

SAFETY DATA SHEET

Preparation Date: 7/28/2017

Revision Date: 7/28/2017

Revision Number: G1

1. IDENTIFICATION

Product identifier

Product code: AA240
Product Name: NICKEL ATOMIC ABSORPTION STANDARD

Other means of identification

Synonyms: No information available
CAS #: Mixture
RTECS # Not available
CI#: Not available

Recommended use of the chemical and restrictions on use

Recommended use: No information available.
Uses advised against No information available

Supplier: Spectrum Chemical Mfg. Corp
 14422 South San Pedro St.
 Gardena, CA 90248
 (310) 516-8000.

Order Online At: <https://www.spectrumchemical.com>

Emergency telephone number Chemtrec 1-800-424-9300

Contact Person: Martin LaBenz (West Coast)

Contact Person: Ibad Tirmiz (East Coast)

2. HAZARDS IDENTIFICATION

Classification

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

Considered a dangerous substance or mixture according to the Globally Harmonized System (GHS)

| | |
|-----------------------------------|---------------------------|
| Skin corrosion/irritation | Category 1 Sub-category B |
| Serious eye damage/eye irritation | Category 1 |
| Skin sensitization | Category 1 |
| Carcinogenicity | Category 2 |
| Corrosive to metals | Category 1 |

Label elements

Danger

Hazard statements

Causes severe skin burns and eye damage
 May cause an allergic skin reaction
 Suspected of causing cancer
 May be corrosive to metals



Hazards not otherwise classified (HNOC)

Not Applicable

Other hazards

Not available

Precautionary Statements - Prevention

Do not breathe dust/fume/gas/mist/vapors/spray
Wash face, hands and any exposed skin thoroughly after handling
Wear protective gloves/protective clothing/eye protection/face protection
Keep only in original container
Contaminated work clothing must not be allowed out of the workplace

Precautionary Statements - Response

Immediately call a POISON CENTER or doctor/physician
Absorb spillage to prevent material damage
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 person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or doctor/physician.
IF SWALLOWED: Rinse mouth. DO NOT induce vomiting

Precautionary Statements - Storage

Store locked up
Store in corrosive resistant/ .? container with a resistant inner liner

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

3. COMPOSITION/INFORMATION ON INGREDIENTS

| Components | CAS-No. | Weight % |
|-------------|-----------|-----------|
| Water | 7732-18-5 | 97.4-97.9 |
| Nitric acid | 7697-37-2 | 2.0-2.5 |
| Nickel | 7440-02-0 | 0.1 |

4. FIRST AID MEASURES

First aid measures

General Advice:

National Capital Poison Center in the United States can provide assistance if you have a poison emergency and need to talk to a poison specialist. Call 1-800-222-1222. Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves. First aider needs to protect himself.

Skin Contact:

Wash off immediately with soap and plenty of water. Continue flushing with plenty of water for at least 15 minutes. Remove all contaminated clothes and shoes. Immediate medical attention is required. Call a physician immediately.

Eye Contact: Flush eyes with water for 15 minutes. Immediate medical attention is required. Call a physician immediately.

Inhalation: Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. **WARNING!** It may be hazardous to the person providing aid to give mouth-to-mouth resuscitation when the inhaled or ingested material is toxic, infectious or corrosive. Do not use mouth-to-mouth resuscitation if victim ingested or inhaled the substance; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Immediate medical attention is required. Call a physician immediately.

Ingestion: Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. If victim is conscious, give water or milk. Follow with Milk of Magnesia or egg whites beaten with water. Immediate medical attention is required. Call a physician or Poison Control Center immediately.

Most important symptoms and effects, both acute and delayed

Symptoms Severe skin and eye irritation or burns. Dyspnea (Shortness of breath and difficulty breathing). Abdominal pain. Vomiting. May cause an allergic skin reaction.

Indication of any immediate medical attention and special treatment needed

Notes to Physician: Treat symptomatically.

