DFC CERAMICS, LLC
515 S. 9th Street Cañon City, CO 81226
Phone: 719-275-7525 Fax: 719-275-2051

SDS NO: DFC104 DATE PREPARED: 05/19/15 CURRENT DATE: 05/19/15

SECTION 1: Identification

Product Identifier:

Name of Product: MgO Cupels
Other Means of Identification: Magnesite
Recommended Use: Fire Assay

Manufacturer/Supplier: DFC Ceramics, LLC
515 South 9th Street
Canon City, CO 81212
Telephone General: (719) 275-7525

Emergency Telephone: (800) 424-9300 – CHEMTREC

SECTION 2: Hazard(s) Identification

EMERGENCY OVERVIEW

Caution
Components of these products are considered to be a nuisance, however, dust from these products generated by cutting or sanding may aggravate existing chronic lung conditions such as bronchitis, emphysema and asthma.

United States (US)
According to OSHA 29 CFR 1910.1200 HCS

Classification:
OSHA HCS 2012

Carcinogenicity: Not Applicable
Specific target organ toxicity, single exposure; respiratory tract irritation: Not Applicable

Label Elements:
GHS-US LABELING
HAZARD PICTOGRAMS (GHS-US) **Not Applicable**

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Signal Word (GHS-US): **Warning**

Hazard Statements (GHS-US): **Not Applicable; Exposure to fresh fumes may cause flu-like symptoms that subside with fresh air.**

Precautionary Statements (GHS-US):

P101: Obtain special instructions before use
P264: Wash exposed skin thoroughly after handling
P340: Remove person to fresh air and keep comfortable for breathing.
P501: Dispose of contents/container in accordance with local, regional, national, and international regulation listed in section 13 of this document.

Storage/Disposal (GHS-US): Store in original factory container in a dry area. Keep container closed when not in use. Avoid creating airborne dust. Follow routine housekeeping procedures. Vacuum only with HEPA filtered equipment. If sweeping is necessary, use a dust suppressant and place material in closed containers. **Do not use compressed air for clean-up.**

Other Hazards: Not available

Unknown Acute Toxicity (GHS-US): Not available

SECTION 3: Composition/Information on Ingredients

Substances:

NAME	PRODUCT IDENTIFIER (CAS #)	% BY WEIGHT	OSHA PEL	ACGIH TLV
Magnesium Oxide	1309-48-4	90-96	15 mg/m^3 (total); 5 mg/m^3 (respirable)	Not Established
Inorganic nuisance binder	None	4-10	15 mg/m^3 (total); 5 mg/m^3 (respirable)	10 mg/m^3 (inhalable); 3 mg/m^3 (respirable)

(See Section 8 " Exposure Controls / Personal Protection: for exposure guidelines.)

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SECTION 4: First-aid Measures

Description of First Aid Measures

Inhalation: Remove affected person to dust free location. See Section 8 to reduce or eliminate exposure.

Eye Irritation: Flush with large amounts of water for at least 15 minutes. Do not rub eyes.

Skin Irritation: Wash affected area gently with soap and water. Skin cream or lotion after washing may be helpful.

Ingestion: Unlikely route of exposure. Seek medical attention.

Most important symptoms and effects, both acute and delayed

Symptoms/Injuries: All symptoms should be temporary and should subside with treatment.

Symptoms/Injuries after inhalation: Chronic respiratory conditions may be aggravated. Fresh fumes may result in influenza-like symptoms.

Symptoms/Injuries after eye contact: Symptoms should be temporary, should subside with treatment, and may include redness, itching, or irritation.

Symptoms/Injuries after skin contact: Prolonged or frequent skin contact may lead to dermatitis.

Symptoms/Injuries after ingestion: Not a likely route of exposure; no conclusive data is available at this time.

-If symptoms persist, seek medical attention.

Indication of any immediate medical attention and special treatment needed

-If symptoms persist, seek medical attention.

***If medical advice is needed, have product container or label at hand.**

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SECTION 5: Fire-fighting Measures

Extinguishing Media

Suitable extinguishing media: Use extinguishing media suitable for type of surrounding fire.

Special Hazards Arising From the Substance or Mixture

Fire hazard: None
Explosion hazard: None
Reactivity: None

Advice for Firefighters

Firefighting instructions: Product is not flammable, and fires should be treated respective of what caused them and what is in the surrounding area.

