

Issue Date 09-Nov-2015

Revision Date 09-Nov-2015

Version 1

## 1. IDENTIFICATION

### Product identifier

**Product Name** Trace Metals 1

### Other means of identification

**Product Code** PEI-034-1

**UN/ID no.** 2031

**Synonyms** None

### Recommended use of the chemical and restrictions on use

**Recommended Use** For Laboratory Use Only.

**Uses advised against** No information available

### Details of the supplier of the safety data sheet

### Emergency telephone number

**Company Phone Number** 800-234-7837

**FAX** 919-789-3019

**Website** www.nsilabsolutions.com

**E-mail address** nsi@nsilabsolutions.com

**Emergency Telephone** 919-349-7322

## 2. HAZARDS IDENTIFICATION

### Classification

### OSHA Regulatory Status

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

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

### Label elements

### Emergency Overview

**Danger**

### Hazard statements

H332: Harmful if inhaled

H314: Causes severe skin burns and eye damage



**Appearance** Clear / Colorless to light yellow

**Physical state** Liquid

**Odor** Odorless

### Precautionary Statements - Prevention

Obtain special instructions before use

Do not handle until all safety precautions have been read and understood  
 Wear protective gloves/protective clothing/eye protection/face protection  
 Use only outdoors or in a well-ventilated area  
 Do not breathe dusts or mists  
 Wash face, hands and any exposed skin thoroughly after handling

**Precautionary Statements - Response**

Immediately call a POISON CENTER or doctor  
 Specific treatment (see supplemental first aid 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  
 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower  
 Wash contaminated clothing before reuse  
 IF INHALED: Remove person to fresh air and keep comfortable for breathing  
 Immediately call a POISON CENTER or doctor  
 IF SWALLOWED: Rinse mouth. DO NOT induce vomiting

**Precautionary Statements - Storage**

Store locked up

**Precautionary Statements - Disposal**

Dispose of contents/container to an approved waste disposal plant

**Hazards not otherwise classified (HNOC)**

Not applicable

**Other Information**

H411: Toxic to aquatic life with long lasting effects H402: Harmful to aquatic life

Unknown acute toxicity

0 % of the mixture consists of ingredient(s) of unknown toxicity

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

**Substance**

| Chemical Name                  | CAS No.    | Weight-% |
|--------------------------------|------------|----------|
| Water                          | 7732-18-5  | 94-99    |
| Nitric acid                    | 7697-37-2  | 1-5      |
| Iron metal                     | 7439-89-6  | 0-0.04   |
| Aluminum metal                 | 7429-90-5  | 0-0.04   |
| Barium nitrate                 | 10022-31-8 | 0-0.025  |
| Zinc metal                     | 7440-66-6  | 0-0.02   |
| Nickel metal                   | 7440-02-0  | 0-0.02   |
| Manganese acetate tetrahydrate | 6156-78-1  | 0-0.02   |
| Ammonium metavanadate          | 7803-55-6  | 0-0.02   |
| Lead metal                     | 7439-92-1  | 0-0.015  |
| Silver metal                   | 7440-22-4  | 0-0.01   |
| Selenium metal                 | 7782-49-2  | 0-0.01   |
| Copper metal                   | 7440-50-8  | 0-0.01   |
| Cobalt metal                   | 7440-48-4  | 0-0.01   |
| Chromium metal                 | 7440-47-3  | 0-0.01   |
| Cadmium metal                  | 7440-43-9  | 0-0.01   |
| Arsenic metal                  | 7440-38-2  | 0-0.009  |
| Antimony metal                 | 7440-36-0  | 0-0.009  |
| Thallium metal                 | 7440-28-0  | 0-0.008  |
| Molybdenum metal               | 7439-98-7  | 0-0.006  |
| Strontium nitrate              | 10042-76-9 | 0-0.005  |
| Beryllium acetate, basic       | 19049-40-2 | 0-0.005  |

Refer to Certificate of Analysis for exact percentage concentration.

#### 4. FIRST AID MEASURES

##### Description of first aid measures

|                       |                                                                                                                                                                                |
|-----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>General advice</b> | In case of accident or unwellness, seek medical advice immediately (show directions for use or Safety Data Sheet, if possible).                                                |
| <b>Eye contact</b>    | Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.                                                           |
| <b>Skin contact</b>   | Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes.                                                                          |
| <b>Inhalation</b>     | Remove to fresh air. If symptoms persist, call a physician.                                                                                                                    |
| <b>Ingestion</b>      | Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Clean mouth with water and drink afterwards plenty of water. Consult a physician, if necessary. |

##### Most important symptoms and effects, both acute and delayed

|                 |                                                                                             |
|-----------------|---------------------------------------------------------------------------------------------|
| <b>Symptoms</b> | The most important known symptoms and effects are described in Section 2 and/or Section 11. |
|-----------------|---------------------------------------------------------------------------------------------|

##### Indication of any immediate medical attention and special treatment needed

|                           |                        |
|---------------------------|------------------------|
| <b>Note to physicians</b> | 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** No information available.

##### Specific hazards arising from the chemical

Thermal decomposition can lead to release of irritating and/or toxic gases and vapors.

##### 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.

#### 6. ACCIDENTAL RELEASE MEASURES

##### Personal precautions, protective equipment and emergency procedures

|                                 |                                                                                                                                                                                                                                           |
|---------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Personal precautions</b>     | Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Ensure adequate ventilation, especially in confined areas. Use personal protective equipment, as required. Do not get in eyes, on skin, or on clothing. |
| <b>For emergency responders</b> | Ensure adequate ventilation.                                                                                                                                                                                                              |

##### Environmental precautions

|                                  |                                                       |
|----------------------------------|-------------------------------------------------------|
| <b>Environmental precautions</b> | Prevent further leakage or spillage if safe to do so. |
|----------------------------------|-------------------------------------------------------|

##### Methods and material for containment and cleaning up

|                                |                                                                                            |
|--------------------------------|--------------------------------------------------------------------------------------------|
| <b>Methods for containment</b> | Soak up condensate with inert absorbent material and collect in ventilated waste container |
|--------------------------------|--------------------------------------------------------------------------------------------|

for disposal.

**Methods for cleaning up** Take up mechanically, placing in appropriate containers for disposal.

**Prevention of secondary hazards** See Section 12: ECOLOGICAL INFORMATION.

## 7. HANDLING AND STORAGE

### Precautions for safe handling

**Advice on safe handling** Avoid breathing vapors or mists. For precautions, see Section 2.

### Conditions for safe storage, including any incompatibilities

**Storage Conditions** Keep container tightly closed in a dry and well-ventilated place. Store in accordance with local regulations.

