



# Safety Data Sheet

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**ADVANCED TECHNOLOGIES FOR A CLEANER WORLD**

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## 1. PRODUCT & COMPANY IDENTIFICATION

### 1.1. PRODUCT IDENTIFIERS

PRODUCT NAME: **CAD-CON 1000™, CAD-CON 1001™**  
PRODUCT No: 1000, 1001  
BRAND: Geo-Chem Technologies  
CAS No: Mixture

### 1.2. RELEVANT IDENTIFIED USES OF THE SUBSTANCE OR MIXTURE AND USES ADVISED AGAINST

IDENTIFIED USES: Treatment and stabilization of cadmium, lead and other heavy metals in industrial wastewater and waste.

### 1.3. DETAILS OF THE SUPPLIER OF THE SAFETY DATA SHEET

COMPANY: Risk Busters, LLC  
7125 Lakota Ridge Dr.  
Liberty Twp., OH 45011  
TELEPHONE: 513-847-4999  
FAX: 513-847-4999

1.4. EMERGENCY TELEPHONE: 513-314-8419

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## 2. HAZARDS IDENTIFICATION

### 2.1. CLASSIFICATION

Dust of this product is classified as a "nuisance particulate not otherwise regulated" as specified by ACGIH and OSHA. The product will react with water generating some heat. Not a fire or spill hazard. Product is of low toxicity.

### 2.2. GHS LABEL ELEMENTS

**Emergency Overview** - Product dust is classified as a "nuisance particulate, not otherwise regulated" as specified by ACGIH and OSHA. The excessive, long-term inhalation of mineral dusts may contribute to the development of industrial bronchitis, reduced breathing capacity, and may lead to the increased susceptibility to lung disease.

**Appearance:** Fine powder to somewhat granular  
**Physical State:** Solid  
**Odor:** Odorless

### 2.3. HAZARDS NOT OTHERWISE CLASSIFIED (HNOC) OR NOT COVERED BY GHS

None.

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## 3. COMPOSITION / INFORMATION ON INGREDIENTS

### 3.1. SUBSTANCES

SYNONYMS:  $\beta$ -Calcium phosphate tribasic  
Calcium Triple Superphosphate

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FORMULA:  $\text{Ca}_3\text{O}_8\text{P}_2$   
MOLECULAR WEIGHT: 310.18 g/mole  
CAS-No.: 7758-87-4  
EC-No.: 231-840-8

SYNONYMS: Magnesia  
Magnesium Oxide

FORMULA: MgO  
MOLECULAR WEIGHT: 40.30 g/mole  
CAS-No.: 1309-48-4  
EC-No.: 215-171-9

No components of this product are hazardous according to OSHA criteria.

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## 4. FIRST AID MEASURES

### 4.1. DESCRIPTION OF FIRST AID MEASURES

IF INHALED: Move person into fresh air. If symptoms persist, seek medical attention.

IN CASE OF SKIN CONTACT: Low toxicity by skin contact. Wash skin with soap and plenty of water. If skin irritation persists, seek medical attention.

IN CASE OF EYE CONTACT: Rinse thoroughly with plenty of water including under the eyelids. If eye irritation persists, seek medical attention.

IF SWALLOWED: Ingestion is an unlikely route of exposure. If ingested in large quantity and victim is conscious, give 1-2 glasses of water or milk. Never give anything by mouth to an unconscious person. Leave decision to induce vomiting to qualified medical personnel, since particles may be aspirated into the lungs. Seek immediate medical attention.

### 4.2. MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED

SYMPTOMS: The most important known symptoms and effects are described in the labelling (see Section 2.2) and/or in Section 11.

### 4.3. INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED

NOTE TO PHYSICIANS: Treat symptomatically.

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## 5. FIREFIGHTING MEASURES

### 5.1. EXTINGUISHING MEDIA

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

**UNSUITABLE EXTINGUISHING MEDIA:** Water reacts with magnesium oxide in the product to produce magnesium hydroxide and heat. Keep the product inside containers dry; reaction with sufficient water inside the container will cause the product to swell, generate heat, and burst the container.

### 5.2. SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE

May produce oxides of magnesium, calcium and phosphorus.

#### EXPLOSION DATA

SENSITIVITY TO MECHANICAL IMPACT: None  
SENSITIVITY TO STATIC DISCHARGE: None

**5.3. ADVICE FOR FIREFIGHTERS**

Firefighters should wear NIOSH approved, positive pressure, self-contained breathing apparatus and full protective clothing as appropriate.

**5.4. FURTHER INFORMATION**

No data available

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**6. ACCIDENTAL RELEASE MEASURES****6.1. PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES**

Avoid dust formation. Avoid breathing dust or mist.  
Ensure adequate ventilation, especially in confined areas.  
For personal protection see Section 8.

**6.2. ENVIRONMENTAL PRECAUTIONS**

Do not discharge used or unused product into the environment.

**6.3. METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP**

CONTAINMENT METHODS: Prevent further leakage or spillage if safe to do so.