Protection of first-aiders

First-Aid Providers: Avoid exposure to blood or body fluids. Wear gloves and other necessary protective clothing. Dispose of contaminated clothing and equipment as bio-hazardous waste.

5. FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media: The product is not flammable. If it is involved in a fire, extinguish the fire using an agent suitable for the type of surrounding fire.

Unsuitable Extinguishing Media: No information available.

Specific hazards arising from the chemical

Hazardous Combustion Products: No information available.

Specific hazards: No information available.

Special Protective Actions for Firefighters

Specific Methods: No information available.

Special Protective Equipment 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

Personal Precautions: Keep people away from and upwind of spill/leak. Ensure adequate ventilation. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Use personal protective equipment. Avoid contact with skin, eyes and clothing.

Environmental precautions Prevent further leakage or spillage if safe to do so. Should not be released into the environment. Do not let product enter drains. Do not flush into surface water or sanitary sewer system. Prevent entry into waterways, sewers, basements or confined areas.

Methods and material for containment and cleaning up

Methods for containment Stop leak if you can do it without risk.

Methods for cleaning up Neutralize with Sodium carbonate or Sodium bicarbonate. Dilute with water. Absorb spill with inert material (e.g. vermiculite, dry sand or earth). Use appropriate tools to put the spilled material in a suitable chemical waste disposal container. Clean contaminated surface thoroughly.

7. HANDLING AND STORAGE

Precautions for safe handling

Technical Measures/Precautions:

Use only in area provided with appropriate exhaust ventilation. Keep away from incompatible materials.

Safe Handling Advice

Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Do not ingest. Do not breathe vapors or spray mist. Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities

Technical Measures/Storage Conditions:

Keep container tightly closed in a dry and well-ventilated place. Store at room temperature in the original container. May corrode metallic surfaces. Do not store in uncoated metallic containers. Store in a segregated and approved area. Store away from incompatible materials.

Incompatible Materials:

Bases
Reducing agents
Combustible materials
Organic materials
Metals
Acids

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

National occupational exposure limits

United States

| Components | CAS-No. | OSHA | NIOSH | ACGIH | AIHA WHEEL |
|-------------|-----------|--------------------------------------|--------------------------------------|-------------------------|--------------------------|
| Water | 7732-18-5 | None | None | None | None |
| Nitric acid | 7697-37-2 | 2 ppm TWA 5 mg/m ³ TWA | 2 ppm TWA 5 mg/m ³ TWA | 4 ppm STEL 2 ppm TWA | No information available |

| | | | | | |
|--------|-----------|-------------------------|---|--|------|
| | | | 4 ppm STEL 10 mg/m ³ STEL | | |
| Nickel | 7440-02-0 | 1 mg/m ³ TWA | 0.015 mg/m ³ TWA | 1.5 mg/m ³ TWA inhalable particulate matter | None |

Canada

| Components | CAS-No. | Canada - Alberta | Canada - British Columbia | Canada - Ontario | Canada - Quebec |
|-------------|-----------|---|----------------------------|--------------------------------------|---|
| Water | 7732-18-5 | None | None | None | None |
| Nitric acid | 7697-37-2 | 2 ppm TWA 5.2 mg/m ³ TWA 4 ppm STEL 10 mg/m ³ STEL | 2 ppm TWA 4 ppm STEL | 2 ppm TWA 4 ppm STEL | 2 ppm TWAEV 5.2 mg/m ³ TWAEV 4 ppm STEV 10 mg/m ³ STEV |
| Nickel | 7440-02-0 | 1.5 mg/m ³ TWA | 0.05 mg/m ³ TWA | 1 mg/m ³ TWA inhalable | 1 mg/m ³ TWAEV |

Australia and Mexico

| Components | CAS-No. | Australia | Mexico |
|-------------|-----------|---|---|
| Water | 7732-18-5 | None | None |
| Nitric acid | 7697-37-2 | 4 ppm STEL 10 mg/m ³ STEL 2 ppm TWA 5.2 mg/m ³ TWA | 2 ppm TWA 5 mg/m ³ TWA 4 ppm STEL 10 mg/m ³ STEL |
| Nickel | 7440-02-0 | 1 mg/m ³ TWA | 1 mg/m ³ TWA |

Appropriate engineering controls

Engineering measures to reduce exposure:

Ensure adequate ventilation. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors and mist below their respective threshold limit value.

Individual protection measures, such as personal protective equipment

Personal Protective Equipment

Eye protection: Face-shield and Goggles

Skin and body protection: Long sleeved clothing
Chemical resistant apron
Gloves
If working with large quantities:
Chemical resistant protective suit
Boots

Respiratory protection: Respiratory protection is not necessary for normal handling. Good room ventilation or use of local exhaust (fume hood) is sufficient. Use a vapor respirator under conditions where exposure to the substance is apparent (e.g. generation of high concentrations of mist or vapor, inadequate ventilation, development of respiratory tract irritation), and engineering controls are not feasible. Be sure to use an approved/certified respirator or equivalent.

Hygiene measures: Avoid contact with skin, eyes and clothing. When using, do not eat, drink or smoke. Wash hands before breaks and immediately after handling the product.

9. PHYSICAL AND CHEMICAL PROPERTIES

| | | |
|--|---|--|
| Physical state: Liquid | Appearance: No information available. | Color: Light green. |
| Odor: No information available. | Taste No information available. | Formula: No information available |
| Molecular/Formula weight: No information available | Flammability: No information available | Flashpoint (°C/°F): No information available. |
| Flash Point Tested according to: Not available | Autoignition Temperature (°C/°F): No information available | Lower Explosion Limit (%): No information available |
| Upper Explosion Limit (%): No information available | Melting point/range(°C/°F): No information available | Decomposition temperature(°C/°F): No information available |
| Boiling point/range(°C/°F): No information available | Bulk density: No information available | Density (g/cm3): 1.03 |
| Specific gravity: 1.02-1.03 | pH: No information available | Vapor pressure @ 20°C (kPa): No information available |
| Evaporation rate: No information available | Vapor density: No information available | VOC content (g/L): No information available |
| Odor threshold (ppm): No information available | Partition coefficient (n-octanol/water): No information available | Viscosity: No information available |
| Miscibility: No information available | Solubility: No information available | |

10. STABILITY AND REACTIVITY

Reactivity

For Nitric Acid:

Incompatible with combustible materials, organic materials, metallic powders, bases, ammonia, reducing agents, carbides, aldehydes, cyanides, chromic acid, hydrogen sulfide, sulfides, metals, organic solvents, acetic acid, alkalis, alcohols, cesium and rubidium acetylides, nitrobenzene, turpentine, arsine, phosphine, tetraborane, 4-Methylcyclohexane

Chemical stability

Stability: Stable.

Possibility of Hazardous Reactions: Hazardous polymerization does not occur

Conditions to avoid: Incompatible materials.

Incompatible Materials:
Bases
Reducing agents
Combustible materials
Organic materials
Metals
Acids

Hazardous decomposition products: No information available.

Other Information

Corrosivity: No information available

Product code: AA240

Product name: NICKEL ATOMIC
ABSORPTION STANDARD

6 / 15

Special Remarks on Corrosivity: No information available

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Principal Routes of Exposure:

Skin. Inhalation. Ingestion.

Acute Toxicity

Component Information

| | |
|---------|-----------|
| Water | |
| CAS-No. | 7732-18-5 |

LD50/oral/rat = > 90 mL/kg Oral LD50 Rat
LD50/oral/mouse = No information available
LD50/dermal/rabbit = No information available
LD50/dermal/rat = No information available
LC50/inhalation/rat = No information available
LC50/inhalation/mouse = No information available
Other LD50 or LC50 information = No information available

| | |
|-------------|-----------|
| Nitric acid | |
| CAS-No. | 7697-37-2 |

LD50/oral/rat = No information available
LD50/oral/mouse = No information available
LD50/dermal/rabbit = No information available
LD50/dermal/rat = No information available
LC50/inhalation/rat = 67 ppm Inhalation LC50 Rat 4 h
130 mg/m³ 4 h
7 mg/l 1 h
LC50/inhalation/mouse = No information available
Other LD50 or LC50 information = 430 mg/kg Oral LDL Rat

| | |
|---------|-----------|
| Nickel | |
| CAS-No. | 7440-02-0 |

LD50/oral/rat = > 9000 mg/kg Oral LD50 Rat
LD50/oral/mouse = No information available
LD50/dermal/rabbit = No information available
LD50/dermal/rat = > 9000 mg/kg Oral LD50
LC50/inhalation/rat = No information available
LC50/inhalation/mouse = No information available
Other LD50 or LC50 information = No information available

Product Information

LD50/oral/rat =
VALUE- Acute Tox Oral = No information available

LD50/oral/mouse =
Value - Acute Tox Oral = No information available

LD50/dermal/rabbit
VALUE-Acute Tox Dermal = No information available

LD50/dermal/rat

Product code: AA240

Product name: NICKEL ATOMIC
ABSORPTION STANDARD

7 / 15

VALUE -Acute Tox Dermal = No information available

LC50/inhalation/rat

VALUE-Vapor = No information available

VALUE-Gas = No information available

VALUE-Dust/Mist = No information available

LC50/Inhalation/mouse

VALUE-Vapor = No information available

VALUE - Gas = No information available

VALUE - Dust/Mist = No information available

Symptoms

Skin Contact: Severe skin irritation. Causes skin burns. May cause deep penetrating ulcers of the skin with a characteristic yellow to brownish discoloration. Absorption through the skin may cause methemoglobinemia (the formation of methemoglobin in the blood which causes deficient oxygenation of the blood due to decreased available hemoglobin).

Eye Contact: Severe eye irritation. Causes eye burns. May cause irreversible eye damage.

Inhalation Causes irritation and possible burns of the respiratory tract with burning pain in the nose and throat, coughing, sneezing, wheezing, shortness of breath and pulmonary edema.

Ingestion Causes serious gastrointestinal tract irritation or burns with nausea, vomiting, severe abdominal pain, and possible "coffee grounds" appearance of the vomitus . May cause perforation of the digestive tract.

Aspiration hazard No information available.

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

Chronic Toxicity Repeated inhalation may produce changes in pulmonary function and/or chronic bronchitis. It may also cause weight loss, and affect behavior/central nervous system (headache, dizziness, drowsiness, muscle contraction or spasticity, weakness, loss of coordination, mental confusion), and urinary system (kidney failure, decreased urinary output after several hours of uncorrected circulatory collapse).
Repeated exposure may cause discoloration and/or erosion of teeth (dental enamel).
Eye irritation and respiratory tract signs and symptoms resembling those of frequent upper respiratory viral infections have been associated with chronic nitric acid exposure. Prolonged or repeated skin contact may cause allergic reaction. Repeated or prolonged skin contact may cause skin sensitization.

Sensitization: May cause sensitization by skin contact.

Mutagenic Effects: No information available

Carcinogenic effects: Not considered carcinogenic.

| Components | CAS-No. | IARC | ACGIH - Carcinogens | NTP | OSHA HCS - Carcinogens | Australia - Notifiable Carcinogenic Substances | Australia - Prohibited Carcinogenic Substances |
|-------------|-----------|------------|---------------------|------------|------------------------|--|--|
| Water | 7732-18-5 | Not listed | Not listed | Not listed | Not listed | Not listed | Not listed |
| Nitric acid | 7697-37-2 | Not listed | Not listed | Not listed | Not listed | Not listed | Not listed |

| | | | | | | | |
|--------|-----------|--|--|---|---------|------------|------------|
| Nickel | 7440-02-0 | Group 2B - Possibly Carcinogenic to Humans Monograph 49 [1990] Supplement 7 [1987] | A5 Not Suspected as a Human Carcinogen | Reasonably Anticipated To Be A Human Carcinogen | Present | Not listed | Not listed |
|--------|-----------|--|--|---|---------|------------|------------|

ACGIH (American Conference of Governmental Industrial Hygienists)

IARC (International Agency for Research on Cancer)

NTP (National Toxicology Program)

OSHA (Occupational Safety and Health Administration of the US Department of Labor)

Reproductive toxicity

No data is available

Reproductive Effects:
Developmental Effects:
Teratogenic Effects:

No information available
 May cause adverse developmental effects based on animal data
 No information available

Specific Target Organ Toxicity

STOT - single exposure
STOT - repeated exposure
Target Organs:

No information available.
 No information available.
 Skin. Eyes. Respiratory system.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Ecotoxicity effects:

Aquatic environment.

Nitric acid - 7697-37-2

Freshwater Fish Species Data: 72 mg/L LC50 *Gambusia affinis* 96h

Nickel - 7440-02-0

Freshwater Algae Data: 0.18 mg/L EC50 *Pseudokirchneriella subcapitata* 72 h 0.174 - 0.311 mg/L EC50 *Pseudokirchneriella subcapitata* 96 h

Freshwater Fish Species Data: 100 mg/L LC50 *Brachydanio rerio* 96 h 1 1.3 mg/L LC50 *Cyprinus carpio* 96 h semi-static 1 10.4 mg/L LC50 *Cyprinus carpio* 96 h static 1

Water Flea Data: 100 mg/L EC50 *Daphnia magna* 48 h 1 mg/L EC50 *Daphnia magna* 48 h

Persistence and degradability: No information available

Bioaccumulative potential: No information available.

Mobility: No information available.

13. DISPOSAL CONSIDERATIONS

Disposal Methods

Waste from residues / unused products:

Waste must be disposed of in accordance with Federal, State and Local regulation.

Contaminated packaging:

Empty containers should be taken for local recycling, recovery or waste disposal

| Components | CAS-No. | RCRA - F Series Wastes | RCRA - K Series Wastes | RCRA - P Series Wastes | RCRA - U Series Wastes |
|-------------|-----------|------------------------|------------------------|------------------------|------------------------|
| Water | 7732-18-5 | None | None | None | None |
| Nitric acid | 7697-37-2 | None | None | None | None |
| Nickel | 7440-02-0 | None | None | None | None |

14. TRANSPORT INFORMATION

DOT

UN-No: Not Regulated
Proper Shipping Name: No information available
Hazard Class: No information available
Subsidiary Class No information available
Packing group: No information available
Emergency Response Guide Number No information available
Marine Pollutant No data available
DOT RQ (lbs): No information available
Special Provisions No Information available
Symbol(s): No information available
Description: No information available

TDG (Canada)

UN-No: Not Regulated
Proper Shipping Name: No information available
Hazard Class: No information available
Subsidiary Risk: No information available
Packing Group: No information available
Marine Pollutant No Information available
Description: No information available

ADR

UN-No: Not Regulated
Proper Shipping Name: No information available
Hazard Class: No information available
Packing Group: No information available
Subsidiary Risk: No information available

IMO / IMDG

UN-No: Not Regulated
Proper Shipping Name: No information available
Hazard Class: No information available
Subsidiary Risk: No information available
Packing Group: No information available
Marine Pollutant No information available

RID

UN-No: Not Regulated
Proper Shipping Name: No information available
Hazard Class: No information available
Subsidiary Risk: No information available
Packing Group: No information available

ICAO

UN-No: Not Regulated
Proper Shipping Name: No information available
Hazard Class: No information available
Subsidiary Risk: No information available

Packing Group: No information available

IATA

UN-No: Not Regulated
Proper Shipping Name: No information available
Hazard Class: No information available
Subsidiary Risk: No information available
Packing Group: No information available
ERG Code: No information available
Special Provisions No information available

15. REGULATORY INFORMATION

International Inventories

| Components | CAS-No. | U.S. TSCA | KOREA KECL | Philippines (PICCS) | Japan ENCS | CHINA | Australia (AICS) | EINECS-No. |
|-------------|-----------|-----------|---------------------|---------------------|--------------------|---------|------------------|----------------------|
| Water | 7732-18-5 | Present | Present KE-35400 | Present | Not present | Present | Present | Present 231-791-2 |
| Nitric acid | 7697-37-2 | Present | Present KE-25911 | Present | Present (1)-394 | Present | Present | Present 231-714-2 |
| Nickel | 7440-02-0 | Present | Present KE-25818 | Present | Not present | Present | Present | Present 231-111-4 |

U.S. Regulations

Nitric acid

Massachusetts RTK: Present
Massachusetts EHS: extraordinarily hazardous
New Jersey RTK Hazardous Substance List: 1356
New Jersey (EHS) List: 1356 500 lb TPQ
New Jersey - Discharge Prevention - List of Hazardous Substances: Present
New Jersey TCPA - EHS: 15000lbTQ
450lbTQ
Pennsylvania RTK: Environmental hazard
Pennsylvania RTK - Environmental Hazard List Present
Michigan PSM HHC: = 500 lb TQ 94.5% by weight or greater
Minnesota - Hazardous Substance List: Present
New York Release Reporting - List of Hazardous Substances:
1000 lb RQ
100 lb RQ
Louisiana Reportable Quantity List for Pollutants: 1000lbfinal RQAs listed in 40 CFR 117.3 Table 117.3 and 40 CFR 302.4 Table 302.4
454kgfinal RQAs listed in 40 CFR 117.3 Table 117.3 and 40 CFR 302.4 Table 302.4
1000lbRQAs listed in Louisiana Administrative Code, Title 33, Part 1, Subpart 2, Chapter 39, Subchapter E. Applies to unauthorized emissions based on total mass emitted into or onto all media within any consecutive 24-hour period
100lbRQAs listed in Louisiana Administrative Code, Title 33, Part 1, Subpart 2, Chapter 39, Subchapter E. Applies to unauthorized emissions based on total mass emitted into the atmosphere
California Directors List of Hazardous Substances: Present

Nickel

Massachusetts RTK: Present
Massachusetts EHS: carcinogen; extraordinarily hazardous
New Jersey RTK Hazardous Substance List: 1341
New Jersey (EHS) List: 1341 500 lb TPQ
New Jersey - Discharge Prevention - List of Hazardous Substances: Present
Pennsylvania RTK: Environmental hazard
Special hazardous substance
Pennsylvania RTK - Environmental Hazard List Present
Pennsylvania RTK - Special Hazardous Substances Present
Michigan - Critical Materials List: Present
Minnesota - Hazardous Substance List: Present
New York Release Reporting - List of Hazardous Substances:
100 lb RQ
Louisiana Reportable Quantity List for Pollutants: 100lbfinal RQno reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is >=100 µm

45.4kgfinal RQno reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is >=100 µm

California Directors List of Hazardous Substances: Present

FDA - Food Additives Generally Recognized as Safe (GRAS): 21 CFR 184.1537

FDA - 21 CFR - Total Food Additives 172.864, 176.180, 184.1537

California Prop. 65: Safe Drinking Water and Toxic Enforcement Act of 1986.

Chemicals Known to the State of California to Cause Cancer:

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

Chemicals Known to the State of California to Cause Reproductive Toxicity:

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

| Components | CAS-No. | Carcinogen | Developmental Toxicity | Male Reproductive Toxicity | Female Reproductive Toxicity: |
|-------------|-----------|------------|------------------------|----------------------------|-------------------------------|
| Water | 7732-18-5 | Not Listed | Not Listed | Not Listed | Not Listed |
| Nitric acid | 7697-37-2 | Not Listed | Not Listed | Not Listed | Not Listed |
| Nickel | 7440-02-0 | carcinogen | Not Listed | Not Listed | Not Listed |

CERCLA/SARA

| Components | CAS-No. | CERCLA - Hazardous Substances and their Reportable Quantities | Section 302 Extremely Hazardous Substances and TPQs | Section 302 Extremely Hazardous Substances and RQs | Section 313 - Chemical Category | Section 313 - Reporting de minimis |
|-------------|-----------|---|---|--|---------------------------------|------------------------------------|
| Water | 7732-18-5 | None | None | None | None | None |
| Nitric acid | 7697-37-2 | 1000 lb final RQ 454 kg final RQ | 1000 lb TPQ 1000 lb EPCRA RQ | None | None | 1.0 % de minimis concentration |
| Nickel | 7440-02-0 | 100 lb final RQ 45.4 kg final RQ | None | None | None | 0.1 % de minimis concentration |

U.S. TSCA

| Components | CAS-No. | TSCA Section 5(a)2 - Chemicals With Significant New Use Rules (SNURS) | TSCA 8(d) -Health and Safety Reporting |
|-------------|-----------|---|--|
| Water | 7732-18-5 | Not Applicable | Not Applicable |
| Nitric acid | 7697-37-2 | Not Applicable | Not Applicable |
| Nickel | 7440-02-0 | Not Applicable | Not Applicable |

Canada

WHMIS 2015 - GHS Classifications

WHMIS 2015 Hazard Classification Information:

Component
Water
7732-18-5 (97.4-97.9)
Nitric acid
7697-37-2 (2.0-2.5)

Nickel
7440-02-0 (0.1)

WHMIS 2015 Hazard Classification
Not a dangerous product according to HPR classification criteria

Oxidizing liquids - Category 3: H272 May intensify fire, oxidizer.; Corrosive to Metals - Category 1: H290 May be corrosive to metals. (potentially corrosive to metals; the supplier should be contacted for more information); Health Hazard Not Otherwise Classified - Category 1: Causes severe damage to the respiratory tract; Skin corrosion/irritation - Category 1: H314 Causes severe skin burns and eye damage.; Serious Eye Damage/Eye Irritation - Category 1: H318 Causes serious eye damage.
Skin sensitizers - Category 1: H317 May cause allergic skin reaction.; Carcinogenicity - Category 2: H351 Suspected of causing cancer.; Specific target organ toxicity - Repeated exposure - Category 1: H372 Causes damage to organs through prolonged or repeated exposure.

Canada Hazardous Products Regulation This product has been classified according to the hazard criteria of the HPR (Hazardous Products Regulation) and the SDS contains all of the information required by the HPR

WHMIS 1988 Hazard Class

E Corrosive material
D2A Very toxic materials
D2B Toxic materials

Components

| | |
|--------------------|---|
| Water | WHMIS 1988 Uncontrolled product according to WHMIS classification criteria |
| Nitric acid | C,E including 61.3%, 67.18%, 70% E 0.63%, 6.3% |
| Nickel | D2A,D2B B6,D2A Raney |

Canada Controlled Products Regulation:

This product has been classified according to the hazard criteria of the CPR (Controlled Products Regulation) and the MSDS contains all of the information required by the CPR.

| Components | WHMIS Ingredient Disclosure List - |
|-------------|------------------------------------|
| Nitric acid | 1 % |
| Nickel | 0.1 % |

Inventory

| Components | CAS-No. | Canada (DSL) | Canada (NDSL) |
|-------------|-----------|--------------|---------------|
| Water | 7732-18-5 | Present | Not Listed |
| Nitric acid | 7697-37-2 | Present | Not Listed |
| Nickel | 7440-02-0 | Present | Not Listed |

| Components | CAS-No. | CEPA Schedule I - Toxic Substances |
|-------------|-----------|---|
| Water | 7732-18-5 | Not listed |
| Nitric acid | 7697-37-2 | Not listed |
| Nickel | 7440-02-0 | Not listed |
| Components | CAS-No. | CEPA - 2010 Greenhouse Gases Subject to Mandatory Reporting |
| Water | 7732-18-5 | Not listed |
| Nitric acid | 7697-37-2 | Not listed |
| Nickel | 7440-02-0 | Not listed |

EU Classification

EU GHS - SV - CLP 1272/2008

| Components | CAS-No. | EU GHS - SV - CLP (1272/2008) |
|-------------|-----------|--|
| Water | 7732-18-5 | |
| Nitric acid | 7697-37-2 | Oxidizing liquids - Ox. Liq. 2: H272 May intensify fire, oxidizer. (C >= 99 %); Skin corrosion/irritation - Skin Corr. 1A: H314 Causes severe skin burns and eye damage. (C >= 20 %); Supplemental Hazards: EUH071 Corrosive to respiratory tract.007-004-00-1 Oxidizing liquids - Ox. Liq. 2: H272 May intensify fire, oxidizer. (C >= 99 %); Oxidizing liquids - Ox. Liq. 3: H272 May intensify fire, oxidizer. (65 % <= C <99 %); Skin corrosion/irritation - Skin Corr. 1A: H314 Causes severe skin burns and eye damage. (C >= 20 %); Skin corrosion/irritation - Skin Corr. |

| | | |
|--------|-----------|---|
| | | 1B: H314 Causes severe skin burns and eye damage. (5 % ≤ C <20 %)007-004-00-1 |
| Nickel | 7440-02-0 | Skin sensitizers - Skin Sens. 1: H317 May cause allergic skin reaction.; Carcinogenicity - Carc. 2: H351 Suspected of causing cancer.; Specific target organ toxicity - Repeated exposure - STOT RE 1: H372 Causes damage to organs through prolonged or repeated exposure. (No information to prove exclusion of certain routes of exposure)028-002-00-7 |

EU - CLP (1272/2008)

R-phrase(s)

R34 - Causes burns.

R40 - Limited evidence of a carcinogenic effect

R43 - May cause sensitization by skin contact.

S -phrase(s)

S23 - Do not breathe gas/fumes/vapor/spray.

S26 - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S36 - Wear suitable protective clothing.

S45 - In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

S 1/2 - Keep locked up and out of the reach of children.

| Components | CAS-No. | Classification | Concentration Limits: | Safety Phrases |
|-------------|-----------|-------------------------------------|---|-------------------------|
| Water | 7732-18-5 | | No information | |
| Nitric acid | 7697-37-2 | C; R35 O; R8 | 20%≤C C;R35 5%≤C<20% C;R34 70%≤C O;R8 | S1/2 S23 S26 S36 S45 |
| Nickel | 7440-02-0 | Carc.Cat.3; R40 R43 T; R48/23 | No information | S2 S36/37/39 S45 |

The product is classified in accordance with Annex VI to Directive 67/548/EEC

Indication of danger:

C - Corrosive.



16. OTHER INFORMATION

Preparation Date: 7/28/2017
Revision Date: 7/28/2017
Prepared by: Sonia Owen

Disclaimer:

All chemicals may pose unknown hazards and should be used with caution. This Safety Data Sheet (SDS) applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this SDS. The physical properties reported in this SDS are obtained from the literature and do not constitute product specifications. Information contained herein does not constitute a warranty, whether expressed or implied, as to the safety, merchantability or fitness of the goods for a particular purpose. Spectrum Chemicals & Laboratory Products, Inc. assumes no responsibility for results obtained or for incidental or consequential damages, including lost profits, arising from the use of these data. No warranty against infringement of any patent, copyright or trademark is made or implied. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this SDS is based on technical data judged to be reliable, Spectrum assumes no responsibility for the completeness or accuracy of the information contained herein.

End of Safety Data Sheet