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Revision Number 2

**Section 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING****Product identifier****Product Name** CMS-5**Other means of identification****Product Description** 10 µg/mL: Ag, Al, Ca, Co, Cr, Cs, Cu, Fe, K, Li, Mg, Mn, Na, Ni, Rb, Sr, Zn**Recommended use of the chemical and restrictions on use****Recommended Use** Laboratory chemicals**Restriction on Use** No information available**Details of the supplier of the safety data sheet**

|         |                            |                |                            |
|---------|----------------------------|----------------|----------------------------|
| Company | Inorganic Ventures         | E-mail Address | info@inorganicventures.com |
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|         | Christiansburg, VA 24073   |                |                            |
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|         | info@inorganicventures.com |                |                            |

**Emergency telephone number****Emergency Telephone** Chemtrec 1-800-424-9300 (US)  
+34.678750066**Section 2: HAZARDS IDENTIFICATION****Classification**

|                                   |             |
|-----------------------------------|-------------|
| Skin corrosion/irritation         | Category 2  |
| Serious eye damage/eye irritation | Category 2A |
| Carcinogenicity                   | Category 1A |
| Corrosive to metals               | Category 1  |

**Label Elements****Danger****Hazard statements**

Causes skin irritation  
Causes serious eye irritation  
May cause cancer  
May be corrosive to metals

**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  
Wash face, hands and any exposed skin thoroughly after handling  
Keep only in original packaging

**Precautionary Statements - Response**

IF exposed or concerned: Get medical advice/attention

**Eyes**

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
If eye irritation persists: Get medical advice/attention

**Skin**

IF ON SKIN: Wash with plenty of water and soap  
If skin irritation occurs: Get medical advice/attention  
Take off contaminated clothing and wash it before reuse

**Spill**

Absorb spillage to prevent material damage

**Precautionary Statements - Storage**

Store locked up  
Store in corrosion resistant container with a resistant inner liner

**Precautionary Statements - Disposal**

Dispose of contents/container to an approved waste disposal plant

**Other Information**

Toxic to aquatic life

**Unknown acute toxicity** 3.50001 % of the mixture consists of ingredient(s) of unknown toxicity  
3.50001 % of the mixture consists of ingredient(s) of unknown acute oral toxicity  
3.50001 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity  
3.50001 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas)  
1E-05 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor)  
1E-05 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)

**Section 3: COMPOSITION/INFORMATION ON INGREDIENTS****Substance**

Not applicable.

**Mixture**

| Chemical name | CAS No.   | Weight-% | Hazardous Material Information Review Act registry number (HMIRA registry #) | Date HMIRA filed and date exemption granted (if applicable) |
|---------------|-----------|----------|------------------------------------------------------------------------------|-------------------------------------------------------------|
| Nitric acid   | 7697-37-2 | 3.5      | -                                                                            |                                                             |

## Section 4: FIRST AID MEASURES

### Description of first aid measures

|                                           |                                                                                                                                                                                                                                                                                     |
|-------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>General advice</b>                     | Show this safety data sheet to the doctor in attendance. IF exposed or concerned: Get medical advice/attention.                                                                                                                                                                     |
| <b>Inhalation</b>                         | Remove to fresh air. Get medical attention immediately if symptoms occur.                                                                                                                                                                                                           |
| <b>Eye contact</b>                        | Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Keep eye wide open while rinsing. Do not rub affected area. Get medical attention if irritation develops and persists. |
| <b>Skin contact</b>                       | Wash off immediately with soap and plenty of water for at least 15 minutes. Get medical attention if irritation develops and persists.                                                                                                                                              |
| <b>Ingestion</b>                          | Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Do NOT induce vomiting. Call a physician.                                                                                                                       |
| <b>Self-protection of the first aider</b> | Avoid contact with skin, eyes or clothing. Wear personal protective clothing (see section 8).                                                                                                                                                                                       |

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

|                 |                           |
|-----------------|---------------------------|
| <b>Symptoms</b> | No information available. |
|-----------------|---------------------------|

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

|                           |                        |
|---------------------------|------------------------|
| <b>Note to physicians</b> | Treat symptomatically. |
|---------------------------|------------------------|