SECTION 6: Accidental Release Measures

Personal Precautions, Protective Equipment and Emergency Procedures

Spill/Leak Procedures: Avoid creating airborne dust. Follow routine housekeeping procedures. Vacuum only with HEPA filtered equipment. If sweeping is necessary, use a dust suppressant and place material in closed containers. **Do not use compressed air for clean-up.** Personnel should wear gloves, goggles, and approved respirator.

For Non-Emergency Personnel

Protective equipment: Gloves, goggles, and respirator
Emergency procedures: Not applicable

For Emergency Responders

Protective equipment: Gloves, goggles, and respirator
Emergency procedures: Not applicable

Methods and Material for Containment and Cleaning Up

For containment: See **Spill/ Leak Procedures** above

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Methods for cleaning up: See **Spill/ Leak Procedures** above

Reference to Other Sections

See heading 8, Exposure controls and Personal Protection

SECTION 7: Handling and Storage

Precautions for Safe Handling

Additional hazards when processed: Not applicable

Precautions for safe handling: No specific handling procedures are required. Frequently clean the work area with HEPA filtered vacuum or wet seeping to minimize the accumulation of debris. **Do not use compressed air for clean-up.**

Hygiene measures: Wash exposed skin with mild soap and water after exposure.

Conditions for Safe Storage, Including Any Incompatibilities

Storage conditions: This product is stable under all conditions of storage. Store in original factory container in a dry area. Keep container closed when not in use.

Incompatible products: Chlorine trifluoride phosphorus pentachloride

Storage area: Store in dry area in original container. Keep container closed when not in use.

Special rules on packaging: Do not reuse product packaging as it may contain residue.

Specific End Use(s):

Fire assay

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SECTION 8: Exposure Controls/Personal Protection

Caution
Components of these products are considered to be a nuisance, however, dust from these products generated by cutting or sanding may aggravate existing chronic lung conditions such as bronchitis, emphysema and asthma.

Control Parameters

Concentration	Respirator
Up to PEL	No specific recommendation. A disposable N95 rated particulate respirator if desired.
1 to 10 times PEL	Half-mask, air-purifying respirator with high efficiency particulate air (HEPA) or P10 rated filter cartridges.
10 to 50 times PEL	Full face mask air-purifying respirator with HEPA or P100 rated filter cartridges or powered air-purifying respirator (PAPR) with HEPA or P100 rated filter cartridges.
50 times PEL	Full face mask positive pressure supplied air respirator.

Exposure Controls

Appropriate engineering controls: Use in a well ventilated area and avoid breathing dust. Over exposure to any of the chemicals listed on Section 3 is not anticipated. Consult an industrial hygienist for exposure assessment due to abnormal use of this product. If respirators are selected, use NIOSH/MSHA approved respirators, in compliance with OSHA Respiratory Protection Standard 29 CFR 1910.134 and 29 CFR 1926.103, for the particular hazard or airborne concentrations to be encountered in the work environment.

Personal protective equipment:

Hand protection: Gloves may be worn, if desired, and respirator according to table above.

Eye protection: Goggles/safety glasses with side shields should be worn.

Skin and body protection: Special equipment not required.

Respiratory protection: If respirators are selected, use NIOSH/MSHA approved respirators, in compliance with OSHA Respiratory Protection Standard 29 CFR 1910.134 and 29 CFR 1926.103, for the particular hazard or airborne concentrations to be encountered in the work environment.

Thermal hazard protection: Not applicable

SECTION 9: Physical and Chemical Properties

Information on Basic Physical and Chemical Properties

Physical state	: Chemical family: Magnesite
Appearance	: Pressed shape; white, various diameters
Color	: Varies
Odor	: None
Odor Threshold	: Not applicable
pH	: Not applicable
Relative evaporation rate	: Not applicable
Melting point	: 2750˚
Freezing point	: Not applicable
Boiling point	: 3600˚C
Flash point	: None
Auto-ignition temperature	: Not applicable
Decomposition temperature	: Not applicable
Flammability (solid, gas)	: Not applicable
Vapor pressure	: Not applicable
Relative density at 20 * C	: Not applicable
Relative density	: Not applicable
Density	: Not applicable
Solubility	: Slightly soluble in water
Log Pow	: Not applicable
Log Kow	: Not applicable
Viscosity, kinematic	: Not applicable
Viscosity, dynamic	: Not applicable
Explosive properties	: None

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Oxidizing properties : Not applicable
Explosive limits : Not applicable

SECTION 10: Stability and Reactivity

Reactivity: Hazardous reactions will not occur under normal conditions.