**Incompatible materials** No information available.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Control parameters

**Exposure Guidelines** This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

| Chemical Name                               | ACGIH TLV                                                                 | OSHA PEL                                                                                                                                                                                                                                              | NIOSH IDLH                                                                                                                                      |
|---------------------------------------------|---------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|
| Water<br>7732-18-5                          | -                                                                         | -                                                                                                                                                                                                                                                     | -                                                                                                                                               |
| Nitric acid<br>7697-37-2                    | STEL: 4 ppm<br>TWA: 2 ppm                                                 | TWA: 2 ppm<br>TWA: 5 mg/m <sup>3</sup><br>(vacated) TWA: 2 ppm<br>(vacated) TWA: 5 mg/m <sup>3</sup><br>(vacated) STEL: 4 ppm<br>(vacated) STEL: 10 mg/m <sup>3</sup>                                                                                 | IDLH: 25 ppm<br>TWA: 2 ppm<br>TWA: 5 mg/m <sup>3</sup><br>STEL: 4 ppm<br>STEL: 10 mg/m <sup>3</sup>                                             |
| Iron metal<br>7439-89-6                     | -                                                                         | -                                                                                                                                                                                                                                                     | -                                                                                                                                               |
| Aluminum metal<br>7429-90-5                 | TWA: 1 mg/m <sup>3</sup> respirable fraction                              | TWA: 15 mg/m <sup>3</sup> total dust<br>TWA: 5 mg/m <sup>3</sup> respirable fraction<br>(vacated) TWA: 15 mg/m <sup>3</sup> total dust<br>(vacated) TWA: 5 mg/m <sup>3</sup> respirable fraction<br>(vacated) TWA: 5 mg/m <sup>3</sup> Al<br>Aluminum | TWA: 10 mg/m <sup>3</sup> total dust<br>TWA: 5 mg/m <sup>3</sup> respirable dust<br>TWA: 5 mg/m <sup>3</sup> Al                                 |
| Barium nitrate<br>10022-31-8                | TWA: 0.5 mg/m <sup>3</sup> Ba                                             | TWA: 0.5 mg/m <sup>3</sup> Ba<br>(vacated) TWA: 0.5 mg/m <sup>3</sup> Ba                                                                                                                                                                              | IDLH: 50 mg/m <sup>3</sup> Ba<br>TWA: 0.5 mg/m <sup>3</sup> Ba TWA: 0.5 mg/m <sup>3</sup> except Barium sulfate Ba                              |
| Zinc metal<br>7440-66-6                     | -                                                                         | -                                                                                                                                                                                                                                                     | -                                                                                                                                               |
| Nickel metal<br>7440-02-0                   | TWA: 1.5 mg/m <sup>3</sup> inhalable fraction                             | TWA: 1 mg/m <sup>3</sup><br>(vacated) TWA: 1 mg/m <sup>3</sup>                                                                                                                                                                                        | IDLH: 10 mg/m <sup>3</sup> IDLH: 10 mg/m <sup>3</sup> Ni<br>TWA: 0.015 mg/m <sup>3</sup> TWA: 0.015 mg/m <sup>3</sup> except Nickel carbonyl Ni |
| Manganese acetate tetrahydrate<br>6156-78-1 | -                                                                         | (vacated) Ceiling: 5 mg/m <sup>3</sup><br>Ceiling: 5 mg/m <sup>3</sup> Mn                                                                                                                                                                             | IDLH: 500 mg/m <sup>3</sup> Mn<br>TWA: 1 mg/m <sup>3</sup> Mn<br>STEL: 3 mg/m <sup>3</sup> Mn                                                   |
| Ammonium metavanadate<br>7803-55-6          | -                                                                         | -                                                                                                                                                                                                                                                     | Ceiling: 0.05 mg/m <sup>3</sup> V dust and fume 15 min                                                                                          |
| Lead metal<br>7439-92-1                     | TWA: 0.05 mg/m <sup>3</sup> TWA: 0.05 mg/m <sup>3</sup> Pb                | TWA: 50 µg/m <sup>3</sup> TWA: 50 µg/m <sup>3</sup> Pb                                                                                                                                                                                                | IDLH: 100 mg/m <sup>3</sup> IDLH: 100 mg/m <sup>3</sup> Pb<br>TWA: 0.050 mg/m <sup>3</sup> TWA: 0.050 mg/m <sup>3</sup> Pb                      |
| Silver metal<br>7440-22-4                   | TWA: 0.1 mg/m <sup>3</sup> dust and fume                                  | TWA: 0.01 mg/m <sup>3</sup><br>(vacated) TWA: 0.01 mg/m <sup>3</sup>                                                                                                                                                                                  | IDLH: 10 mg/m <sup>3</sup> dust<br>TWA: 0.01 mg/m <sup>3</sup> dust                                                                             |
| Selenium metal<br>7782-49-2                 | TWA: 0.2 mg/m <sup>3</sup> TWA: 0.2 mg/m <sup>3</sup> Se                  | TWA: 0.2 mg/m <sup>3</sup> Se<br>(vacated) TWA: 0.2 mg/m <sup>3</sup><br>(vacated) TWA: 0.2 mg/m <sup>3</sup> Se                                                                                                                                      | IDLH: 1 mg/m <sup>3</sup> IDLH: 1 mg/m <sup>3</sup> Se<br>TWA: 0.2 mg/m <sup>3</sup> TWA: 0.2 mg/m <sup>3</sup> except Selenium hexafluoride Se |
| Copper metal<br>7440-50-8                   | TWA: 0.2 mg/m <sup>3</sup> fume TWA: 1 mg/m <sup>3</sup> Cu dust and mist | TWA: 0.1 mg/m <sup>3</sup> fume<br>TWA: 1 mg/m <sup>3</sup> dust and mist                                                                                                                                                                             | IDLH: 100 mg/m <sup>3</sup> dust, fume and mist IDLH: 100 mg/m <sup>3</sup> Cu dust and                                                         |

