is accurate. However, neither Préventis System nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.