

Safety Data Sheet

Material Name: Crushed Refractory Brick

SDS ID: 00244161

*** Section 1 - PRODUCT AND COMPANY IDENTIFICATION ***

Material Name: Crushed Refractory Brick

Manufacturer Information

CMC Cometals
CONTACT:
2050 Center Avenue, Suite 250
Ft. Lee, NJ 07024
Mfg Contact: CMC Cometals

EMERGENCY

Synonyms

Product Use

industrial

*** Section 2 - HAZARDS IDENTIFICATION ***

EMERGENCY OVERVIEW

Color: colorless, white, gray

Odor: Not available

POTENTIAL HEALTH EFFECTS

Inhalation

Short Term: irritation, metal fume fever, difficulty breathing

Long Term: irritation, difficulty breathing, bluish skin color, cancer

Skin

Short Term: irritation

Long Term: irritation

Eye

Short Term: irritation

Long Term: blurred vision

Ingestion

Short Term: irritation, nausea, vomiting, diarrhea, stomach pain

Long Term: no information on significant adverse effects

Potential Environmental Effects

No information available.

*** Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS ***

CAS	Component	Percent	Symbol(s)	Risk Phrase(s)
1344-28-1	Aluminum oxide 215-691-6	<1	---	---
7631-86-9	Silica, amorphous 231-545-4	<25	---	---
13463-67-7	Titanium dioxide 236-675-5	<6	---	---
1309-37-1	Iron oxide 215-168-2	<3.5	---	---

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*** Section 4 - FIRST AID MEASURES ***

Inhalation

If adverse affects occur, remove to uncontaminated area. Give artificial respiration if not breathing. Get immediate medical attention.

Skin

Wash skin with soap and water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention, if needed. Thoroughly clean and dry contaminated clothing and shoes before reuse.

Eyes

Flush eyes with plenty of water for at least 15 minutes. Then get immediate medical attention.

Ingestion

If a large amount is swallowed, get medical attention.

*** Section 5 - FIRE FIGHTING MEASURES ***

See Section 9 for Flammability Properties

NFPA Ratings: Health: 1 Fire: 0 Reactivity: 0

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

Extinguishing Media

Use extinguishing agents appropriate for surrounding fire.

Protective Equipment and Precautions for Firefighters

Move container from fire area if it can be done without risk. Avoid inhalation of material or combustion by-products. Stay upwind and keep out of low areas.

Fire Fighting Measures

Negligible fire hazard.

Thermal Decomposition Products

Combustion: oxides of titanium, crystalline silica

Sensitivity to Mechanical Impact

No

Sensitivity to Static Discharge

No.

*** Section 6 - ACCIDENTAL RELEASE MEASURES ***

Occupational spill/release

Stop leak if possible without personal risk. Collect spilled material in appropriate container for disposal. Ventilate the area. Remove sources of ignition.

Dispose in accordance with all applicable regulations.

*** Section 7 - HANDLING AND STORAGE ***

Handling Procedures

When using, do not eat, drink or smoke. Avoid contact with eyes and skin. Do not inhale dusts.

Storage Procedures

Storage and handle in accordance with all current regulations and standards. Store in a tightly closed container. Keep separated from incompatible substances.

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*** Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION ***

Exposure Guidelines

Provide eyewash stations and quick-drench shower facilities.

Component Exposure Limits

Aluminum oxide (1344-28-1)

OSHA (US): 15 mg/m³ TWA (total dust); 5 mg/m³ TWA (respirable fraction)

Mexico: 10 mg/m³ TWA

Silica, amorphous (7631-86-9)

NIOSH: 6 mg/m³ TWA
3000 mg/m³ IDLH

OSHA (US): 20 mppcf TWA; ((80))/(% SiO₂) mg/m³ TWA)

Titanium dioxide (13463-67-7)

ACGIH: 10 mg/m³ TWA

NIOSH: 5000 mg/m³ IDLH

OSHA (US): 15 mg/m³ TWA (total dust)

Mexico: 10 mg/m³ TWA (as Ti)
20 mg/m³ STEL (as Ti)

Iron oxide (1309-37-1)

ACGIH: 5 mg/m³ TWA (respirable fraction)

NIOSH: 5 mg/m³ TWA (as Fe, dust and fume)
2500 mg/m³ IDLH (as Fe, dust and fume)

OSHA (US): 10 mg/m³ TWA (fume)

Mexico: 5 mg/m³ TWA
10 mg/m³ STEL (as Fe)

Engineering Controls

General or local exhaust ventilation and other forms of engineering controls are the preferred means for controlling exposures. If ventilation cannot reduce airborne concentrations below acceptable limits, appropriate respiratory protection should be used.

