

SAFETY DATA SHEET

Issue Date 25-Aug-2014

Product Name

Revision Date 25-Aug-2014

Version 1

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

| Other means of identification | |
|-------------------------------|--|
| Product Code | |
| UN/ID No. | |
| Synonyms | |

049 UN3264 None

BIOLOX NP-2 NF RED

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 | | |

Do not breathe dust/fume/gas/mist/vapors/spray Wash face, hands and any exposed skin thoroughly after handling Keep only in original container Wear protective gloves/protective clothing/eye protection/face protection Use only in well-ventilated areas

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 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

| Chemical Name | CAS No. | Weight-% | Trade Secret |
|---------------|-----------|----------|--------------|
| Nitric acid | 7697-37-2 | 20 | |
| Sulfuric acid | 7664-93-9 | 7.5 | |

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

4. FIRST AID MEASURES First aid measures Flush immediately with water for 15 minutes. Lift upper and lower eyelids for complete Eve contact rinsing. Get immediate medical attention. Flush with water for 15 minutes. If irritation persists after rinsing, get medical attention. Skin Contact 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. Rinse mouth with water. Give water to dilute. Do not induce vomiting. Get immediate Ingestion medical attention. Never give anything by mouth to a semi-comatose, comatose, convulsing or unconscious person. Use personal protective equipment as required. Avoid contact with skin, eyes or clothing. Self-protection of the first aider Most important symptoms and effects, both acute and delayed Causes severe irritation and or burns. Symptoms Indication of any immediate medical attention and special treatment needed Treat symptomatically. Note to physicians 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.

Incompatible materials

Alkali. Reducing agent. Combustible material. Metals. Oxidizing agents.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

- - - --

| Exposure Guidelines | | | |
|---------------------|-----------|----------|------------|
| Chemical Name | ACGIH TLV | OSHA PEL | NIOSH IDLH |

| Nitric acid | STEL: 4 ppm | TWA: 2 ppm | IDLH: 25 ppm |
|---------------|--|--------------------------------------|----------------------------|
| 7697-37-2 | TWA: 2 ppm | TWA: 5 mg/m ³ | TWA: 2 ppm |
| | | (vacated) TWA: 2 ppm | TWA: 5 mg/m ³ |
| | | (vacated) TWA: 5 mg/m ³ | STEL: 4 ppm |
| | | (vacated) STEL: 4 ppm | STEL: 10 mg/m ³ |
| | | (vacated) STEL: 10 mg/m ³ | |
| Sulfuric acid | TWA: 0.2 mg/m ³ thoracic fraction | TWA: 1 mg/m ³ | IDLH: 15 mg/m ³ |
| 7664-93-9 | - | (vacated) TWA: 1 mg/m ³ | TWA: 1 mg/m ³ |

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. |

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

| Physical state Appearance Color | liquid aqueous solution clear pink | Odor Odor threshold | Acrid odor No information available |
|---|--|---------------------------------|--|
| Property pH Melting point/freezing point Boiling point / boiling range Flash point Evaporation rate Flammability (solid, gas) Flammability Limit in Air Upper flammability limit: Lower flammability limit: Vapor pressure Vapor density | <u>Values</u> 1.6 No information available No information available | Remarks • Method 1% Solution | |
| Specific Gravity Water solubility Solubility in other solvents Partition coefficient Autoignition temperature Decomposition temperature Kinematic viscosity Dynamic viscosity Explosive properties Oxidizing properties | 1.176 Soluble in water No information available No information available No information available No information available No information available No information available No information available | | |
| <u>Other Information</u> Softening point Molecular weight | No information available No information available | | |

VOC Content (%) Density Bulk density

No information available No information available No information available

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

Alkali. Reducing agent. Combustible material. Metals. Oxidizing agents.

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. |

| Chemical Name | Oral LD50 | Dermal LD50 | Inhalation LC50 |
|----------------------------|--------------------|-------------|---------------------|
| Nitric acid 7697-37-2 | - | - | = 67 ppm (Rat)4 h |
| Sulfuric acid 7664-93-9 | = 2140 mg/kg (Rat) | - | = 510 mg/m³(Rat)2 h |

Information on toxicological effects

Symptoms

No information available.