## Section 5: FIRE FIGHTING MEASURES

|                                                       |                                                                                                                                    |
|-------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|
| <b>Suitable Extinguishing Media</b>                   | Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.                            |
| <b>Unsuitable extinguishing media</b>                 | CAUTION: Use of water spray when fighting fire may be inefficient.                                                                 |
| <b>Specific hazards arising from the chemical</b>     | No information available.                                                                                                          |
| <b>Explosion data</b>                                 |                                                                                                                                    |
| Sensitivity to mechanical impact                      | None.                                                                                                                              |
| Sensitivity to static discharge                       | None.                                                                                                                              |
| <b>Special protective equipment for fire-fighters</b> | Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment. |

## Section 6: ACCIDENTAL RELEASE MEASURES

### Personal precautions, protective equipment and emergency procedures

**Personal precautions** Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required.

**Other information** Refer to protective measures listed in Sections 7 and 8.

### Methods and material for containment and cleaning up

**Methods for containment** Prevent further leakage or spillage if safe to do so.

**Methods for cleaning up** Pick up and transfer to properly labeled containers.

## Section 7: HANDLING AND STORAGE

### Precautions for safe handling

**Advice on safe handling** Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing.

### Conditions for safe storage, including any incompatibilities

**Storage Conditions** Keep containers tightly closed in a dry, cool and well-ventilated place. Protect from moisture. Store locked up. Keep out of the reach of children. Store away from other materials.

## Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### Control Parameters

#### Exposure Limits

| Chemical name            | Alberta                                                                               | British Columbia          | Ontario TWAEV             | Quebec                                                                                |
|--------------------------|---------------------------------------------------------------------------------------|---------------------------|---------------------------|---------------------------------------------------------------------------------------|
| Nitric acid<br>7697-37-2 | TWA: 2 ppm<br>TWA: 5.2 mg/m <sup>3</sup><br>STEL: 4 ppm<br>STEL: 10 mg/m <sup>3</sup> | TWA: 2 ppm<br>STEL: 4 ppm | TWA: 2 ppm<br>STEL: 4 ppm | TWA: 2 ppm<br>TWA: 5.2 mg/m <sup>3</sup><br>STEL: 4 ppm<br>STEL: 10 mg/m <sup>3</sup> |

### Appropriate engineering controls

**Engineering controls** Showers  
Eyewash stations  
Ventilation systems.

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

**Eye/face protection** No special protective equipment required.

**Hand protection** Wear suitable gloves.

**Skin and body protection** Wear suitable protective clothing.

|                                       |                                                                                                                                                                                                                                              |
|---------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Respiratory protection</b>         | No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.                                                                     |
| <b>General hygiene considerations</b> | Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product. |

## Section 9: PHYSICAL AND CHEMICAL PROPERTIES

### Information on basic physical and chemical properties

|                                               |                           |                                                |                   |
|-----------------------------------------------|---------------------------|------------------------------------------------|-------------------|
| <b>Physical state</b>                         | Liquid                    | <b>pH</b>                                      | No data available |
| <b>Appearance</b>                             | clear /colorless          | <b>Initial boiling point and boiling range</b> | 100 °C / 212 °F   |
| <b>Odor</b>                                   | Odorless                  | <b>Evaporation rate</b>                        | No data available |
| <b>Odor threshold</b>                         | No information available  | <b>Flammability Limit in Air</b>               |                   |
| <b>Property</b>                               | <b>Values</b>             |                                                |                   |
| <b>Melting point / freezing point</b>         | No data available         |                                                |                   |
| <b>Flash point</b>                            | No data available         |                                                |                   |
| <b>Flammability</b>                           | No data available         |                                                |                   |
| <b>Upper flammability or explosive limits</b> | No data available         |                                                |                   |
| <b>Lower flammability or explosive limits</b> | No data available         |                                                |                   |
| <b>Vapor pressure</b>                         | No data available         | <b>Relative vapor density</b>                  | No data available |
| <b>Relative Density</b>                       | No data available         | <b>Water solubility</b>                        | No data available |
| <b>Literary reference</b>                     |                           | <b>Solubility in other solvents</b>            |                   |
| <b>Partition coefficient: n-octanol/water</b> | No data available         | <b>Autoignition temperature</b>                | No data available |
| <b>Hyphen</b>                                 | No data available         | <b>Kinematic viscosity</b>                     | No data available |
| <b>Dynamic viscosity</b>                      | No data available         | <b>None known</b>                              |                   |
| <b>Other information</b>                      |                           |                                                |                   |
| <b>Explosive properties</b>                   | No information available. |                                                |                   |
| <b>Oxidizing properties</b>                   | No information available. |                                                |                   |
| <b>Softening point</b>                        | No information available  |                                                |                   |
| <b>Molecular Weight</b>                       | No information available  |                                                |                   |
| <b>VOC content</b>                            | No information available  |                                                |                   |
| <b>Liquid Density</b>                         | No information available  |                                                |                   |
| <b>Bulk density</b>                           | No information available  |                                                |                   |