PERSONAL PROTECTIVE EQUIPMENT

Eyes/Face

Wear splash resistant safety goggles. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.

Protective Clothing

Keep exposure of this material to a minimum. Wear appropriate chemical resistant clothing and gloves.

Respiratory Protection

Under conditions of frequent use or heavy exposure, respiratory protection may be needed.

Respiratory protection is ranked in order from minimum to maximum.

Consider warning properties before use.

Any particulate respirator equipped with an N95, R95, or P95 filter (including N95, R95, and P95 filtering facepieces) except quarter-mask respirators. The following filters may also be used: N99, R99, P99, N100, R100 or P100.

Any powered, air-purifying respirator with a high-efficiency particulate filter.

Any powered, air-purifying respirator with a tight-fitting facepiece and a high-efficiency particulate filter.

Any supplied-air respirator with a full facepiece that is operated in a pressure-demand or other positive-pressure mode.

For Unknown Concentrations or Immediately Dangerous to Life or Health -

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Any supplied-air respirator with a full facepiece that is operated in a pressure-demand or other positive-pressure mode in combination with an auxiliary self-contained breathing apparatus operated in pressure-demand or other positive-pressure mode.

Any self-contained breathing apparatus that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode.

A NIOSH approved air-purifying respirator with an appropriate cartridge or canister may be appropriate under certain circumstances where airborne concentrations are expected to exceed exposure limits.

Appropriate respirator selection should be made by a qualified professional as part of a comprehensive respiratory protection program as described in 29 CFR 1910.134.

Protection provided by air-purifying respirators is limited and should not be used in atmospheres deficient in oxygen or where airborne concentrations are immediately dangerous to life or health.

Use a positive-pressure air-supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air-purifying respirators may not provide adequate protection.

*** Section 9 - PHYSICAL AND CHEMICAL PROPERTIES ***

Physical State:	solid	Appearance:	Crystals powder
Color:	colorless, white, gray	Physical Form:	
Odor:	Not available	Odor Threshold:	Not available
pH:	Not available	Melting Point:	Not available
Boiling Point:	Not applicable	Flash Point:	Not available
Decomposition:	Not available	Evaporation Rate:	Not available
LEL:	Not available	UEL:	Not available
Vapor Pressure:	Not applicable	Vapor Density (air = 1):	Not applicable
Density:	Not available	Specific Gravity (water = 1):	Not available
Water Solubility:	Not available	Log KOW:	Not available
Coeff. Water/Oil Dist:	Not available	Auto Ignition:	Not available
Viscosity:	Not available	Molecular Weight:	Not available

*** Section 10 - STABILITY AND REACTIVITY ***

Chemical Stability

Stable at normal temperatures and pressure.

Conditions to Avoid

None reported.

Materials to Avoid

halo carbons, halogens, combustible materials, oxidizing materials, acids, metals, metal salts, peroxides

Decomposition Products

Oxides of nitrogen, phosphorus, ammonia

Thermal Decomposition Products

Combustion: oxides of titanium, crystalline silica

Possibility of Hazardous Reactions

Will not polymerize.

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*** Section 11 - TOXICOLOGICAL INFORMATION ***

Component Analysis - LD50/LC50

The components of this material have been reviewed in various sources and the following selected endpoints are published:

Aluminum oxide (1344-28-1)

Oral LD50 Rat: >5000 mg/kg

Silica, amorphous (7631-86-9)

Oral LD50 Rat: >5000 mg/kg; Inhalation LC50 Rat: >2.2 mg/L/1H; Dermal LD50 Rabbit: >2000 mg/kg

Titanium dioxide (13463-67-7)

Oral LD50 Rat: >10000 mg/kg

Iron oxide (1309-37-1)

Oral LD50 Rat: >10000 mg/kg

RTECS Acute Toxicity (selected)

The components of this material have been reviewed and RTECS publishes no data as of the date on this document.