|                                        |                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                 |
|----------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|
|                                        |                                                                                                                                                                                                    | (vacated) TWA: 0.1 mg/m <sup>3</sup> Cu dust, fume, mist                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | mist<br>TWA: 1 mg/m <sup>3</sup> dust and mist<br>TWA: 0.1 mg/m <sup>3</sup> fume TWA: 1 mg/m <sup>3</sup> Cu dust and mist                     |
| Cobalt metal<br>7440-48-4              | TWA: 0.02 mg/m <sup>3</sup> TWA: 0.02 mg/m <sup>3</sup> Co                                                                                                                                         | TWA: 0.1 mg/m <sup>3</sup> dust and fume (vacated) TWA: 0.05 mg/m <sup>3</sup> dust and fume                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | IDLH: 20 mg/m <sup>3</sup> dust and fume<br>TWA: 0.05 mg/m <sup>3</sup> dust and fume                                                           |
| Chromium metal<br>7440-47-3            | TWA: 0.5 mg/m <sup>3</sup>                                                                                                                                                                         | TWA: 1 mg/m <sup>3</sup> (vacated) TWA: 1 mg/m <sup>3</sup>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | IDLH: 250 mg/m <sup>3</sup><br>TWA: 0.5 mg/m <sup>3</sup>                                                                                       |
| Cadmium metal<br>7440-43-9             | TWA: 0.01 mg/m <sup>3</sup><br>TWA: 0.002 mg/m <sup>3</sup> respirable fraction TWA: 0.01 mg/m <sup>3</sup> Cd<br>TWA: 0.002 mg/m <sup>3</sup> Cd respirable fraction                              | TWA: 0.1 mg/m <sup>3</sup> fume applies to any operations or sectors for which the Cadmium standard is stayed or otherwise not in effect<br>TWA: 0.2 mg/m <sup>3</sup> dust applies to any operations or sectors for which the Cadmium standard is stayed or otherwise not in effect<br>TWA: 5 µg/m <sup>3</sup> (vacated) STEL: 0.3 ppm fume<br>Ceiling: 0.3 mg/m <sup>3</sup> fume applies to any operations or sectors for which the Cadmium standard is stayed or otherwise not in effect<br>Ceiling: 0.6 mg/m <sup>3</sup> dust applies to any operations or sectors for which the Cadmium standard is stayed or otherwise not in effect | IDLH: 9 mg/m <sup>3</sup> dust IDLH: 9 mg/m <sup>3</sup> Cd dust and fume                                                                       |
| Arsenic metal<br>7440-38-2             | TWA: 0.01 mg/m <sup>3</sup> TWA: 0.01 mg/m <sup>3</sup> As                                                                                                                                         | TWA: 10 µg/m <sup>3</sup> As (vacated) TWA: 0.5 mg/m <sup>3</sup>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | IDLH: 5 mg/m <sup>3</sup> IDLH: 5 mg/m <sup>3</sup> As<br>Ceiling: 0.002 mg/m <sup>3</sup> 15 min<br>Ceiling: 0.002 mg/m <sup>3</sup> As 15 min |
| Antimony metal<br>7440-36-0            | TWA: 0.5 mg/m <sup>3</sup> TWA: 0.5 mg/m <sup>3</sup> Sb                                                                                                                                           | TWA: 0.5 mg/m <sup>3</sup> TWA: 0.5 mg/m <sup>3</sup> Sb (vacated) TWA: 0.5 mg/m <sup>3</sup> (vacated) TWA: 0.5 mg/m <sup>3</sup> Sb                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | IDLH: 50 mg/m <sup>3</sup> IDLH: 50 mg/m <sup>3</sup> Sb<br>TWA: 0.5 mg/m <sup>3</sup> TWA: 0.5 mg/m <sup>3</sup> Sb                            |
| Thallium metal<br>7440-28-0            | TWA: 0.02 mg/m <sup>3</sup> inhalable fraction<br>TWA: 0.02 mg/m <sup>3</sup> TI inhalable fraction<br>S*                                                                                          | (vacated) TWA: 0.1 mg/m <sup>3</sup> (vacated) S*                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | -                                                                                                                                               |
| Molybdenum metal<br>7439-98-7          | TWA: 10 mg/m <sup>3</sup> inhalable fraction<br>TWA: 3 mg/m <sup>3</sup> respirable fraction<br>TWA: 10 mg/m <sup>3</sup> Mo inhalable fraction<br>TWA: 3 mg/m <sup>3</sup> Mo respirable fraction | TWA: 15 mg/m <sup>3</sup> total dust (vacated) TWA: 10 mg/m <sup>3</sup> (vacated) TWA: 10 mg/m <sup>3</sup> Mo                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | IDLH: 5000 mg/m <sup>3</sup> IDLH: 5000 mg/m <sup>3</sup> Mo                                                                                    |
| Strontium nitrate<br>10042-76-9        | -                                                                                                                                                                                                  | -                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | -                                                                                                                                               |
| Beryllium acetate, basic<br>19049-40-2 | TWA: 0.00005 mg/m <sup>3</sup> Be inhalable fraction                                                                                                                                               | TWA: 2 µg/m <sup>3</sup> Be (vacated) TWA: 2 µg/m <sup>3</sup> Be (vacated) STEL: 25 µg/m <sup>3</sup> 30 min (vacated) Ceiling: 5 µg/m <sup>3</sup> Ceiling: 5 µg/m <sup>3</sup> Be                                                                                                                                                                                                                                                                                                                                                                                                                                                          | IDLH: 4 mg/m <sup>3</sup> Be<br>Ceiling: 0.0005 mg/m <sup>3</sup> Be                                                                            |

**Appropriate engineering controls****Engineering Controls**

Handle in accordance with good industrial hygiene and safety practice.

**Individual protection measures, such as personal protective equipment****Eye/face protection**

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166 (EU).

**Skin and body protection**

Wear protective gloves and protective clothing.