CLEAN-UP METHODS: Carefully sweep up spilled product for reuse or place into a suitable closed container for disposal being careful to avoid creating excessive dust. If conditions warrant, clean-up personnel should wear approved respiratory protection, gloves and goggles to prevent irritation from contact and/or inhalation.

**6.4. REFERENCE TO OTHER SECTIONS**

For disposal see Section 13.

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**7. HANDLING AND STORAGE****7.1. PRECAUTIONS FOR SAFE HANDLING**

ADVICE ON SAFE HANDLING Handle in accordance with good industrial hygiene and safety practice. Minimize dust generation during material handling and transfer.

**7.2. CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES**

STORAGE CONDITIONS Store in dry, protected location. Product is stable under normal conditions of storage. Do not allow water to get inside containers; reaction with water will cause product to swell, generate heat and burst its container.

INCOMPATIBLE MATERIALS MgO component is soluble in aqueous acids generating heat and steam.

Violent reaction or ignition with interhalogens (e.g., bromine pentafluoride; chlorine trifluoride).

Incandescent reaction with phosphorus pentachloride.

Water will react with the magnesium oxide component to produce magnesium hydroxide and heat.

**7.3. SPECIFIC END USE(S)**

Apart from the uses mentioned in Section 1.2, no other specific uses are stipulated.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1. CONTROL PARAMETERS

EXPOSURE GUIDELINES: This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region-specific regulatory bodies.

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Magnesium Oxide 1309-48-4	TWA: 10 mg/m <sup>3</sup> inhalable fraction	TWA: 15 mg/m <sup>3</sup> fume and total particulate (vacated) TWA: 10 mg/ m <sup>3</sup> fume and total particulate	IDLH: 750 mg/m <sup>3</sup> fume

### 8.2. APPROPRIATE ENGINEERING CONTROLS

ENGINEERING CONTROLS: Provide sufficient ventilation, in both volume and air flow patterns to control mist/dust concentrations to below allowable exposure limits.

### 8.3. INDIVIDUAL PROTECTION MEASURES, SUCH AS PERSONAL PROTECTIVE EQUIPMENT

EYE/FACE PROTECTION: The use of NIOSH-approved eye/face protection is recommended.

SKIN AND BODY PROTECTION: The use of gloves and long sleeve clothing is recommended.

RESPIRATORY PROTECTION: Respiratory protection is not required to protect against chemical exposure. Where protection from nuisance levels of dusts are desired in accordance with requirements of 29 CFR 1910.134, use Type N95 (US) or Type P1 (EN 143) dust masks. Respirators and components should be tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

### 8.4. GENERAL HYGIENE CONSIDERATIONS

Avoid contact with skin, eyes or clothing. After handling this product, wash hands before eating, drinking or smoking.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### 9.1. INFORMATION ON BASIC PHYSICAL PROPERTIES

PHYSICAL STATE: Solid  
 APPEARANCE: Fine powder to granular  
 ODOR: Odorless  
 COLOR: Gray to grayish-brown  
 ODOR THRESHOLD: No information available

### 9.2. INFORMATION ON CHEMICAL PROPERTIES

PROPERTY	VALUES	REMARKS
PH	2.5-10	
MELTING POINT/FREEZING POINT	>450°C	
BOILING POINT / BOILING RANGE	No information available	
FLASH POINT	No information available	
EVAPORATION RATE	Not applicable	
FLAMMABILITY (SOLID, GAS)	No information available	

PROPERTY	VALUES	REMARKS
FLAMMABILITY LIMIT IN AIR UPPER FLAMMABILITY LIMIT LOWER FLAMMABILITY LIMIT	No information available No information available	
VAPOR PRESSURE	No information available	
VAPOR DENSITY	No information available	
SPECIFIC GRAVITY	Not applicable	Mixture
WATER SOLUBILITY	No information available	
SOLUBILITY IN OTHER SOLVENTS	No information available	
PARTITION COEFFICIENT	No information available	
AUTOIGNITION TEMPERATURE	No information available	
DECOMPOSITION TEMPERATURE	No information available	
KINEMATIC VISCOSITY	Not applicable	
DYNAMIC VISCOSITY	Not applicable	

### 9.3. OTHER INFORMATION

SOFTENING POINT:	No information available
MOLECULAR WEIGHT:	See Section 3
VOC CONTENT (%):	No information available
DENSITY:	No information available
BULK DENSITY:	70-90 lbs/ft <sup>3</sup>

## 10. STABILITY AND REACTIVITY

### 10.1. REACTIVITY

No data available.

### 10.2. CHEMICAL STABILITY

Stable under recommended storage conditions.

### 10.3. POSSIBILITY OF HAZARDOUS REACTIONS

None under normal conditions of use.

### 10.4. HAZARDOUS POLYMERIZATION

Does not occur.

### 10.5. CONDITIONS TO AVOID

Extremes of temperature and direct sunlight.