Hazardous polymerization: Hazardous polymerization will not occur.

Chemical Stability: Stable under normal conditions.

Possibility of Hazardous Reactions: Not likely under normal usage conditions.

Condition to Avoid:
Chemical incompatibilities: Chlorine trifluoride phosphorus pentachloride

Incompatible Materials: Chlorine trifluoride phosphorus pentachloride
Hazardous Decomposition Products: None

SECTION 11: Toxicological Information

Information on Toxicological Effects

Magnesite is considered by both OSHA and the ACHIH to one of the dusts that do not produce significant organic disease or toxic effect when exposures are kept under reasonable control. Exposure to excess levels of magnesite in the workplace causes skin or mucous membrane irritation resulting either from contact with the magnesite itself or from the rigorous cleansing procedures necessary for removing the dust.

Slight reactions, (not further specified), have been reported in human subjects after exposures of less than 10 minutes to freshly generated MgO fume at concentrations of from 400 to 600 mg/m^3. The symptoms of exposure include those of metal fume fever (fever, chills, muscular pain, nausea, and vomiting) and leukocytosis, symptoms analogous to those caused by exposure to zinc oxide fume.

Acute toxicity: Not classified
Skin corrosion/irritation: Not Applicable

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Serious eye damage/irritation: Not Applicable
Respiratory or skin sensitization: Not Applicable
Germ cell mutagenicity: Not Applicable
Carcinogenicity: Not Applicable
Reproductive toxicity: Not available
Specific target organ toxicity (single exposure): Not available
Specific target organ (repeated exposure): Not available

Aspiration hazard: Not available

Symptoms/injuries after inhalation: Chronic respiratory conditions may be aggravated.
Symptoms/injuries after eye contact: Symptoms should be temporary, should subside with treatment, and may include redness, itching, or irritation.
Symptoms/Injuries after skin contact: Prolonged or frequent skin contact may lead to dermatitis.

Symptoms/injuries after ingestion: Not a likely route of exposure; no conclusive data is available at this time.

SECTION 12: Ecological Information (Non-Mandatory)

Adverse effects of this material on the environment are not anticipated.

SECTION 13: Disposal Considerations (Non-Mandatory)

Waste Management

To prevent waste materials becoming airborne during waste storage, transportation and disposal, a covered container or plastic bagging is recommended. Comply with federal, state and local regulations. Chemical additions, processing or otherwise altering this material may make the waste management information presented in the SDS incomplete, inaccurate, or otherwise inappropriate.

Method of disposal: Landfill

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Disposal

If discarded in its purchased form, this product would not be a hazardous waste under Federal regulations (40 CFR 261). Any processing, use, alteration, or chemical additions to the product, as purchased, may alter the disposal requirements. Under Federal regulations, it is the waste generator's responsibility to properly characterize a waste material, to determine if it is a hazardous waste. Check local, regional, state, or provincial regulations to identify all applicable disposal requirements.

SECTION 14: Transport Information (Non-Mandatory)

U.S. Department of Transportation (DOT)

Hazard Class:	Not Regulated
Labels:	Not Applicable
Placards:	Not Applicable
United Nations (UN) Number:	Not Applicable
North America (NA) Number:	Not Applicable
Bill of Lading:	Product Name

SECTION 15: Regulatory Information (Non-Mandatory)

SARA Title III: The powder from these products contain magnesium oxide which is reportable under Sections 313 (40 CFR 372). Sections 311 and 312 apply.

OSHA: Comply with Hazard Communication Standards 29 CFR 1910.134 and 29 CFR 1926.59 and Respiratory Protection Standard 29 CFR 1910.134 and 29 CFR 1926.103.

TSCA: All substances contained in this product are listed in the TSCA Chemical Inventory

SECTION 16: Other Information,

Indication of changes : 05/19/2015

Other information: 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.