**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**

Wash hands thoroughly after handling.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Information on basic physical and chemical properties

|                       |                                   |                       |                          |
|-----------------------|-----------------------------------|-----------------------|--------------------------|
| <b>Physical state</b> | Liquid                            | <b>Odor</b>           | Odorless                 |
| <b>Appearance</b>     | Clear / Colorless to light yellow | <b>Odor threshold</b> | No information available |
| <b>Color</b>          | No information available          |                       |                          |

| <u>Property</u>                | <u>Values</u>            | <u>Remarks • Method</u> |
|--------------------------------|--------------------------|-------------------------|
| pH                             | No data available.       |                         |
| Melting point / freezing point | No information available |                         |
| Boiling point / boiling range  | No information available |                         |
| Flash point                    | No information available |                         |
| Evaporation rate               | No information available |                         |
| Flammability (solid, gas)      | No information available |                         |
| Flammability Limit in Air      |                          |                         |
| Upper flammability limit:      | No information available |                         |
| Lower flammability limit:      | No information available |                         |
| Vapor pressure                 | No information available |                         |
| Vapor density                  | No information available |                         |
| Relative density               | No information available |                         |
| Water solubility               | Miscible in water        |                         |
| Solubility in other solvents   | No information available |                         |
| Partition coefficient          | No information available |                         |
| Autoignition temperature       | No information available |                         |
| Decomposition temperature      | No information available |                         |
| Kinematic viscosity            | No information available |                         |
| Dynamic viscosity              | No information available |                         |
| Explosive properties           | No information available |                         |
| Oxidizing properties           | No information available |                         |

### Other Information

|                  |                          |
|------------------|--------------------------|
| Softening point  | No information available |
| Molecular weight | No information available |
| VOC Content (%)  | No information available |
| Density          | No information available |
| Bulk density     | No information available |

## 10. STABILITY AND REACTIVITY

### Reactivity

No information available

### Chemical stability

Stable under recommended storage conditions.

### Possibility of Hazardous Reactions

No information available.

|                                 |                                          |
|---------------------------------|------------------------------------------|
| <b>Hazardous polymerization</b> | Hazardous polymerization does not occur. |
|---------------------------------|------------------------------------------|

### Conditions to avoid

No information available.

### Incompatible materials

No information available.

### Hazardous Decomposition Products

Nitrogen oxides (NOx).

## 11. TOXICOLOGICAL INFORMATION

### Information on likely routes of exposure

|                            |                    |
|----------------------------|--------------------|
| <b>Product Information</b> | No data available  |
| <b>Inhalation</b>          | No data available. |
| <b>Eye contact</b>         | No data available. |
| <b>Skin contact</b>        | No data available. |
| <b>Ingestion</b>           | No data available. |

| Chemical Name                               | Oral LD50                                  | Dermal LD50          | Inhalation LC50                                          |
|---------------------------------------------|--------------------------------------------|----------------------|----------------------------------------------------------|
| Water<br>7732-18-5                          | > 90 mL/kg ( Rat )                         | -                    | -                                                        |
| Nitric acid<br>7697-37-2                    | -                                          | -                    | = 130 mg/m <sup>3</sup> ( Rat ) 4 h = 67 ppm ( Rat ) 4 h |
| Aluminum metal<br>7429-90-5                 | -                                          | -                    | -                                                        |
| Iron metal<br>7439-89-6                     | = 984 mg/kg ( Rat )                        | -                    | -                                                        |
| Barium nitrate<br>10022-31-8                | = 355 mg/kg ( Rat )                        | -                    | -                                                        |
| Nickel metal<br>7440-02-0                   | > 9000 mg/kg ( Rat )                       | -                    | -                                                        |
| Manganese acetate tetrahydrate<br>6156-78-1 | = 3730 mg/kg ( Rat )                       | -                    | -                                                        |
| Zinc metal<br>7440-66-6                     | -                                          | -                    | -                                                        |
| Ammonium metavanadate<br>7803-55-6          | = 58100 µg/kg ( Rat ) = 58.1 mg/kg ( Rat ) | = 2102 mg/kg ( Rat ) | = 7800 µg/m <sup>3</sup> ( Rat ) 4 h                     |
| Lead metal<br>7439-92-1                     | -                                          | -                    | -                                                        |
| Silver metal<br>7440-22-4                   | > 2000 mg/kg ( Rat )                       | -                    | -                                                        |
| Cadmium metal<br>7440-43-9                  | = 1140 mg/kg ( Rat )                       | -                    | = 25 mg/m <sup>3</sup> ( Rat ) 30 min                    |
| Chromium metal<br>7440-47-3                 | -                                          | -                    | -                                                        |
| Cobalt metal<br>7440-48-4                   | = 6171 mg/kg ( Rat )                       | -                    | > 10 mg/L ( Rat ) 1 h                                    |
| Copper metal<br>7440-50-8                   | -                                          | -                    | -                                                        |
| Selenium metal<br>7782-49-2                 | = 6700 mg/kg ( Rat )                       | -                    | -                                                        |
| Antimony metal<br>7440-36-0                 | = 7 g/kg ( Rat )                           | -                    | -                                                        |
| Arsenic metal<br>7440-38-2                  | = 15 mg/kg ( Rat ) = 763 mg/kg ( Rat )     | -                    | -                                                        |
| Thallium metal<br>7440-28-0                 | -                                          | -                    | -                                                        |
| Molybdenum metal<br>7439-98-7               | -                                          | -                    | -                                                        |
| Strontium nitrate<br>10042-76-9             | = 2750 mg/kg ( Rat ) = 1892 mg/kg ( Rat )  | -                    | -                                                        |
| Beryllium acetate, basic<br>19049-40-2      | -                                          | -                    | -                                                        |

#### 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 components of this mixture at given concentrations are considered to be carcinogens or potential carcinogens as listed by OSHA, IARC or NTP.

|                          |                           |
|--------------------------|---------------------------|
| Reproductive toxicity    | No information available. |
| STOT - single exposure   | No information available. |
| STOT - repeated exposure | No information available. |
| Other adverse effects    | 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 (inhalation-dust/mist) | 2.60     |
| ATEmix (inhalation-vapor)     | 1,340.00 |

