1. Company Identification and Product Hazard Overview:

Product Name: Calcium Tungstate

Recommended Use: Used chiefly in screens for radiography as a contrast agent, in luminous paint, and in fluorescent lamps.

Manufactured by: NORTH Metal and Chemical Company
P. O. Box 1985
York, PA USA 17405
Tel: 717-845-8646
Email: north@nmc-nic.com
Website: www.nmc-nic.com

2. Hazard Identification:

GHS Classification:
Acute Toxicity - Oral (Cat. 5)
Acute Toxicity - Dermal (Cat. 5),
Acute Toxicity - Inhalation (Cat. 5)
Eye Irritation (Category 2B)

Signal Word: Warning

Pictogram:

Hazard Statements:
H303 : May be harmful if swallowed
H313 : May be harmful in contact with skin
H332 : May be harmful inhaled
H320 : Causes eye irritation.

Precautionary Statements:

Prevention:
P261 + P271 : Avoid breathing dust and/or mist. Use in a well-ventilated area
P264 : Wash all affected body parts thoroughly after handling.
P302 + P352 : IF ON SKIN: Wash with plenty of water.
P304 + P340 : IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P301+P312 : IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
P338 : IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337 + P313 : If eye irritation persists: Get medical advice/attention
P312 : Call a POISON CENTER/doctor if you feel unwell.
P391 + P501 : Collect Spillage. Dispose of contents/containers in accordance with local regulations
3. Composition/Information on Ingredient:

<table>
<thead>
<tr>
<th>Common Name:</th>
<th>Calcium Tungstate</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAS Number:</td>
<td>7790-75-2</td>
</tr>
<tr>
<td>Chemical Formula:</td>
<td>CaWO₄</td>
</tr>
<tr>
<td>EC Number:</td>
<td>232-219-4</td>
</tr>
</tbody>
</table>

4. First Aid Measures:

**Eyes**: Flush eyes with running water for at least fifteen minutes. Remove any contact lenses. If irritation persists, get medical aid.

**Skin**: Flush skin with running water for fifteen minutes. If irritation persists, get medical attention.

**Ingestion**: Rinse mouth out and drink a glass of water. If the product is swallowed, do not induce vomiting.

**Inhalation**: If safe to do so, remove individual from further exposure. Supply fresh air. If cough or other symptoms develop, call doctor/poison center immediately.

**PPE first responders**: Dust mask, gloves and safety goggles are highly recommended.

5. Fire Fighting Measures:

**Fire/Explosion Hazard**: Negligible fire hazard when exposed to flame.

**Extinguishing Media**: Use any extinguishing media suitable for type of surrounding fire.

**General Hazard**: Evacuate personnel downwind in-order to avoid inhalation of irritating and/or harmful fumes and smoke.

**Special Hazards arising from the substance or mixture**: Calcium Oxide, Tungsten Oxide

**Fire Fighting Procedures**: This product is a non-flammable substance. No acute hazard.

**Fire Fighting Equipment**: Full protective equipment (bunker gear) and self-contained breathing apparatus (SCBA) should be used for all indoor fires and any significant outdoor fires. If possible, firefighters should control run-off water to prevent environmental contamination.

6. Accidental Release Measures:

**Personal precautions**: Avoid breathing dust

**Protective Gear for Personnel**: Gloves and dust mask.

**Spill Clean-up Procedures**: Sweep up and dispose according to state, federal, and local non-hazardous waste laws and regulations. Do not let waste enter the environment.

**Environmental Precaution**: Do not allow to enter sewers or ground water, or penetrate the soil.

7. Handling and Storage:

**Handling**: Use appropriate personal protective equipment as specified in Section 8. Handle in a well-ventilated area. Handle in a manner consistent with good industrial/manufacturing techniques and practices. Wash hands thoroughly with soap and water after use. Remove contaminated clothing and protective equipment before entering eating areas.

**Storage**: Store in a cool, dry well-ventilated area. Keep containers closed when not in use. Observe all federal, state and local regulations when storing or disposing of this substance.
8. Exposure Controls and Personal Protection:

**Exposure Limits**

<table>
<thead>
<tr>
<th>Source</th>
<th>Limit Description</th>
<th>Compound</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACGIH</td>
<td>5 mg/m³ TWA (as W) - listed under Tungsten insoluble compounds</td>
<td>Calcium Tungstate</td>
</tr>
<tr>
<td></td>
<td>10 mg/m³ STEL (as W) - listed under Tungsten insoluble compounds</td>
<td></td>
</tr>
<tr>
<td>NISOH/GUIDE</td>
<td>5 mg/m³ REL (as W; Recommended Exposure Limit) - listed under Tungsten insoluble compounds</td>
<td></td>
</tr>
<tr>
<td>Z1A</td>
<td>No info available</td>
<td></td>
</tr>
<tr>
<td>OSHA</td>
<td>No OSHA Vacated PELs are listed for this chemical</td>
<td></td>
</tr>
</tbody>
</table>

**Exposure Controls**: Calcium Tungstate is not classified as a hazardous substance. High airborne dust concentrations require mechanical ventilation or a respirator mask.

**Engineering Controls**: Use appropriate engineering controls to minimize exposure to dust generated via routine use. Maintain adequate ventilation of workplace and storage areas.

**Personal Protective Equipment**

- **Eyes and face**: Wear safety glasses with side shields or goggles when handling this material.
- **Skin**: Wear protective clothing and gloves when handling this product to prevent prolonged skin contact.
- **Respiratory**: Avoid breathing dust or mist. Use NIOSH approved respiratory protection equipment when airborne exposure is excessive.

**Work Hygienic Practices**: Facilities storing or using this material should be equipped with emergency eyewash, and a safety shower. Good personal hygiene practices should always be followed.

