# Safety Data Sheet
# AQUARIAN M365

## 1. Identification

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| **Product identifier** | AQUARIAN M365 |
| **Product code** | M365 |
| **Other means of identification** | None. |
| **Recommended use of the chemical and restrictions on use** | Miscellaneous. |
| **Manufacturer** | AQUARIAN CHEMICALS INC.<br>768 Westgate Road<br>Oakville, Ontario<br>Canada L6L 5N2<br>Tel. 905-825-3711<br>Fax 905-825-0177<br>www.aquarianchemicals.com<br>info@aquarianchemicals.com |
| **Emergency phone number** | Canutec: 613-996-6666 |

## 2. Hazard identification

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| **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. |

**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** |
|---|---|---|
| Water | 7732-15-5 | 81-82% |
| Sodium nitrite | 7632-00-0 | 3-4 % |
| Jempax SXS | 1300-72-7 | 7- 8 % |
| Sodium metaborate tetrahydrate | 10555-76-7 | 3-4 % |
| EDTA | 13235-36-4 | 3-4 % |
| Sodium Hydroxide | 1310-73-2 | 2-3 % |

## *4. First-aid measures*

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| **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 domage. May cause respiratory tract irritation. |

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| **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 |

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| | lavage. |

## 5. Fire-fighting measures

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| **Suitable extinguishing media** | Dried powder, water spray, carbon dioxide (CO2), 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

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| **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

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| **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 flamable 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

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| **Immediately Dangerous to Life or Health** | No IDLH value is reported. |

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| Sodium metaborate tetrahydrate | STEL | Inhalable Fraction | 6 mg/m$^3$ | ACGIH , BC, ON |
| | TWA (8h) | Inhalable Fraction | 2 mg/m$^3$ | ACGIH , BC, ON |

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| **Appropriate engineering controls** | Provide sufficient mechanical ventilation (general and/or local exhaust) to keep the airborn 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*

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| **Physical state** | Liquid | **Flammability** | Non-flammable. |
| **Colour** | Yellow | **Flammability limits** | N/Ap. |
| **Odour** | None | **Flash point** | N/Ap. |
| **Odour threshold** | N/Av. | **Auto-ignition temperature** | N/Ap. |
| **pH** | 13 to 14 | **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** | 1.13 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

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| **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

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| **Numerical measures of toxicity** | Sodium nitrite | Ingestion 180 mg/kg Rat LD50<br>Inhalation 5.5 mg/m$^3$/4h Rat LC50 |
| | Sodium metaborate tetrahydrate | Ingestion 2330 mg/kg Rat LD50 |
| | Jempax SXS | LD50 Rat 7200 mg/kg |
| **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. |

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| | **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*

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| **Ecological toxicity** | Fish Common dab | LC50 | 74 mg/L; 96h (Sodium tetraborate) |
| | Fish - Oncorhynchus mykiss - Rainbow trout | LC50 | 0.36 mg/L; 96h (Sodium nitrite) |
| | Aquatic Invertebrate - Daphnia Magna, Water flea, fresh water | EC50 | 12.5 mg/L; 48h (Sodium nitrite) |
| | Crustacea Daphnia | EC50 | 1000 mg/l, 48 hours(Jempax SXS) |
| **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*

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| **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. |

## *14. Transport information*

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| **UN Number** | UN 3139 |
| **UN Proper Shipping Name** | OXIDIZING LIQUID, CORROSIVE 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)** | |

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| **Transport hazard class(es)** |  Class 5.1 Class 8 |
| **Packing group** | III |
| **Emergency response guidebook 2012** | 140 |
| **IMO/IMDG - International Maritime Transport** | |
| **Classification** | UN 3098. OXIDIZING LIQUID,CORROSIVE N.O.S. Classe 5.1, GE III. Emergency schedules (EmS-No) F-A, S-Q |
| **IATA - International Air Transport Association** | |
| **Classification** | UN 3098. OXIDIZING LIQUID,CORROSIVE N.O.S. Classe 5.1, GE III. Emergency schedules (EmS-No) F-A, S-Q |

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

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| **Date (YYYY-MM-DD)** | AQUARIAN CHEMICALS INC. 2015-10-02 |
| **Version** | 01 |
| **Other information** | REFERENCES:<br>- Haz-Map, Information on Hazardous Chemicals and Occupational Diseases, http://hazmap.nlm.nih.gov/index.php<br>- Service du répertoire toxicologique de la Commission de la santé et de la sécurité du travail (CSST), http://www.reptox.csst.qc.ca<br>- TOXNET Databases, Toxicology Data Network, NIH U.S. National Library of Medicine, http://toxnet.nlm.nih.gov/<br>- OECD Existing Chemicals Database, Chemicals Screening Information DataSet (SIDS) for High Volume Chemicals, UNEP publications, http://webnet.oecd.org/HPV/UI/Search.aspx<br>- Database, Institut National de Recherche et de Sécurité, http://www.inrs.fr/accueil/produits/bdd.html<br>- NIOSH Pocket Guide to Chemical Hazards, Centers for Disease Control and Prevention, NIOSH Publications, 2007, http://www.cdc.gov/niosh/npg/npg.html<br><br>ACGIH: American Conference of Governmental Industrial Hygienists<br>AIHA: American Industrial Hygiene Association<br>HMIS: Hazardous Materials Identification System<br>NFPA: National Fire Protection Association<br>OSHA: Occupational Safety and Health Administration (USA)<br>NIOSH: National Institute for Occupational Safety and Health<br>NTP: National Toxicology Program<br>RSST: Règlement sur la santé et la sécurité du travail (Québec)<br>GHS: Globally Harmonized System<br>IARC: International Agency for Research on Cancer<br>IDLH: Immediately Dangerous to Life or Health<br>STEL: Short Term Exposure Limit (15 min)<br>TWA: Time Weighted Averages<br>WHMIS: Workplace Hazardous Materials Information System<br><br> |