**12. ECOLOGICAL INFORMATION****Ecotoxicity**

0.126 % of the mixture consists of component(s) of unknown hazards to the aquatic environment

| Chemical Name                               | Algae/aquatic plants                                                                                                                                              | Fish                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Crustacea                                                                                    |
|---------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|
| Water<br>7732-18-5                          | -                                                                                                                                                                 | -                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | -                                                                                            |
| Nitric acid<br>7697-37-2                    | -                                                                                                                                                                 | 72: 96 h <i>Gambusia affinis</i> mg/L<br>LC50                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | -                                                                                            |
| Aluminum metal<br>7429-90-5                 | -                                                                                                                                                                 | -                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | -                                                                                            |
| Iron metal<br>7439-89-6                     | -                                                                                                                                                                 | 13.6: 96 h <i>Morone saxatilis</i> mg/L<br>LC50 static                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | -                                                                                            |
| Barium nitrate<br>10022-31-8                | -                                                                                                                                                                 | -                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | -                                                                                            |
| Nickel metal<br>7440-02-0                   | 0.174 - 0.311: 96 h<br><i>Pseudokirchneriella subcapitata</i><br>mg/L EC50 static 0.18: 72 h<br><i>Pseudokirchneriella subcapitata</i><br>mg/L EC50               | 100: 96 h <i>Brachydanio rerio</i> mg/L<br>LC50 10.4: 96 h <i>Cyprinus carpio</i><br>mg/L LC50 static 1.3: 96 h <i>Cyprinus</i><br><i>carpio</i> mg/L LC50 semi-static                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 1: 48 h <i>Daphnia magna</i> mg/L EC50<br>Static 100: 48 h <i>Daphnia magna</i><br>mg/L EC50 |
| Manganese acetate tetrahydrate<br>6156-78-1 | -                                                                                                                                                                 | -                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | -                                                                                            |
| Zinc metal<br>7440-66-6                     | 0.11 - 0.271: 96 h<br><i>Pseudokirchneriella subcapitata</i><br>mg/L EC50 static 0.09 - 0.125: 72 h<br><i>Pseudokirchneriella subcapitata</i><br>mg/L EC50 static | 0.211 - 0.269: 96 h <i>Pimephales</i><br><i>promelas</i> mg/L LC50 semi-static<br>0.45: 96 h <i>Cyprinus carpio</i> mg/L<br>LC50 semi-static 7.8: 96 h <i>Cyprinus</i><br><i>carpio</i> mg/L LC50 static 0.41: 96 h<br><i>Oncorhynchus mykiss</i> mg/L LC50<br>static 2.66: 96 h <i>Pimephales</i><br><i>promelas</i> mg/L LC50 static 3.5: 96 h<br><i>Lepomis macrochirus</i> mg/L LC50<br>static 30: 96 h <i>Cyprinus carpio</i> mg/L<br>LC50 0.24: 96 h <i>Oncorhynchus</i><br><i>mykiss</i> mg/L LC50 flow-through<br>2.16 - 3.05: 96 h <i>Pimephales</i><br><i>promelas</i> mg/L LC50 flow-through<br>0.59: 96 h <i>Oncorhynchus mykiss</i><br>mg/L LC50 semi-static | 0.139 - 0.908: 48 h <i>Daphnia magna</i><br>mg/L EC50 Static                                 |
| Ammonium metavanadate<br>7803-55-6          | -                                                                                                                                                                 | 1.5: 144 h <i>Poecilia reticulata</i> mg/L<br>LC50                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | -                                                                                            |
| Lead metal<br>7439-92-1                     | -                                                                                                                                                                 | 0.44: 96 h <i>Cyprinus carpio</i> mg/L<br>LC50 semi-static 1.17: 96 h<br><i>Oncorhynchus mykiss</i> mg/L LC50<br>flow-through 1.32: 96 h<br><i>Oncorhynchus mykiss</i> mg/L LC50<br>static                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 600: 48 h water flea µg/L EC50                                                               |
| Silver metal<br>7440-22-4                   | -                                                                                                                                                                 | 0.00155 - 0.00293: 96 h <i>Pimephales</i><br><i>promelas</i> mg/L LC50 static 0.064:<br>96 h <i>Lepomis macrochirus</i> mg/L<br>LC50 static 0.0062: 96 h<br><i>Oncorhynchus mykiss</i> mg/L LC50<br>flow-through                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 0.00024: 48 h <i>Daphnia magna</i> mg/L<br>EC50 Static                                       |
| Cadmium metal<br>7440-43-9                  | -                                                                                                                                                                 | 0.006: 96 h <i>Oncorhynchus mykiss</i><br>mg/L LC50 static 0.24: 96 h                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 0.0244: 48 h <i>Daphnia magna</i> mg/L<br>EC50 Static                                        |

|                                        |                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                  |                                           |
|----------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|
|                                        |                                                                                                                                             | Cyprinus carpio mg/L LC50 static 0.016: 96 h Oryzias latipes mg/L LC50 0.002: 96 h Cyprinus carpio mg/L LC50 21.1: 96 h Lepomis macrochirus mg/L LC50 flow-through 0.0004 - 0.003: 96 h Pimephales promelas mg/L LC50 4.26: 96 h Cyprinus carpio mg/L LC50 semi-static 0.003: 96 h Oncorhynchus mykiss mg/L LC50 flow-through                                                                                    |                                           |
| Chromium metal<br>7440-47-3            | -                                                                                                                                           | -                                                                                                                                                                                                                                                                                                                                                                                                                | -                                         |
| Cobalt metal<br>7440-48-4              | -                                                                                                                                           | 100: 96 h Brachydanio rerio mg/L LC50 static                                                                                                                                                                                                                                                                                                                                                                     | -                                         |
| Copper metal<br>7440-50-8              | 0.0426 - 0.0535: 72 h Pseudokirchneriella subcapitata mg/L EC50 static 0.031 - 0.054: 96 h Pseudokirchneriella subcapitata mg/L EC50 static | 0.3: 96 h Cyprinus carpio mg/L LC50 semi-static 0.052: 96 h Oncorhynchus mykiss mg/L LC50 flow-through 0.3: 96 h Pimephales promelas mg/L LC50 static 0.112: 96 h Poecilia reticulata mg/L LC50 flow-through 0.2: 96 h Pimephales promelas mg/L LC50 flow-through 1.25: 96 h Lepomis macrochirus mg/L LC50 static 0.8: 96 h Cyprinus carpio mg/L LC50 static 0.0068 - 0.0156: 96 h Pimephales promelas mg/L LC50 | 0.03: 48 h Daphnia magna mg/L EC50 Static |
| Selenium metal<br>7782-49-2            | -                                                                                                                                           | -                                                                                                                                                                                                                                                                                                                                                                                                                | -                                         |
| Antimony metal<br>7440-36-0            | -                                                                                                                                           | -                                                                                                                                                                                                                                                                                                                                                                                                                | -                                         |
| Arsenic metal<br>7440-38-2             | -                                                                                                                                           | -                                                                                                                                                                                                                                                                                                                                                                                                                | -                                         |
| Thallium metal<br>7440-28-0            | -                                                                                                                                           | -                                                                                                                                                                                                                                                                                                                                                                                                                | -                                         |
| Molybdenum metal<br>7439-98-7          | -                                                                                                                                           | -                                                                                                                                                                                                                                                                                                                                                                                                                | -                                         |
| Strontium nitrate<br>10042-76-9        | -                                                                                                                                           | -                                                                                                                                                                                                                                                                                                                                                                                                                | -                                         |
| Beryllium acetate, basic<br>19049-40-2 | -                                                                                                                                           | -                                                                                                                                                                                                                                                                                                                                                                                                                | -                                         |

**Persistence and degradability**

No information available.