9. Chemical and Physical Properties:

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance/Color</td>
<td>White fine crystals</td>
</tr>
<tr>
<td>Odor</td>
<td>Odorless</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Flash Point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>Not applicable at ambient conditions</td>
</tr>
<tr>
<td>Lower Explosive Limit</td>
<td>Not explosive</td>
</tr>
<tr>
<td>Upper Explosive Limit</td>
<td>Not explosive</td>
</tr>
<tr>
<td>Auto-ignition Temp</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Decomposition Temp</td>
<td>Not available</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>Negligible</td>
</tr>
<tr>
<td>Vapor Density</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Partition Coefficient</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Solubility</td>
<td>Only slightly</td>
</tr>
<tr>
<td>pH (neat)</td>
<td>Not available</td>
</tr>
<tr>
<td>Melting/Freezing Point</td>
<td>1620°C</td>
</tr>
<tr>
<td>Boiling Range</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Molecular Weight</td>
<td>288.0</td>
</tr>
<tr>
<td>Flammability</td>
<td>Not flammable</td>
</tr>
<tr>
<td>Relative Density</td>
<td>6.06 g/ml at 25 °C</td>
</tr>
</tbody>
</table>

10. Stability and Reactivity:

**Stability**: The product is stable under normal ambient conditions of temperature and pressure.

**Hazardous Decomposition Products**: None identified.

**Incompatible Materials**: Strong oxidizing agents

**Conditions to Avoid**: Avoid exposure to extreme temperatures and Dust generation

**Hazardous Polymerization**: Will not occur
11. Toxicological Information:
Information on toxicological effects

Acute Toxicity : No data available
Inhalation : No data available
Dermal : No data available
Skin corrosion/ Irritation : No data available
Serious Eye damage/ Eye Irritation : No data available
Respiratory or Skin Sensitization : No data available
Gem cell mutagenicity : No data available

Carcinogenicity
IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by ACGIH.
NTP: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by NTP.
OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by OSHA.

Reproductive Toxicity : No data available

Specific Target organ Toxicity : No data available

Health Effects:
INHALATION
Acute Exposure: May cause gastrointestinal irritation
Chronic Exposure: None identified

SKIN CONTACT
Acute Exposure: Brief contact with dry skin is unlikely to cause irritation.
Chronic Exposure: Prolonged contact with dry skin may cause irritation.

EYE CONTACT
Acute Exposure: May cause irritation.
Chronic Exposure: No data available.

INGESTION
Acute Exposure: Gastrointestinal disturbance
Chronic Exposure: Not available
12. Ecological Information:

All work practices must be aimed at eliminating environmental contamination.

Toxicity: No data available
Persistence & Degradability: No data available
Bioaccumulative Potential: No data available
Mobility in soil: No data available

Results of PBT and vPvB assessment: PBT/vPvB assessment not available as chemical safety not required/not conducted.

13. Disposal Considerations:

Disposal Method: Dispose of waste at an appropriate waste disposal facility according to current applicable laws and regulations.

Product Disposal: Recycle or reuse whenever possible. Uncontaminated waste may be returned to the manufacturer. Dispose of any contaminated waste product as non-hazardous waste, unless contamination is hazardous in nature.

Packaging Disposal: Dispose of at a supervised incineration facility or an appropriate waste disposal facility.

14. Transport Information:

Shipping Name: Not D.O.T regulated
Hazard Class: Not Dangerous for Transport
UN Number: None

15. Regulatory Information:

U.S. Federal Regulations:

TSCA Inventory Status: All components of this product are listed on the TSCA inventory.

CERCLA Section 103: No

SARA TITLE III (EPCRA) Section 302/304: This product was not found to be on the hazardous chemicals list.

SARA TITLE III (EPCRA) Section 311/312: This product was not found to be on the acute hazard, chronic hazard, fire hazard, or reactivity hazard chemicals lists.

SARA TITLE III (EPCRA) Section 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

California Proposition 65: This product is not listed.

OSHA process Safety (29CFR1910.119): This product is not listed.

Pennsylvania Right to know Components:

Component: Calcium Wolframate
CAS No.: 7790-75-2

New Jersey Right to Know Components:

Component: Calcium Wolframate
CAS No.: 7790-75-2
16. Other Information:

**HMIS Rating:**

<table>
<thead>
<tr>
<th>Category</th>
<th>Rating</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>HEALTH</td>
<td>1</td>
<td>Can cause irritation or minor reversible injury.</td>
</tr>
<tr>
<td>FLAMMABILITY</td>
<td>0</td>
<td>Will not burn</td>
</tr>
<tr>
<td>PHYSICAL HAZARD</td>
<td>0</td>
<td>Product stable under ambient temperature and condition.</td>
</tr>
<tr>
<td>PERSONAL PROTECTION</td>
<td>D</td>
<td>Face shield, gloves, and apron</td>
</tr>
</tbody>
</table>

**NFPA Rating:**

- HEALTH: 1 Can cause significant irritation
- FLAMMABILITY: 0 Will not burn
- REACTIVITY: 0—Normally stable
- SPECIFIC HAZARD: None

**Revision Date:** April 8, 2015

**Reasons for Revision:** Add necessary data to meet GHS requirements.

The information contained in this SDS was obtained from current and reliable sources. However, the data is provided without any warranty, expressed or implied, regarding its correctness or accuracy. Since the conditions or handling, storage and disposal of this product are beyond the control of the manufacturer/supplier, they are not held responsible for loss, injury, and expense arising out of the product’s use. No warranty, expressed or inferred, regarding the product described in this SDS shall be created or inferred by any statement in this MSDS.