SAFETY DATA SHEET

Issue Date 26-Feb-2015  Revision Date 26-Feb-2015

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product Name BIOLOX VQ 2xRED

Other means of identification
Product Code 329
UN/ID No. UN3264
Synonyms None

Recommended use of the chemical and restrictions on use
Recommended Use Non-Phosphate Liquid Acid Cleaner.
Uses advised against PREVENT DISPERSION OF MISTS!

Manufacturer Address
Anderson Chemical Company, 325 South Davis Avenue, Litchfield, MN 55355 (320-693-2477)

Emergency telephone number
Chemtrec 1-800-424-9300

2. HAZARDS IDENTIFICATION

Classification
Acute toxicity - Inhalation (Dusts/Mists) Category 4
Skin corrosion/irritation Category 1 Sub-category A
Serious eye damage/eye irritation Category 1
Corrosive to metals Category 1

Label elements

Emergency Overview

Danger

Hazard statements
Harmful if inhaled
Causes severe skin burns and eye damage
May be corrosive to metals

Appearance aqueous solution  Physical state liquid  Odor Acrid odor

Precautionary Statements - Prevention
Do not breathe dust/fume/gas/mist/vapors/spray
Wash face, hands and any exposed skin thoroughly after handling
Keep only in original container
Use only in well-ventilated areas
Wear protective gloves/protective clothing/eye protection/face protection
Precautionary Statements - Response
Immediately call a POISON CENTER or doctor/physician
Specific treatment (see Section 4 on this label)
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
Immediately call a POISON CENTER or doctor/physician
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
Wash contaminated clothing before reuse
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
Call a POISON CENTER or doctor/physician if you feel unwell
Immediately call a POISON CENTER or doctor/physician
IF SWALLOWED: Rinse mouth. DO NOT induce vomiting
Absorb spillage to prevent material damage

Precautionary Statements - Storage
Store locked up
Store in a corrosive resistant container.

Precautionary Statements - Disposal
Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)
Other Information

3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS No.</th>
<th>Weight-%</th>
<th>Trade Secret</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nitric acid</td>
<td>7697-37-2</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>Sulfuric acid</td>
<td>7664-93-9</td>
<td>7.5</td>
<td></td>
</tr>
</tbody>
</table>

*The exact percentage (concentration) of composition has been withheld as a trade secret.

4. FIRST AID MEASURES

First aid measures

Eye contact
Flush immediately with water for 15 minutes. Lift upper and lower eyelids for complete rinsing. Get immediate medical attention.

Skin Contact
Flush with water for 15 minutes. If irritation persists after rinsing, get medical attention. Remove contaminated clothing and wash before reuse.

Inhalation
Remove victim from immediate source of exposure to fresh air. If breathing is difficult, administer oxygen if available. If victim is not breathing, administer CPR. If individual experiences nausea, headache, or dizziness, get immediate medical attention.

Ingestion
Rinse mouth with water. Give water to dilute. Do not induce vomiting. Get immediate medical attention. Never give anything by mouth to a semi-comatose, comatose, convulsing or unconscious person.

Self-protection of the first aider
Use personal protective equipment as required. Avoid contact with skin, eyes or clothing.

Most important symptoms and effects, both acute and delayed

Symptoms
Causes severe irritation and or burns.

Indication of any immediate medical attention and special treatment needed

Note to physicians
Treat symptomatically.
5. FIRE-FIGHTING MEASURES

Suitable extinguishing media
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media  None known.

Specific hazards arising from the chemical
No information available.

Explosion data
Sensitivity to Mechanical Impact  None.
Sensitivity to Static Discharge  None.

Protective equipment and precautions for firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Use water spray to cool fire exposed containers.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions  Evacuate nonessential personnel. Ventilate area. Wear appropriate personal protection equipment. Remove all sources of ignition.

Environmental precautions  See Section 12 for additional ecological information.

Methods for containment  Stop leak if you can do it without risk. Completely contain spilled material with dikes or sand bags, etc.

Methods for cleaning up  Recover as much material as possible into containers for disposal or reuse. Remaining material may be diluted with water and neutralized. Flush spill area with water. Neutralization products, both solid and liquid, must be recovered for disposal.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling  Do not get in eyes, on skin, or clothing. Do not breathe vapors or mists. Do not ingest. Wash thoroughly after handling. Wear protective clothing/equipment. Use with adequate ventilation.

Conditions for safe storage, including any incompatibilities

Storage Conditions  Keep containers tightly closed and properly labeled. Containers that have been emptied will retain product residue and should be handled as if they were full. Store in a cool, dry, well-ventilated place away from incompatible materials. Wash hands before eating, drinking, using tobacco, applying make-up or using the toilet. Do not store, use, and/or consume foods, beverages, tobacco in areas where this product is stored.