**Bioaccumulation**

No information available.

| Chemical Name            | Partition coefficient |
|--------------------------|-----------------------|
| Water<br>7732-18-5       | -                     |
| Nitric acid<br>7697-37-2 | -2.3                  |

**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                                  | RCRA | RCRA - Basis for Listing                                                                                                                             | RCRA - D Series Wastes    | RCRA - U Series Wastes |
|------------------------------------------------|------|------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|------------------------|
| Water<br>7732-18-5                             | -    | -                                                                                                                                                    | -                         | -                      |
| Nitric acid<br>7697-37-2                       | -    | -                                                                                                                                                    | -                         | -                      |
| Aluminum metal<br>7429-90-5                    | -    | -                                                                                                                                                    | -                         | -                      |
| Iron metal<br>7439-89-6                        | -    | -                                                                                                                                                    | -                         | -                      |
| Barium nitrate<br>10022-31-8                   | -    | -                                                                                                                                                    | -                         | -                      |
| Nickel metal<br>7440-02-0                      | -    | Included in waste streams:<br>F006, F039                                                                                                             | -                         | -                      |
| Manganese acetate<br>tetrahydrate<br>6156-78-1 | -    | -                                                                                                                                                    | -                         | -                      |
| Zinc metal<br>7440-66-6                        | -    | -                                                                                                                                                    | -                         | -                      |
| Ammonium metavanadate<br>7803-55-6             | P119 | -                                                                                                                                                    | -                         | -                      |
| Lead metal<br>7439-92-1                        | -    | Included in waste streams:<br>F035, F037, F038, F039,<br>K002, K003, K005, K046,<br>K048, K049, K051, K052,<br>K061, K062, K069, K086,<br>K100, K176 | 5.0 mg/L regulatory level | -                      |
| Silver metal<br>7440-22-4                      | -    | Included in waste stream:<br>F039                                                                                                                    | 5.0 mg/L regulatory level | -                      |
| Cadmium metal<br>7440-43-9                     | -    | Included in waste streams:<br>F006, F039, K061, K069,<br>K100                                                                                        | 1.0 mg/L regulatory level | -                      |
| Chromium metal<br>7440-47-3                    | -    | Included in waste streams:<br>F032, F034, F035, F037,<br>F038, F039                                                                                  | 5.0 mg/L regulatory level | -                      |
| Cobalt metal<br>7440-48-4                      | -    | -                                                                                                                                                    | -                         | -                      |
| Copper metal<br>7440-50-8                      | -    | -                                                                                                                                                    | -                         | -                      |
| Selenium metal<br>7782-49-2                    | -    | Included in waste stream:<br>F039                                                                                                                    | 1.0 mg/L regulatory level | -                      |
| Antimony metal<br>7440-36-0                    | -    | Included in waste streams:<br>F039, K021, K161, K177                                                                                                 | -                         | -                      |
| Arsenic metal<br>7440-38-2                     | -    | Included in waste streams:<br>F032, F034, F035, F039,<br>K031, K060, K084, K101,<br>K102, K161, K171, K172,<br>K176                                  | 5.0 mg/L regulatory level | -                      |
| Thallium metal<br>7440-28-0                    | -    | Included in waste streams:<br>F039, K178                                                                                                             | -                         | -                      |
| Molybdenum metal<br>7439-98-7                  | -    | -                                                                                                                                                    | -                         | -                      |
| Strontium nitrate<br>10042-76-9                | -    | -                                                                                                                                                    | -                         | -                      |
| Beryllium acetate, basic<br>19049-40-2         | -    | -                                                                                                                                                    | -                         | -                      |

| Chemical Name            | RCRA - Halogenated<br>Organic Compounds | RCRA - P Series Wastes | RCRA - F Series Wastes | RCRA - K Series Wastes |
|--------------------------|-----------------------------------------|------------------------|------------------------|------------------------|
| Water<br>7732-18-5       | -                                       | -                      | -                      | -                      |
| Nitric acid<br>7697-37-2 | -                                       | -                      | -                      | -                      |

| Chemical Name            | California Hazardous Waste Status |
|--------------------------|-----------------------------------|
| Water<br>7732-18-5       | -                                 |
| Nitric acid<br>7697-37-2 | Toxic<br>Corrosive                |

|                                             |                                        |
|---------------------------------------------|----------------------------------------|
|                                             | Ignitable                              |
| Aluminum metal<br>7429-90-5                 | Ignitable powder                       |
| Iron metal<br>7439-89-6                     | -                                      |
| Barium nitrate<br>10022-31-8                | Toxic<br>Ignitable                     |
| Nickel metal<br>7440-02-0                   | Toxic powder<br>Ignitable powder       |
| Manganese acetate tetrahydrate<br>6156-78-1 | -                                      |
| Zinc metal<br>7440-66-6                     | Ignitable powder Toxic                 |
| Ammonium metavanadate<br>7803-55-6          | -                                      |
| Lead metal<br>7439-92-1                     | Toxic                                  |
| Silver metal<br>7440-22-4                   | Toxic                                  |
| Cadmium metal<br>7440-43-9                  | -                                      |
| Chromium metal<br>7440-47-3                 | Toxic<br>Corrosive<br>Ignitable        |
| Cobalt metal<br>7440-48-4                   | Toxic powder<br>Ignitable powder Toxic |
| Copper metal<br>7440-50-8                   | Toxic                                  |
| Selenium metal<br>7782-49-2                 | -                                      |
| Antimony metal<br>7440-36-0                 | Toxic                                  |
| Arsenic metal<br>7440-38-2                  | -                                      |
| Thallium metal<br>7440-28-0                 | -                                      |
| Molybdenum metal<br>7439-98-7               | Ignitable powder                       |
| Strontium nitrate<br>10042-76-9             | Toxic<br>Ignitable<br>Reactive         |
| Beryllium acetate, basic<br>19049-40-2      | -                                      |

#### 14. TRANSPORT INFORMATION

##### DOT

This standard is packaged and shipped in accordance with 49 CFR 173.4: Hazardous Materials in Excepted Quantities.