Acute Toxicity Level

Titanium dioxide (13463-67-7)

Moderately Toxic: inhalation.

Slightly Toxic: ingestion.

Component Carcinogenicity

Aluminum oxide (1344-28-1)

DFG: Category 2 (considered to be carcinogenic for man, fibre dust)

Silica, amorphous (7631-86-9)

IARC: Monograph 68 [1997]; Supplement 7 [1987] (Group 3 (not classifiable))

Titanium dioxide (13463-67-7)

ACGIH: A4 - Not Classifiable as a Human Carcinogen

IARC: Monograph 93 [in preparation]; Monograph 47 [1989] (Group 2B (possibly carcinogenic to humans))

DFG: Category 3A (could be carcinogenic for man, inhalable fraction with the exception of ultra small particles)

OSHA: Present

Iron oxide (1309-37-1)

ACGIH: A4 - Not Classifiable as a Human Carcinogen

IARC: Supplement 7 [1987]; Monograph 1 [1972] (Group 3 (not classifiable))

Irritation

May cause skin and eye irritation.

RTECS Irritation

The components of this material have been reviewed, and RTECS publishes the following endpoints:

Silica, amorphous (7631-86-9)

25 mg/24 hour(s) eyes rabbit mild

Titanium dioxide (13463-67-7)

300 ug/3 day(s) intermittent skin human mild

RTECS Tumorigenic

The components of this material have been reviewed, and RTECS publishes the following endpoints:

Aluminum oxide (1344-28-1)

200 mg/kg implant rat TD; 200 mg/kg implant rat TDLo; 90 mg/kg intrapleural rat TDLo

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Titanium dioxide (13463-67-7)

10 mg/m³ inhalation rat TC (18 hour(s)); 250 mg/m³ inhalation rat TCLo (6 hour(s)); 260 mg/kg intramuscular rat TD (84 week(s)); 360 mg/kg intramuscular rat TDLo (2 year(s))

Iron oxide (1309-37-1)

135 mg/kg subcutaneous rat TDLo

RTECS Mutagenic

The components of this material have been reviewed, and RTECS publishes the following endpoints:

Titanium dioxide (13463-67-7)

sister chromatid exchange hamster ovary 1 umol/L; DNA inhibition hamster lung 500 mg/L; micronucleus test hamster ovary 5 umol/L; micronucleus test mouse intraperitoneal 3 gm/kg/3 day(s) continuous

***** Section 12 - ECOLOGICAL INFORMATION *****

Component Analysis - Aquatic Toxicity

Silica, amorphous (7631-86-9)

Fish: 96 Hr LC50 Brachydanio rerio: 5000 mg/L [static]

Algae: 72 Hr EC50 Pseudokirchneriella subcapitata: 440 mg/L

Invertebrate: 48 Hr EC50 Ceriodaphnia dubia: 7600 mg/L

Other Ecological Information

No information is available.

***** Section 13 - DISPOSAL CONSIDERATIONS *****

Disposal Methods

Dispose in accordance with all applicable guidelines.

Component Waste Numbers

The U.S. EPA has not published waste numbers for this product's components.

***** Section 14 - TRANSPORT INFORMATION *****

US DOT Information

Shipping Name: Not regulated for transport

TDG Information

Shipping Name: Not regulated for transport

ADR Information

Shipping Name: Not regulated for transport

RID Information

Shipping Name: Not regulated for transport

IATA Information

Shipping Name: Not regulated for transport

ICAO Information

Shipping Name: Not regulated for transport

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IMDG Information

Shipping Name: Not regulated for transport

* * * Section 15 - REGULATORY INFORMATION * * *

U.S. Federal Regulations

This material contains one or more of the following chemicals required to be identified under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 311/312 (40 CFR 370.21), SARA Section 313 (40 CFR 372.65), CERCLA (40 CFR 302.4), TSCA 12(b), and/or require an OSHA process safety plan.