8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>NIOSH IDLH</th>
</tr>
</thead>
</table>

Page 3 / 8
Nitric acid 7697-37-2
STEL: 4 ppm
TWA: 2 ppm
TWA: 2 ppm
TWA: 5 mg/m³ (vacated)
TWA: 2 ppm (vacated)
TWA: 5 mg/m³ (vacated)
STEL: 4 ppm
STEL: 10 mg/m³

Sulfuric acid 7664-93-9
TWA: 0.2 mg/m³ thoracic fraction
TWA: 1 mg/m³
TWA: 1 mg/m³ (vacated)
TWA: 1 mg/m³ (vacated)
STEL: 4 ppm
STEL: 10 mg/m³
STEL: 10 mg/m³

**Appropriate engineering controls**

Showers
Eyewash stations
Ventilation systems.

**Individual protection measures, such as personal protective equipment**

- **Eye/face protection**
  
  Wear safety glasses with side shields (or goggles). Face protection shield.

- **Skin and body protection**
  
  Suitable protective clothing. Rubber gloves.

- **Respiratory protection**
  
  If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

**General Hygiene Considerations**

Handle in accordance with good industrial hygiene and safety practice.

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**9. PHYSICAL AND CHEMICAL PROPERTIES**

*Information on basic physical and chemical properties*

<table>
<thead>
<tr>
<th>Property</th>
<th>Values</th>
<th>Remarks • Method</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>pH</strong></td>
<td>1.6</td>
<td>1% Solution</td>
</tr>
<tr>
<td><strong>Melting point/freezing point</strong></td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td><strong>Boiling point / boiling range</strong></td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td><strong>Flash point</strong></td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td><strong>Evaporation rate</strong></td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td><strong>Flammability (solid, gas)</strong></td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td><strong>Flammability Limit in Air</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Upper flammability limit:</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Lower flammability limit:</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td><strong>Vapor pressure</strong></td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td><strong>Vapor density</strong></td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td><strong>Specific Gravity</strong></td>
<td>1.176</td>
<td></td>
</tr>
<tr>
<td><strong>Water solubility</strong></td>
<td>Soluble in water</td>
<td></td>
</tr>
<tr>
<td><strong>Solubility in other solvents</strong></td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td><strong>Partition coefficient</strong></td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td><strong>Autoignition temperature</strong></td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td><strong>Decomposition temperature</strong></td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td><strong>Kinematic viscosity</strong></td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td><strong>Dynamic viscosity</strong></td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td><strong>Explosive properties</strong></td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td><strong>Oxidizing properties</strong></td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td><strong>Other Information</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Softening point</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Molecular weight</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Kinematic viscosity</td>
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<td></td>
</tr>
<tr>
<td>Dynamic viscosity</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Explosive properties</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Oxidizing properties</td>
<td>No information available</td>
<td></td>
</tr>
</tbody>
</table>
10. STABILITY AND REACTIVITY

Reactivity
No data available

Chemical stability
Stable under recommended storage conditions.

Possibility of Hazardous Reactions
None under normal processing.

Conditions to avoid
High temperatures might lead to formation of nitrogen dioxide. Contact with water may cause violent reaction with evolution of heat. To dilute: Add product slowly to lukewarm water; not water to product.

Incompatible materials

Hazardous Decomposition Products
Nitrogen oxides (NOx). Hydrogen gas may be released upon contact with certain metals. Releases sulfur dioxide at extremely high temperatures.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information No data available

Inhalation May cause irritation of respiratory tract.

Eye contact Risk of serious damage to eyes.

Skin Contact Contact causes severe skin irritation and possible burns.

Ingestion Harmful if swallowed.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Oral LD50</th>
<th>Dermal LD50</th>
<th>Inhalation LC50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nitric acid 7697-37-2</td>
<td>-</td>
<td>-</td>
<td>= 67 ppm ( Rat ) 4 h</td>
</tr>
<tr>
<td>Sulfuric acid 7664-93-9</td>
<td>= 2140 mg/kg ( Rat )</td>
<td>-</td>
<td>= 510 mg/m³ ( Rat ) 2 h</td>
</tr>
</tbody>
</table>

Information on toxicological effects

Symptoms No information available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization No information available.

Germ cell mutagenicity No information available.

Carcinogenicity No information available.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ACGIH</th>
<th>IARC</th>
<th>NTP</th>
<th>OSHA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nitric acid 7697-37-2</td>
<td>-</td>
<td>Group 2A</td>
<td>-</td>
<td>X</td>
</tr>
<tr>
<td>Sulfuric acid 7664-93-9</td>
<td>A2</td>
<td>Group 1</td>
<td>Known</td>
<td>X</td>
</tr>
</tbody>
</table>

Reproductive toxicity No information available.

STOT - single exposure No information available.

STOT - repeated exposure No information available.
Aspiration hazard
No information available.

Numerical measures of toxicity - Product Information

The following values are calculated based on chapter 3.1 of the GHS document.

| ATEmix (oral) | 28533 mg/kg |
| ATEmix (inhalation-dust/mist) | 3.4 mg/l |
| ATEmix (inhalation-vapor) | 335 mg/l |

12. ECOLOGICAL INFORMATION

Ecotoxicity
0% of the mixture consists of components(s) of unknown hazards to the aquatic environment.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Algae/aquatic plants</th>
<th>Fish</th>
<th>Crustacea</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nitric acid 7697-37-2</td>
<td>-</td>
<td>72: 96 h Gambusia affinis mg/L LC50</td>
<td>-</td>
</tr>
<tr>
<td>Sulfuric acid 7664-93-9</td>
<td>-</td>
<td>500: 96 h Brachydanio rerio mg/L LC50 static</td>
<td>29: 24 h Daphnia magna mg/L EC50</td>
</tr>
</tbody>
</table>

Persistence and degradability
No information available.