UN/ID no. 2031  
 Proper shipping name Nitric acid  
 Hazard Class 8  
 Packing Group II

##### IATA

UN/ID no. 2031  
 Proper shipping name Nitric acid  
 Hazard Class 8  
 Packing Group II

##### IMDG

UN/ID no. 2031  
 Proper shipping name Nitric acid

|                      |          |
|----------------------|----------|
| <b>Hazard Class</b>  | 8        |
| <b>Packing Group</b> | II       |
| <b>EmS-No.</b>       | F-A, S-B |

## 15. REGULATORY INFORMATION

### International Inventories

|                      |            |
|----------------------|------------|
| <b>TSCA</b>          | Complies   |
| <b>DSL/NDL</b>       | Not Listed |
| <b>EINECS/ELINCS</b> | Complies   |
| <b>ENCS</b>          | Complies   |
| <b>IECSC</b>         | Complies   |
| <b>KECL</b>          | Complies   |
| <b>PICCS</b>         | Complies   |
| <b>AICS</b>          | Complies   |

### Legend:

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory  
**DSL/NDL** - 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 contains a chemical or 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 % |
|--------------------------------------------|-------------------------------|
| Water - 7732-18-5                          | -                             |
| Nitric acid - 7697-37-2                    | 1.0                           |
| Aluminum metal - 7429-90-5                 | 1.0                           |
| Iron metal - 7439-89-6                     | -                             |
| Barium nitrate - 10022-31-8                | 1.0                           |
| Nickel metal - 7440-02-0                   | 0.1                           |
| Manganese acetate tetrahydrate - 6156-78-1 | 1.0                           |
| Zinc metal - 7440-66-6                     | 1.0                           |
| Ammonium metavanadate - 7803-55-6          | 1.0                           |
| Lead metal - 7439-92-1                     | 0.1                           |
| Silver metal - 7440-22-4                   | 1.0                           |
| Cadmium metal - 7440-43-9                  | 0.1                           |
| Chromium metal - 7440-47-3                 | 1.0                           |
| Cobalt metal - 7440-48-4                   | 0.1                           |
| Copper metal - 7440-50-8                   | 1.0                           |
| Selenium metal - 7782-49-2                 | 1.0                           |
| Antimony metal - 7440-36-0                 | 1.0                           |
| Arsenic metal - 7440-38-2                  | 0.1                           |
| Thallium metal - 7440-28-0                 | 1.0                           |
| Molybdenum metal - 7439-98-7               | -                             |
| Strontium nitrate - 10042-76-9             | 1.0                           |
| Beryllium acetate, basic - 19049-40-2      | 0.1                           |

#### SARA 311/312 Hazard Categories

|                                          |     |
|------------------------------------------|-----|
| <b>Acute health hazard</b>               | Yes |
| <b>Chronic Health Hazard</b>             | Yes |
| <b>Fire hazard</b>                       | No  |
| <b>Sudden release of pressure hazard</b> | No  |
| <b>Reactive Hazard</b>                   | No  |

**CWA (Clean Water Act)**

This product, as supplied, 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 |
|---------------------------------------------|-----------------------------|------------------------|---------------------------|----------------------------|
| Water<br>7732-18-5                          | -                           | -                      | -                         | -                          |
| Nitric acid<br>7697-37-2                    | 1000 lb                     | -                      | -                         | X                          |
| Aluminum metal<br>7429-90-5                 | -                           | -                      | -                         | -                          |
| Iron metal<br>7439-89-6                     | -                           | -                      | -                         | -                          |
| Barium nitrate<br>10022-31-8                | -                           | -                      | -                         | -                          |
| Nickel metal<br>7440-02-0                   | -                           | X                      | X                         | -                          |
| Manganese acetate tetrahydrate<br>6156-78-1 | -                           | -                      | -                         | -                          |
| Zinc metal<br>7440-66-6                     | -                           | X                      | X                         | -                          |
| Ammonium metavanadate<br>7803-55-6          | -                           | -                      | -                         | -                          |
| Lead metal<br>7439-92-1                     | -                           | X                      | X                         | -                          |
| Silver metal<br>7440-22-4                   | -                           | X                      | X                         | -                          |
| Cadmium metal<br>7440-43-9                  | -                           | X                      | X                         | -                          |
| Chromium metal<br>7440-47-3                 | -                           | X                      | X                         | -                          |
| Cobalt metal<br>7440-48-4                   | -                           | -                      | -                         | -                          |
| Copper metal<br>7440-50-8                   | -                           | X                      | X                         | -                          |
| Selenium metal<br>7782-49-2                 | -                           | X                      | X                         | -                          |
| Antimony metal<br>7440-36-0                 | -                           | X                      | X                         | -                          |
| Arsenic metal<br>7440-38-2                  | -                           | X                      | X                         | -                          |
| Thallium metal<br>7440-28-0                 | -                           | X                      | X                         | -                          |
| Molybdenum metal<br>7439-98-7               | -                           | -                      | -                         | -                          |
| Strontium nitrate<br>10042-76-9             | -                           | -                      | -                         | -                          |
| Beryllium acetate, basic<br>19049-40-2      | -                           | X                      | -                         | -                          |

**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)                  |
|-----------------------------|--------------------------|----------------|-------------------------------------------|
| Water<br>7732-18-5          | -                        | -              | -                                         |
| Nitric acid<br>7697-37-2    | 1000 lb                  | 1000 lb        | RQ 1000 lb final RQ<br>RQ 454 kg final RQ |
| Aluminum metal<br>7429-90-5 | -                        | -              | -                                         |
| Iron metal<br>7439-89-6     | -                        | -              | -                                         |