## Section 10: STABILITY AND REACTIVITY

|                                           |                                                     |
|-------------------------------------------|-----------------------------------------------------|
| <b>Reactivity</b>                         | No information available.                           |
| <b>Chemical stability</b>                 | Stable under normal conditions.                     |
| <b>Possibility of hazardous reactions</b> | None under normal processing.                       |
| <b>Hazardous polymerization</b>           | None under normal processing.                       |
| <b>Conditions to Avoid</b>                | Exposure to air or moisture over prolonged periods. |
| <b>Incompatible materials</b>             | Oxidizing agent.                                    |

Hazardous decomposition products Nitrogen oxides (NOx).

## Section 11: TOXICOLOGICAL INFORMATION

### Information on likely routes of exposure

#### Product Information

|              |                                                                   |
|--------------|-------------------------------------------------------------------|
| Inhalation   | Specific test data for the substance or mixture is not available. |
| Eye contact  | Specific test data for the substance or mixture is not available. |
| Skin contact | Specific test data for the substance or mixture is not available. |
| Ingestion    | Specific test data for the substance or mixture is not available. |

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

Symptoms No information available.

### Acute toxicity

#### Numerical measures of toxicity

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

|                               |                 |
|-------------------------------|-----------------|
| ATEmix (oral)                 | 99,999.00 mg/kg |
| ATEmix (dermal)               | 99,999.00 mg/kg |
| ATEmix (inhalation-gas)       | 99,999.00 mg/l  |
| ATEmix (inhalation-dust/mist) | 14.30 mg/l      |
| ATEmix (inhalation-vapor)     | 92.00 mg/l      |

Unknown acute toxicity 3.50001 % of the mixture consists of ingredient(s) of unknown toxicity  
 3.50001 % of the mixture consists of ingredient(s) of unknown acute oral toxicity  
 3.50001 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity  
 3.50001 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas)  
 1E-05 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor)  
 1E-05 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)

#### Component Information

| Chemical name            | Oral LD50 | Dermal LD50 | Inhalation LC50        |
|--------------------------|-----------|-------------|------------------------|
| Nitric acid<br>7697-37-2 | -         | -           | = 2500 ppm ( Rat ) 1 h |

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

|                                   |                                                         |
|-----------------------------------|---------------------------------------------------------|
| Skin corrosion/irritation         | No information available.                               |
| Serious eye damage/eye irritation | No information available.                               |
| Respiratory or skin sensitization | No information available.                               |
| Germ cell mutagenicity            | No information available.                               |
| Carcinogenicity                   | Classification based on data available for ingredients. |

The table below indicates whether each agency has listed any ingredient as a carcinogen.

| Chemical name            | ACGIH | IARC                                                                           | NTP | OSHA    |
|--------------------------|-------|--------------------------------------------------------------------------------|-----|---------|
| Nitric acid<br>7697-37-2 | -     | Group 1 - Carcinogenic to humans<br>Group 2A - Probably carcinogenic to humans | -   | Present |