### 10.6. INCOMPATIBLE MATERIALS

MgO component is soluble in aqueous acids generating heat and steam.  
Violent reaction or ignition with interhalogens (e.g., bromine pentafluoride; chlorine trifluoride).  
Incandescent reaction with phosphorus pentachloride.  
Water will react with product to produce magnesium hydroxide and heat.

### 10.7. HAZARDOUS DECOMPOSITION PRODUCTS

None known based on information provided.

## 11. TOXICOLOGICAL INFORMATION

### 11.1. INFORMATION ON LIKELY ROUTES OF EXPOSURE

PRODUCT INFORMATION: MgO (CAS No. 1309-48-4) does not present an acute toxicity hazard based on known or supplied information.  $\text{Ca}_3\text{O}_8\text{P}_2$  (CAS No. 7758-23-8) may be harmful by inhalation, ingestion, or skin absorption.

INHALATION: Inhalation of dust in high concentration may cause irritation of respiratory system.

EYE CONTACT: Contact with eyes may cause irritation.

SKIN CONTACT: Low toxicity by skin contact.

INGESTION: Ingestion is an unlikely route of exposure. If ingested in large amounts it may cause irritation, nausea, vomiting, diarrhea, abdominal pain, black stool, pink urine, coma and possibly death.

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
$\text{Ca}_3\text{O}_8\text{P}_2$ (CAS No. 7758-23-8)	= 17500 mg/kg ( Rat )	> 2 g/kg ( Rabbit )	-----

### 11.2. INFORMATION ON TOXICOLOGICAL EFFECTS

SYMPTOMS: NO INFORMATION AVAILABLE.

### 11.3. DELAYED AND IMMEDIATE EFFECTS AS WELL AS CHRONIC EFFECTS FROM SHORT AND LONG-TERM EXPOSURE

SENSITIZATION: No information available.

GERM CELL MUTAGENICITY: No information available.

CARCINOGENICITY: No information available.

REPRODUCTIVE TOXICITY: No information available.

STOT<sup>1</sup> - SINGLE EXPOSURE: No information available.

STOT - REPEATED EXPOSURE: No information available.

ASPIRATION HAZARD: No information available.

### 11.4. NUMERICAL MEASURES OF TOXICITY - PRODUCT INFORMATION

## 12. ECOLOGICAL INFORMATION

### 12.1. ECOTOXICITY

Avoid release to the environment.

### 12.2. PERSISTENCE AND DEGRADABILITY

No information available.

### 12.3. BIOACCUMULATION

No information available.

### 12.4. OTHER ADVERSE EFFECTS

No information available.

<sup>1</sup> Specific Target Organ Toxicity

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## 13. DISPOSAL CONSIDERATIONS

### 13.1. WASTE TREATMENT

- WASTE DISPOSAL: Unused product does not exhibit any characteristics of hazardous waste and is suitable for landfill disposal. Used product may be contaminated with toxic materials that are deemed hazardous under RCRA. Follow all applicable federal, state and local regulations to ensure safe disposal.
- PACKAGING: An empty container that has not been exposed to other materials may be washed and reused for industrial purposes. Do not reuse a container for storage of food or other products used for human consumption.

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## 14. TRANSPORTATION

### 14.1. DOT

Not regulated by DOT as a hazardous material. No hazard class, label or placard required.

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## 15. REGULATORY INFORMATION

### 15.1. INTERNATIONAL INVENTORIES

Components of this product are listed on the following inventories

TSCA STATUS	UNITED STATES	YES
AICS STATUS	AUSTRALIA	YES
DSL/NDSL STATUS	CANADA	YES
IECSC	CHINA	YES
EINECS/ELINCS STATUS	EUROPE	YES
ENCS STATUS	JAPAN	YES
LECS STATUS	KOREA	YES
PICCS STATUS	PHILIPPINES	YES

### 15.2. U.S. FEDERAL REGULATIONS

#### SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals that are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

#### SARA 311/312 HAZARD CATEGORIES

Acute Health Hazard:	No
Chronic Health Hazard:	No
Fire Hazard:	No
Sudden Release of Pressure Hazard:	No
Reactive Hazard:	No

#### CWA (CLEAN WATER ACT)

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

#### CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA)

(40 CFR 355). There may be specific reporting requirements at the local, regional, or state levels pertaining to releases of this material.

### 15.3. US STATE REGULATIONS

CALIFORNIA PROPOSITION 65

This product does not contain any Proposition 65 chemicals

#### U.S. STATE RIGHT-TO-KNOW REGULATIONS

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Magnesium Oxide 1309-48-4	X	X	X

### 15.4. U.S. EPA LABEL INFORMATION

EPA PESTICIDE REGISTRATION NUMBER

Not Applicable

## 16. OTHER INFORMATION

NFPA    HEALTH HAZARDS 1    FLAMMABILITY 0    INSTABILITY 0    PHYSICAL/CHEMICAL PROPERTIES  
 HMIS    HEALTH HAZARDS 0    FLAMMABILITY 0    PHYSICAL HAZARDS 0    PERSONAL PROTECTION X

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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 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 Safety Data Sheet**