|                                             |               |   |                                                                                        |
|---------------------------------------------|---------------|---|----------------------------------------------------------------------------------------|
| Barium nitrate<br>10022-31-8                | -             | - | -                                                                                      |
| Nickel metal<br>7440-02-0                   | 100 lb        | - | RQ 100 lb final RQ<br>RQ 45.4 kg final RQ                                              |
| Manganese acetate tetrahydrate<br>6156-78-1 | -             | - | -                                                                                      |
| Zinc metal<br>7440-66-6                     | 1000 lb       | - | RQ 454 kg final RQ<br>RQ 1000 lb final RQ                                              |
| Ammonium metavanadate<br>7803-55-6          | 1000 lb       | - | RQ 1000 lb final RQ<br>RQ 454 kg final RQ                                              |
| Lead metal<br>7439-92-1                     | 10 lb         | - | RQ 10 lb final RQ<br>RQ 4.54 kg final RQ                                               |
| Silver metal<br>7440-22-4                   | 1000 lb 1 lb  | - | RQ 1000 lb final RQ<br>RQ 454 kg final RQ RQ 1 lb final<br>RQ<br>RQ 0.454 kg final RQ  |
| Cadmium metal<br>7440-43-9                  | 10 lb         | - | RQ 10 lb final RQ<br>RQ 4.54 kg final RQ                                               |
| Chromium metal<br>7440-47-3                 | 5000 lb 10 lb | - | RQ 5000 lb final RQ<br>RQ 2270 kg final RQ RQ 10 lb final<br>RQ<br>RQ 4.54 kg final RQ |
| Cobalt metal<br>7440-48-4                   | -             | - | -                                                                                      |
| Copper metal<br>7440-50-8                   | 5000 lb       | - | RQ 5000 lb final RQ<br>RQ 2270 kg final RQ                                             |
| Selenium metal<br>7782-49-2                 | 100 lb        | - | RQ 100 lb final RQ<br>RQ 45.4 kg final RQ                                              |
| Antimony metal<br>7440-36-0                 | 5000 lb 10 lb | - | RQ 5000 lb final RQ<br>RQ 2270 kg final RQ RQ 10 lb final<br>RQ<br>RQ 4.54 kg final RQ |
| Arsenic metal<br>7440-38-2                  | 1 lb          | - | RQ 1 lb final RQ<br>RQ 0.454 kg final RQ                                               |
| Thallium metal<br>7440-28-0                 | 1000 lb       | - | RQ 1000 lb final RQ<br>RQ 454 kg final RQ                                              |
| Molybdenum metal<br>7439-98-7               | -             | - | -                                                                                      |
| Strontium nitrate<br>10042-76-9             | -             | - | -                                                                                      |
| Beryllium acetate, basic<br>19049-40-2      | -             | - | -                                                                                      |

**US State Regulations****California Proposition 65**

This product contains the following Proposition 65 chemicals.

| Chemical Name                              | California Proposition 65                                               |
|--------------------------------------------|-------------------------------------------------------------------------|
| Water - 7732-18-5                          | -                                                                       |
| Nitric acid - 7697-37-2                    | -                                                                       |
| Aluminum metal - 7429-90-5                 | -                                                                       |
| Iron metal - 7439-89-6                     | -                                                                       |
| Barium nitrate - 10022-31-8                | -                                                                       |
| Nickel metal - 7440-02-0                   | Carcinogen                                                              |
| Manganese acetate tetrahydrate - 6156-78-1 | -                                                                       |
| Zinc metal - 7440-66-6                     | -                                                                       |
| Ammonium metavanadate - 7803-55-6          | -                                                                       |
| Lead metal - 7439-92-1                     | Carcinogen<br>Developmental<br>Female Reproductive<br>Male Reproductive |
| Silver metal - 7440-22-4                   | -                                                                       |
| Cadmium metal - 7440-43-9                  | Carcinogen<br>Developmental<br>Male Reproductive                        |
| Chromium metal - 7440-47-3                 | -                                                                       |
| Cobalt metal - 7440-48-4                   | Carcinogen                                                              |

|                                       |            |
|---------------------------------------|------------|
| Copper metal - 7440-50-8              | -          |
| Selenium metal - 7782-49-2            | -          |
| Antimony metal - 7440-36-0            | -          |
| Arsenic metal - 7440-38-2             | Carcinogen |
| Thallium metal - 7440-28-0            | -          |
| Molybdenum metal - 7439-98-7          | -          |
| Strontium nitrate - 10042-76-9        | -          |
| Beryllium acetate, basic - 19049-40-2 | Carcinogen |

**U.S. State Right-to-Know Regulations**

| Chemical Name                               | New Jersey | Massachusetts | Pennsylvania |
|---------------------------------------------|------------|---------------|--------------|
| Water<br>7732-18-5                          | -          | -             | X            |
| Nitric acid<br>7697-37-2                    | X          | X             | X            |
| Aluminum metal<br>7429-90-5                 | X          | X             | X            |
| Iron metal<br>7439-89-6                     | -          | -             | -            |
| Barium nitrate<br>10022-31-8                | X          | X             | X            |
| Nickel metal<br>7440-02-0                   | X          | X             | X            |
| Manganese acetate tetrahydrate<br>6156-78-1 | X          | -             | X            |
| Zinc metal<br>7440-66-6                     | X          | X             | X            |
| Ammonium metavanadate<br>7803-55-6          | X          | X             | X            |
| Lead metal<br>7439-92-1                     | X          | X             | X            |
| Silver metal<br>7440-22-4                   | X          | X             | X            |
| Cadmium metal<br>7440-43-9                  | X          | X             | X            |
| Chromium metal<br>7440-47-3                 | X          | X             | X            |
| Cobalt metal<br>7440-48-4                   | X          | X             | X            |
| Copper metal<br>7440-50-8                   | X          | X             | X            |
| Selenium metal<br>7782-49-2                 | X          | X             | X            |
| Antimony metal<br>7440-36-0                 | X          | X             | X            |
| Arsenic metal<br>7440-38-2                  | X          | X             | X            |
| Thallium metal<br>7440-28-0                 | X          | X             | X            |
| Molybdenum metal<br>7439-98-7               | X          | X             | X            |
| Strontium nitrate<br>10042-76-9             | X          | X             | X            |
| Beryllium acetate, basic<br>19049-40-2      | X          | -             | X            |

**U.S. EPA Label Information**

EPA Pesticide Registration Number Not applicable

**16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF THE LAST REVISION**

|                            |                   |                           |                    |                                    |
|----------------------------|-------------------|---------------------------|--------------------|------------------------------------|
| <b>NFPA</b>                | Health hazards 3  | Flammability 0            | Instability 0      | Physical and Chemical Properties - |
| <b>HMIS</b>                | Health hazards 3* | Flammability 0            | Physical hazards 2 | Personal protection X              |
| Chronic Hazard Star Legend |                   | * = Chronic Health Hazard |                    |                                    |

Issue Date 09-Nov-2015

Revision Date 09-Nov-2015

**Revision Note**

No information available

**Disclaimer**

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**End of Safety Data Sheet**