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

| Sensitization Germ cell mutagenicity Carcinogenicity | No informatio No informatio No informatio | n available. | | |
|---|---|--------------|-------|------|
| Chemical Name | ACGIH | IARC | NTP | OSHA |
| Nitric acid 7697-37-2 | - | Group 2A | - | Х |
| Sulfuric acid 7664-93-9 | A2 | Group 1 | Known | Х |
| Reproductive toxicity STOT - single exposure STOT - repeated exposure | No informatio No informatio No informatio | n 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/kgATEmix (inhalation-dust/mist)3.4 mg/lATEmix (inhalation-vapor)335 mg/l

12. ECOLOGICAL INFORMATION

Ecotoxicity

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

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

Persistence and degradability

No information available.

Bioaccumulation

No information available.

| Chemical Name | Partition coefficient |
|---------------|-----------------------|
| Nitric acid | -2.3 |
| 7697-37-2 | |

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.

| Chemical Name | California Hazardous Waste Status |
|---------------|-----------------------------------|
| Nitric acid | Toxic |
| 7697-37-2 | Corrosive |
| | Ignitable |
| Sulfuric acid | Toxic |
| 7664-93-9 | Corrosive |

14. TRANSPORT INFORMATION

| DO. | Г | |
|-----|---|-----|
| | U | N/I |

| UN/ID No. | |
|-----------------------|--|
| Proper shipping name | |
| Hazardous ingredients | |
| Hazard Class | |
| Packing Group | |

Regulated UN3264 Corrosive liquid, acidic, inorganic, n.o.s. (nitric acid/sulfuric acid) 8 II

15. REGULATORY INFORMATION

| International Inventories | |
|---------------------------|-----------------|
| TSCA | Complies |
| DSL/NDSL | Complies |
| EINECS/ELINCS | Complies |
| ENCS | Does not comply |
| IECSC | Complies |
| KECL | Complies |
| PICCS | Complies |
| AICS | Complies |

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

<u>SARA 313</u>

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

| Chemical Name | SARA 313 - Threshold Values % |
|-----------------------------------|-------------------------------|
| Nitric acid - 7697-37-2 | 1.0 |
| Sulfuric acid - 7664-93-9 | 1.0 |
| 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)

| Chemical Name | CWA - Reportable Quantities | CWA - Toxic Pollutants | CWA - Priority Pollutants | CWA - Hazardous Substances |
|----------------------------|--------------------------------|------------------------|---------------------------|-------------------------------|
| Nitric acid 7697-37-2 | 1000 lb | - | - | х |
| Sulfuric acid 7664-93-9 | 1000 lb | - | - | Х |

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

| Chemical Name | Hazardous Substances RQs | CERCLA/SARA RQ | Reportable Quantity (RQ) |
|---------------|--------------------------|----------------|--------------------------|
| Nitric acid | 1000 lb | 1000 lb | RQ 1000 lb final RQ |
| 7697-37-2 | | | RQ 454 kg final RQ |

| Sulfuric acid 7664-93-9 | 1000 lb | 1000 lb | RQ 1000 lb final RQ RQ 454 kg final RQ |
|----------------------------|---------|---------|---|
|----------------------------|---------|---------|---|

US State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals

| Chemical Name | California Proposition 65 | |
|---------------------------|---------------------------|--|
| Sulfuric acid - 7664-93-9 | Carcinogen | |

U.S. State Right-to-Know Regulations

| Chemical Name | New Jersey | Massachusetts | Pennsylvania |
|----------------------------|------------|---------------|--------------|
| Nitric acid 7697-37-2 | Х | X | Х |
| Sulfuric acid 7664-93-9 | Х | X | Х |

U.S. EPA Label Information

EPA Pesticide Registration Number Not Applicable

| 16. OTHER INFORMATION | | | | | |
|--|-----------------------------|--------------------------|-----------------------------|---------------------------------------|--|
| <u>NFPA</u> | 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 Issue Date Revision Date | lmt 25-Aug-2 25-Aug-2 | | | | |
| Revision Note No information available Disclaimer The information provide | ed in this Material Safe | aty Data Sheet is correc | t to the best of our knowle | dge, information and belief | |

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