Aluminum oxide (1344-28-1)

SARA 313: 1.0 % de minimis concentration (fibrous forms)

U.S. State Regulations

The following components appear on one or more of the following state hazardous substances lists:

Component	CAS	CA	MA	MN	NJ	PA	RI
Aluminum oxide	1344-28-1	Yes	Yes	Yes	Yes	Yes	Yes
Silica, amorphous	7631-86-9	Yes	Yes	Yes	No	Yes	No
Titanium dioxide	13463-67-7	No	Yes	Yes	Yes	Yes	Yes
Iron oxide	1309-37-1	Yes	Yes	Yes	Yes	Yes	Yes

Not regulated under California Proposition 65

Canada

No classification assigned.

Canada WHMIS

The following components are identified under the Canadian Hazardous Products Act Ingredient Disclosure List:

Aluminum oxide (1344-28-1)

1 %

Silica, amorphous (7631-86-9)

1 %

Iron oxide (1309-37-1)

1 %

Germany Water Classification

Aluminum oxide (1344-28-1)

Number 1346, not considered hazardous to water

Silica, amorphous (7631-86-9)

Number 849, not considered hazardous to water

Silica, amorphous (7631-86-9)

Number 849, not considered hazardous to water

Titanium dioxide (13463-67-7)

Number 1345, not considered hazardous to water

Iron oxide (1309-37-1)

Number 800, not considered hazardous to water

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Component Analysis - Inventory

Component	CAS	US	CA	EU	AU	PH	JP	KR	CN	NZ
Aluminum oxide	1344-28-1	Yes	DSL	EIN	Yes	Yes	Yes	Yes	Yes	Yes
Silica, amorphous	7631-86-9	Yes	DSL	EIN	Yes	Yes	Yes	Yes	Yes	Yes
Titanium dioxide	13463-67-7	Yes	DSL	EIN	Yes	Yes	Yes	Yes	Yes	Yes
Iron oxide	1309-37-1	Yes	DSL	EIN	Yes	Yes	Yes	Yes	Yes	Yes

* * * Section 16 - OTHER INFORMATION * * *

Key / Legend

ACGIH - American Conference of Governmental Industrial Hygienists; ADR - European Road Transport; AU - Australia; BOD - Biochemical Oxygen Demand; C - Celsius; CA - Canada; CAS - Chemical Abstracts Service; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CN - China; CPR - Controlled Products Regulations; DFG - Deutsche Forschungsgemeinschaft; DOT - Department of Transportation; DSL - Domestic Substances List; EEC - European Economic Community; EINECS - European Inventory of Existing Commercial Chemical Substances; EPA - Environmental Protection Agency; EU - European Union; F - Fahrenheit; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; ICAO - International Civil Aviation Organization; IDL - Ingredient Disclosure List; IMDG - International Maritime Dangerous Goods; JP - Japan; Kow - Octanol/water partition coefficient; KR - Korea; LEL - Lower Explosive Limit; LOLI - List Of Lists™ - ChemADVISOR's Regulatory Database; MAK - Maximum Concentration Value in the Workplace; MEL - Maximum Exposure Limits; NFPA - National Fire Protection Agency; NIOSH - National Institute for Occupational Safety and Health; NJTSR - New Jersey Trade Secret Registry; NTP - National Toxicology Program; NZ - New Zealand; OSHA - Occupational Safety and Health Administration; PH - Philippines; RCRA - Resource Conservation and Recovery Act; RID - European Rail Transport; RTECS - Registry of Toxic Effects of Chemical Substances®; SARA - Superfund Amendments and Reauthorization Act; STEL - Short-term Exposure Limit; TDG - Transportation of Dangerous Goods; TSCA - Toxic Substances Control Act; TWA - Time Weighted Average; UEL - Upper Explosive Limit; US - United States

Other Information

NOTICE: The information presented herein is based on data considered to be accurate as of the date of preparation of this Material Safety Data Sheet. However, MSDS may not be used as a commercial specification sheet of manufacturer or seller, and no warranty or representation, expressed or implied, is made as to the accuracy or comprehensiveness of the foregoing data and safety information, nor is any authorization given or implied to practice any patented invention without a license. In addition, no responsibility can be assumed by vendor for any damage or injury resulting from abnormal use, from any failure to adhere to recommended practices, or from any hazards inherent in the nature of the product.

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