Bioaccumulation
No information available.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Partition coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nitric acid 7697-37-2</td>
<td>-2.3</td>
</tr>
</tbody>
</table>

Other adverse effects
No information available.

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Disposal of wastes
Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated packaging
Do not reuse container.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>California Hazardous Waste Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nitric acid 7697-37-2</td>
<td>Toxic Corrosive Ignitable</td>
</tr>
<tr>
<td>Sulfuric acid 7664-93-9</td>
<td>Toxic Corrosive</td>
</tr>
</tbody>
</table>

14. TRANSPORT INFORMATION

DOT
Regulated
UN/ID No. UN3264
Proper shipping name Corrosive liquid, acidic, inorganic, n.o.s.
Hazardous ingredients (nitric acid/sulfuric acid)
Hazard Class 8
Packing Group II
15. REGULATORY INFORMATION

International Inventories

<table>
<thead>
<tr>
<th>International Inventory</th>
<th>Complies/Does Not Comply</th>
</tr>
</thead>
<tbody>
<tr>
<td>TSCA</td>
<td>Complies</td>
</tr>
<tr>
<td>DSL/NDSL</td>
<td>Complies</td>
</tr>
<tr>
<td>EINECS/ELINCS</td>
<td>Complies</td>
</tr>
<tr>
<td>ENCS</td>
<td>Does not comply</td>
</tr>
<tr>
<td>IECSC</td>
<td>Complies</td>
</tr>
<tr>
<td>KECL</td>
<td>Complies</td>
</tr>
<tr>
<td>PICCS</td>
<td>Complies</td>
</tr>
<tr>
<td>AICS</td>
<td>Complies</td>
</tr>
</tbody>
</table>

Legend:

- TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
- DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
- EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
- ENCS - Japan Existing and New Chemical Substances
- IECSC - China Inventory of Existing Chemical Substances
- KECL - Korean Existing and Evaluated Chemical Substances
- PICCS - Philippines Inventory of Chemicals and Chemical Substances
- AICS - Australian Inventory of Chemical Substances

US Federal Regulations

SARA 313
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>SARA 313 - Threshold Values %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nitric acid - 7697-37-2</td>
<td>1.0</td>
</tr>
<tr>
<td>Sulfuric acid - 7664-93-9</td>
<td>1.0</td>
</tr>
</tbody>
</table>

SARA 311/312 Hazard Categories

- Acute health hazard: Yes
- Chronic Health Hazard: No
- Fire hazard: No
- Sudden release of pressure hazard: No
- Reactive Hazard: No

CWA (Clean Water Act)
This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CWA - Reportable Quantities</th>
<th>CWA - Toxic Pollutants</th>
<th>CWA - Priority Pollutants</th>
<th>CWA - Hazardous Substances</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nitric acid</td>
<td>1000 lb</td>
<td>-</td>
<td>-</td>
<td>X</td>
</tr>
<tr>
<td>7697-37-2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sulfuric acid</td>
<td>1000 lb</td>
<td>-</td>
<td>-</td>
<td>X</td>
</tr>
<tr>
<td>7664-93-9</td>
<td></td>
<td></td>
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</tbody>
</table>

CERCLA
This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Hazardous Substances RQs</th>
<th>CERCLA/SARA RQ</th>
<th>Reportable Quantity (RQ)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nitric acid</td>
<td>1000 lb</td>
<td>1000 lb</td>
<td>RQ 1000 lb final RQ</td>
</tr>
<tr>
<td>7697-37-2</td>
<td></td>
<td></td>
<td>RQ 454 kg final RQ</td>
</tr>
</tbody>
</table>
US State Regulations

California Proposition 65
This product does not contain any Proposition 65 chemicals

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>California Proposition 65</th>
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</thead>
<tbody>
<tr>
<td>Sulfuric acid</td>
<td>Carcinogen</td>
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</tbody>
</table>

U.S. State Right-to-Know Regulations

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>New Jersey</th>
<th>Massachusetts</th>
<th>Pennsylvania</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nitric acid</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>7697-37-2</td>
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<td></td>
</tr>
<tr>
<td>Sulfuric acid</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>7664-93-9</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

U.S. EPA Label Information
EPA Pesticide Registration Number Not Applicable

16. OTHER INFORMATION

NFPA  Health hazards 3  Flammability 0  Instability 1  Physical and Chemical Properties -
HMIS  Health hazards 3  Flammability 0  Physical hazards 1  Personal protection X

Prepared By lmt  
Issue Date 26-Feb-2015  
Revision Date 26-Feb-2015  
Revision Note No information available  
Disclaimer The information provided in this Material Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet