

# SAFETY DATA SHEET

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

**Product identifier**

**Product Name** CLPP-CAL-1

**Other means of identification**

**Product Description** 5000 µg/mL: Ca, K, Mg, Na; 2000 µg/mL: Al, Ba; 1000 µg/mL: Fe; 500 µg/mL: Co, Mn, Ni, V, Zn; 250 µg/mL: Ag, Cu; 200 µg/mL: Cr; 50 µg/mL: Be

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

**Recommended Use** Laboratory chemicals.

**Uses advised against** No information available

**Details of the supplier of the safety data sheet**

**Company**

Inorganic Ventures  
300 Technology Drive  
Christiansburg, VA 24073  
Phone: 1(800) 669-6799  
Email: info@inorganicventures.com

**Emergency Telephone Number**

Chemtrec 1-800-424-9300 (North America)  
Chemtrec +1 703-741-5970 (International)

## 2. HAZARDS IDENTIFICATION

### GHS

**Classification**

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

**Label Elements**

**Danger**

**Hazard statements**

Causes severe skin burns and eye damage  
May cause cancer  
May be corrosive to metals



**Appearance** clear/ tan**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  
 Use personal protective equipment as required  
 Do not breathe dust/fume/gas/mist/vapors/spray  
 Wash face, hands and any exposed skin thoroughly after handling  
 Keep only in original container

**Precautionary Statements - Response****Eyes**

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

**Skin**

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower  
 Wash contaminated clothing before reuse

**Inhalation**

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing  
 Immediately call a POISON CENTER or doctor/physician

**Ingestion**

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting

**Spill**

Absorb spillage to prevent material damage

**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

**Hazards not otherwise classified (HNOC)**

- Very toxic to aquatic life with long lasting effects

**Other Information**

2.7806 % of the mixture consists of ingredient(s) of unknown toxicity

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

| Chemical name                 | CAS No.    | Weight-% |
|-------------------------------|------------|----------|
| Nitric acid                   | 7697-37-2  | 5        |
| Aluminum Nitrate, Nonahydrate | 7784-27-2  | 2.7806   |
| Potassium nitrate             | 7757-79-1  | 1.29485  |
| Sodium carbonate              | 497-19-8   | 1.1522   |
| Barium Nitrate                | 10022-31-8 | 0.38102  |

#### 4. FIRST AID MEASURES

##### Description of first aid measures

|                                           |                                                                                                                                                                                                                                                                                |
|-------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>General Advice</b>                     | Immediate medical attention is required. Show this safety data sheet to the doctor in attendance.                                                                                                                                                                              |
| <b>Eye Contact</b>                        | Immediate medical attention is required. Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Keep eye wide open while rinsing. Do not rub affected area.                                  |
| <b>Skin Contact</b>                       | Immediate medical attention is required. Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes.                                                                                                                                 |
| <b>Inhalation</b>                         | Call a physician or poison control center immediately. Remove to fresh air. If breathing is difficult, give oxygen. If breathing is irregular or stopped, administer artificial respiration. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. |
| <b>Ingestion</b>                          | Immediate medical attention is required. Do NOT induce vomiting. Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person.                                                                                           |
| <b>Self-protection of the first aider</b> | Use personal protective equipment as required. Avoid contact with skin, eyes or clothing.                                                                                                                                                                                      |

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

|                                            |                                |
|--------------------------------------------|--------------------------------|
| <b>Most Important Symptoms and Effects</b> | Burn. Difficulty in breathing. |
|--------------------------------------------|--------------------------------|

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

|                           |                                                                                                                                                                                                                                                                                                                                       |
|---------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Notes to Physician</b> | Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Do not give chemical antidotes. Asphyxia from glottal edema may occur. Marked decrease in blood pressure may occur with moist rales, frothy sputum, and high pulse pressure |
|---------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

#### 5. FIRE-FIGHTING MEASURES

##### Suitable Extinguishing Media

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

**Unsuitable Extinguishing Media** Decomposition by contact with water may generate vapors which can be ignited by heat or open flame.

##### Special Exposure Hazards Arising from the Substance/Mixture

The product causes burns of eyes, skin and mucous membranes Thermal decomposition can lead to release of irritating 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

**Personal Precautions**

Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Ensure adequate ventilation. Use personal protective equipment as required. Do not get in eyes, on skin, or on clothing.

**Environmental precautions****Environmental precautions**

Prevent further leakage or spillage if safe to do so. Do not flush into surface water or sanitary sewer system. Prevent product from entering drains. See Section 12 for additional Ecological Information. Avoid release to the environment. Collect spillage. Dispose of contents/container to an approved waste disposal plant.

**Methods and material for containment and cleaning up****Methods for Cleaning up**

Dam up. Neutralise with lime milk; soda. Soak up with inert absorbent material. Sweep up and shovel into suitable containers for disposal. After cleaning, flush away traces with water.

**7. HANDLING AND STORAGE****Precautions for safe handling****Handling**

Wear personal protective equipment. Ensure adequate ventilation In case of insufficient ventilation, wear suitable respiratory equipment Do not get in eyes, on skin, or on clothing Do not breathe vapors or spray mist.

**Conditions for safe storage, including any incompatibilities****Storage Conditions**

Keep containers tightly closed in a dry, cool and well-ventilated place.

**Incompatible Products**

None known based on information supplied.

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION****Control parameters****Exposure Guidelines**

| Chemical name                              | ACGIH TLV                     | OSHA PEL                                                                                                                                                              | NIOSH IDLH                                                                                          |
|--------------------------------------------|-------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| Nitric acid<br>7697-37-2                   | TWA: 2 ppm<br>STEL: 4 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> |
| Aluminum Nitrate, Nonahydrate<br>7784-27-2 |                               | (vacated) TWA: 2 mg/m <sup>3</sup>                                                                                                                                    | TWA: 2 mg/m <sup>3</sup>                                                                            |
| Barium Nitrate<br>10022-31-8               | TWA: 0.5 mg/m <sup>3</sup> Ba | TWA: 0.5 mg/m <sup>3</sup><br>(vacated) TWA: 0.5 mg/m <sup>3</sup>                                                                                                    | IDLH: 50 mg/m <sup>3</sup><br>TWA: 0.5 mg/m <sup>3</sup>                                            |

**Appropriate engineering controls****Engineering Measures**

Ensure adequate ventilation, especially in confined areas.

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

Tightly fitting safety goggles Face-shield

**Skin and Body Protection**

Impervious clothing Boots Chemical resistant apron

**Hand Protection**

Impervious gloves

**Respiratory Protection**

When workers are facing concentrations above the exposure limit they must use appropriate certified respirators If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn

**Hygiene Measures**

Handle in accordance with good industrial hygiene and safety practice. Wear suitable

gloves and eye/face protection. Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this product. Wash hands before breaks and immediately after handling the product. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

|                                         |                          |
|-----------------------------------------|--------------------------|
| Physical state                          | Liquid                   |
| Appearance                              | clear/ tan               |
| Odor                                    | Odorless                 |
| pH - VALUE 1                            | No data available        |
| Melting point / melting range           | No data available        |
| Initial boiling point and boiling range | 100 °C / 212 °F          |
| Evaporation rate                        | No data available        |
| Flammability (solid, gas)               | No data available        |
| Vapor pressure @20 °C (kPa)             | No data available        |
| Relative vapor density                  | No data available        |
| Relative Density                        | No data available        |
| Specific gravity - VALUE 1              | No data available        |
| Water solubility                        | Miscible                 |
| Partition coefficient: n-octanol/water  | No data available        |
| Autoignition temperature                | No data available        |
| Decomposition temperature               | No data available        |
| Dynamic viscosity - VALUE 1             | No data available        |
| Explosive Properties                    | No information available |
| Oxidizing Properties                    | No information available |
| VOC content                             | No information available |

## 10. STABILITY AND REACTIVITY

### Reactivity

No data available

### Chemical stability

Stable under recommended storage conditions.

### Possibility of hazardous reactions

None under normal processing.

|                                 |                               |
|---------------------------------|-------------------------------|
| <b>Hazardous Polymerization</b> | None under normal processing. |
|---------------------------------|-------------------------------|

### Conditions to Avoid

None known.

### Incompatible materials

Bases Cyanides

### Hazardous decomposition products

Nitrogen oxides (NOx).

## 11. TOXICOLOGICAL INFORMATION

**Information on likely routes of exposure****Product Information**

The product causes burns of eyes, skin and mucous membranes

**Inhalation**

Causes burns. Corrosive to respiratory system. Inhaled corrosive substances can lead to a toxic edema of the lungs. Contact with moist mucous membranes of the respiratory system can cause caustic condition resulting in burns. Aspiration may cause pulmonary edema and pneumonitis. Silver in the form of a finely divided dust may cause discoloration in contact with skin, and argyrosis in case of inhalation.

**Eye Contact**

Causes burns. Silver in the form of a finely divided dust may cause discoloration in contact with skin, and argyrosis in case of inhalation.

**Skin Contact**

Causes burns. Silver in the form of a finely divided dust may cause discoloration in contact with skin, and argyrosis in case of inhalation.

**Ingestion**

Can burn mouth, throat, and stomach. Ingestion of soluble silver salts may cause argyria, characterized by permanent blue-gray pigmentation of the skin, mucous membranes, and eyes.

**Component Information**

| Chemical name                             | Oral LD50           | Dermal LD50           | Inhalation LC50                    |
|-------------------------------------------|---------------------|-----------------------|------------------------------------|
| Nitric acid - 7697-37-2                   | -                   | -                     | = 2500 ppm (Rat) 1 h               |
| Aluminum Nitrate, Nonahydrate - 7784-27-2 | = 542.5 mg/kg (Rat) | -                     | -                                  |
| Potassium nitrate - 7757-79-1             | = 3015 mg/kg (Rat)  | > 5000 mg/kg (Rat)    | > 0.527 mg/L (Rat) 4 h             |
| Sodium carbonate - 497-19-8               | = 4090 mg/kg (Rat)  | > 2000 mg/kg (Rabbit) | = 2300 mg/m <sup>3</sup> (Rat) 2 h |
| Barium Nitrate - 10022-31-8               | = 355 mg/kg (Rat)   | -                     | > 1.1 mg/L (Rat) 243 min           |

**Symptoms related to the physical, chemical and toxicological characteristics****Symptoms**

No information available.

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

No information available.

**Mutagenic Effects**

No information available.

**Carcinogenic effects**

| Chemical name                                 | ACGIH | IARC                | NTP | OSHA |
|-----------------------------------------------|-------|---------------------|-----|------|
| Nitric acid<br>7697-37-2                      |       | Group 1<br>Group 2A |     | X    |
| Aluminum Nitrate,<br>Nonahydrate<br>7784-27-2 |       | Group 2A            |     | X    |
| Potassium nitrate<br>7757-79-1                |       | Group 2A            |     | X    |
| Barium Nitrate<br>10022-31-8                  |       | Group 2A            |     | X    |

**Reproductive Toxicity**

No information available.

**STOT - single exposure**

No information available.

**STOT - repeated exposure**

May cause disorder and damage to the. blood. Nervous system. lungs. Respiratory system. Skin, Eyes, Respiratory system.

**Target organ effects****Neurological Effects**

Prolonged or excessive exposure to manganese in dust or fumes may cause irreversible central nervous system damage (Manganism). Symptoms resemble Parkinson's disease and include tremors, impaired speech, mask-like face, and impaired movement.

**Aspiration hazard**

No information available.

**Numerical measures of toxicity - Product Information**

Unknown acute toxicity 2.7806 % of the mixture consists of ingredient(s) of unknown toxicity  
 The following values are calculated based on chapter 3.1 of the GHS document  
 ATEmix (oral) 16584 mg/kg  
 ATEmix (inhalation-dust/mist) 7.2 mg/l  
 ATEmix (inhalation-vapor) 64.4 mg/l

## 12. ECOLOGICAL INFORMATION

### Ecotoxicity

#### Ecotoxicity effects

Contains 0 % of components with unknown hazards to the aquatic environment

| Chemical name                | Algae/aquatic plants | Fish                                                                                               | Toxicity to microorganisms | Crustacea                              |
|------------------------------|----------------------|----------------------------------------------------------------------------------------------------|----------------------------|----------------------------------------|
| Nitric acid<br>7697-37-2     |                      | 72: 96 h Gambusia affinis<br>mg/L LC50                                                             |                            |                                        |
| Sodium carbonate<br>497-19-8 |                      | LC50: =300mg/L (96h,<br>Lepomis macrochirus)<br>LC50: 310 - 1220mg/L (96h,<br>Pimephales promelas) |                            | EC50: =265mg/L (48h,<br>Daphnia magna) |

### Persistence and Degradability

No information available.

### Bioaccumulation

No information available.

| Chemical name            | Partition coefficient |
|--------------------------|-----------------------|
| Nitric acid<br>7697-37-2 | -2.3                  |

## 13. DISPOSAL CONSIDERATIONS

### Waste treatment methods

Waste from Residues/Unused Products Dispose of in accordance with federal, state and local regulations  
 Contaminated Packaging Do not reuse empty containers.

| Chemical name                  | California Hazardous Waste Status |
|--------------------------------|-----------------------------------|
| Nitric acid<br>7697-37-2       | Toxic<br>Corrosive<br>Ignitable   |
| Potassium nitrate<br>7757-79-1 | Ignitable<br>Reactive             |
| Sodium carbonate<br>497-19-8   | Corrosive                         |
| Barium Nitrate<br>10022-31-8   | Toxic<br>Ignitable                |

## 14. TRANSPORT INFORMATION

### IMDG

14.1. UN-No UN3264  
 14.2. Proper shipping name Corrosive liquid, acidic, inorganic, n.o.s  
 14.3. Transport hazard class(es) 8  
 14.4. Packing Group III

|                                                                                         |                          |
|-----------------------------------------------------------------------------------------|--------------------------|
| Description                                                                             | Not applicable           |
| 14.5. Marine Pollutant                                                                  | None                     |
| 14.6. Special Provisions                                                                | None                     |
| No information available in bulk according to Annex II of MARPOL 73/78 and the IBC Code | No information available |

**RID**

|                                  |                                            |
|----------------------------------|--------------------------------------------|
| 14.1. UN-No                      | UN3264                                     |
| 14.2. Proper shipping name       | Corrosive liquid, acidic, inorganic, n.o.s |
| 14.3. Transport hazard class(es) | 8                                          |
| 14.4. Packing Group              | III                                        |
| Description                      | Not applicable                             |
| 14.5. Environmental hazard       | None                                       |
| 14.6. Special Provisions         | None                                       |

**ADR**

|                                  |                                            |
|----------------------------------|--------------------------------------------|
| 14.1. UN-No                      | UN3264                                     |
| 14.2. Proper shipping name       | Corrosive liquid, acidic, inorganic, n.o.s |
| 14.3. Transport hazard class(es) | 8                                          |
| 14.4. Packing Group              | III                                        |
| Description                      | Not applicable                             |
| 14.5. Environmental hazard       | None                                       |
| 14.6. Special Provisions         | None                                       |

**ICAO**

|                            |                                            |
|----------------------------|--------------------------------------------|
| 14.1. UN-No                | UN3264                                     |
| 14.2. Proper Shipping Name | Corrosive liquid, acidic, inorganic, n.o.s |
| 14.3. Hazard Class         | 8                                          |
| 14.4. Packing Group        | III                                        |
| Description                | Not applicable                             |
| 14.5. Environmental hazard | None                                       |
| 14.6. Special Provisions   | None                                       |

**IATA-DGR**

|                                  |                                            |
|----------------------------------|--------------------------------------------|
| 14.1. UN-No                      | UN3264                                     |
| 14.2. Proper shipping name       | Corrosive liquid, acidic, inorganic, n.o.s |
| 14.3. Transport hazard class(es) | 8                                          |
| 14.4. Packing Group              | III                                        |
| Description                      | Not applicable                             |
| 14.5. Environmental hazard       | None                                       |
| 14.6. Special Provisions         | None                                       |

**15. REGULATORY INFORMATION****International Inventories**

|               |          |
|---------------|----------|
| TSCA          | Complies |
| DSL/NDL       | Complies |
| EINECS/ELINCS | Complies |
| ENCS          | Complies |
| IECSC         | Complies |
| KECL          | Complies |
| PICCS         | Complies |
| AIIC          | Complies |

*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 Commercial Chemical Substances/EU 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

## U.S. 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                 | CAS No.    | Weight-% | SARA 313 - Threshold Values % |
|-------------------------------|------------|----------|-------------------------------|
| Nitric acid - 7697-37-2       | 7697-37-2  | 5        | 1.0                           |
| Potassium nitrate - 7757-79-1 | 7757-79-1  | 1.29485  | 1.0                           |
| Barium Nitrate - 10022-31-8   | 10022-31-8 | 0.38102  | 1.0                           |

### **SARA 311/312 Hazard Categories**

|                                   |                |
|-----------------------------------|----------------|
| Acute health hazard               | No             |
| Chronic Health Hazard             | Not classified |
| Fire hazard                       | No             |
| Sudden Release of Pressure Hazard | No             |
| Reactive Hazard                   | No             |

### **Clean Water Act**

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

| Chemical name            | CWA - Reportable Quantities | CWA - Toxic Pollutants | CWA - Priority Pollutants | CWA - Hazardous Substances |
|--------------------------|-----------------------------|------------------------|---------------------------|----------------------------|
| Nitric acid<br>7697-37-2 | 1000 lb                     |                        |                           | X                          |

### **CERCLA**

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

| Chemical name            | Hazardous Substances RQs | Extremely Hazardous Substances RQs | RQ                                        |
|--------------------------|--------------------------|------------------------------------|-------------------------------------------|
| Nitric acid<br>7697-37-2 | 1000 lb                  | 1000 lb                            | RQ 1000 lb final RQ<br>RQ 454 kg final RQ |

## U.S. State Regulations

### **California Proposition 65**

This product contains the following Proposition 65 chemicals:

| Chemical name                    | California Proposition 65 |
|----------------------------------|---------------------------|
| Vanadium pentoxide - 1314-62-1   | Carcinogen                |
| Beryllium di(acetate) - 543-81-7 | Carcinogen                |
| Nickel - 7440-02-0               | Carcinogen                |
| Cobalt - 7440-48-4               | Carcinogen                |

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

| Chemical name                              | New Jersey | Massachusetts | Pennsylvania |
|--------------------------------------------|------------|---------------|--------------|
| Nitric acid<br>7697-37-2                   | X          | X             | X            |
| Aluminum Nitrate, Nonahydrate<br>7784-27-2 | X          |               | X            |
| Potassium nitrate<br>7757-79-1             | X          | X             | X            |
| Barium Nitrate<br>10022-31-8               | X          | X             | X            |

U.S. EPA Label Information**16. OTHER INFORMATION**

Revision Date 26-Jun-2025

**Revision Note**

No information available

**Disclaimer**

The information provided on this SDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

**End of SDS**