**Legend****IARC (International Agency for Research on Cancer)**

Group 1 - Carcinogenic to Humans

Group 2A - Probably Carcinogenic to Humans

|                                 |                                 |
|---------------------------------|---------------------------------|
| <b>Reproductive toxicity</b>    | No information available.       |
| <b>STOT - single exposure</b>   | No information available.       |
| <b>STOT - repeated exposure</b> | No information available.       |
| <b>Target organ effects</b>     | Skin, Eyes, Respiratory system. |
| <b>Aspiration hazard</b>        | No information available.       |

**Section 12: ECOLOGICAL INFORMATION****Ecotoxicity****Persistence and Degradability** No information available.**Bioaccumulation** No information available.**Component Information**

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

**Section 13: DISPOSAL CONSIDERATIONS****Waste treatment methods**

|                                            |                                                                                                                 |
|--------------------------------------------|-----------------------------------------------------------------------------------------------------------------|
| <b>Waste from residues/unused products</b> | Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation. |
| <b>Contaminated packaging</b>              | Do not reuse empty containers.                                                                                  |

**Section 14: TRANSPORT INFORMATION****IMDG**

|                                         |                                            |
|-----------------------------------------|--------------------------------------------|
| <b>14.1. UN-No</b>                      | UN3264                                     |
| <b>14.2. Proper shipping name</b>       | Corrosive liquid, acidic, inorganic, n.o.s |
| <b>14.3. Transport hazard class(es)</b> | 8                                          |
| <b>14.4. Packing Group</b>              | III                                        |
| <b>Description</b>                      | Not applicable                             |

14.5. Marine Pollutant None  
 14.6. Special Provisions None  
 No information available Transport No information available  
 in bulk according  
 to Annex II of MARPOL 73/78 and  
 the IBC Code

**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

## **Section 15: REGULATORY INFORMATION**

**Safety, health and environmental regulations/legislation specific for the substance or mixture**

**International Regulations**

The Montreal Protocol on Substances that Deplete the Ozone Layer Not applicable

The Stockholm Convention on Persistent Organic Pollutants Not applicable

The Rotterdam Convention Not applicable

**International Inventories**

TSCA Complies  
 DSL/NDSL Complies  
 EINECS/ELINCS Complies

|       |          |
|-------|----------|
| ENCS  | Complies |
| IECSC | Complies |
| KECL  | Complies |
| PICCS | Complies |
| AIIC  | 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 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

**Section 16: OTHER INFORMATION**

|             |                           |                       |                           |                                           |
|-------------|---------------------------|-----------------------|---------------------------|-------------------------------------------|
| <b>NFPA</b> | <b>Health hazards</b> 3   | <b>Flammability</b> 0 | <b>Instability</b> 0      | <b>Physical and chemical properties</b> - |
| <b>HMIS</b> | <b>Health hazards</b> 3 * | <b>Flammability</b> 0 | <b>Physical hazards</b> 0 | <b>Personal protection</b> X              |

**Key or legend to abbreviations and acronyms used in the safety data sheet****LEG8 Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

LEGTWA TWA (time-weighted average)

LEGST

STEL (Short Term Exposure Limit)

LEGC Maximum limit value

LEGSKN

Skin designation

**Key literature references and sources for data used to compile the SDS**

Agency for Toxic Substances and Disease Registry (ATSDR)

U.S. Environmental Protection Agency ChemView Database

European Food Safety Authority (EFSA)

Environmental Protection Agency

Acute Exposure Guideline Level(s) (AEGL(s))

U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act

U.S. Environmental Protection Agency High Production Volume Chemicals

Food Research Journal

Hazardous Substance Database

International Uniform Chemical Information Database (IUCLID)

Japan GHS Classification

Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)

NIOSH (National Institute for Occupational Safety and Health)

National Library of Medicine's ChemID Plus (NLM CIP)

National Library of Medicine's PubMed database (NLM PUBMED)

U.S. National Toxicology Program (NTP)

New Zealand's Chemical Classification and Information Database (CCID)

Organization for Economic Co-operation and Development Environment, Health, and Safety Publications

Organization for Economic Co-operation and Development High Production Volume Chemicals Program

Organization for Economic Co-operation and Development Screening Information Data Set

RTECS (Registry of Toxic Effects of Chemical Substances)

World Health Organization

**Revision date** 18-Feb-2026**Revision Note** No information available.**Disclaimer****The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the**

date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

**End of SDS**