# SAFETY DATA SHEET



#### 1. Identification

Product identifier Cement Kiln Dust (CKD)

Other means of identification

Synonyms Kiln Dust, Cement Lime, Raw Mix, Kiln Feed, Baghouse Dust, New Lime.

Recommended use Construction.

**Recommended restrictions** Uses other than the recommended use.

Manufacturer/Importer/Supplier/Distributor information

Company Name Amrize Inc.

Address 8700 W Bryn Mawr Ave, Suite 300

Chicago, IL 60631

Telephone (773) 372-1000

Website www.amrize.com

E-mail sdsinfo@amrize.com

**Emergency Telephone** 

Number

CHEMTREC within USA and Canada: 1-800-424-9300

CHEMTREC outside USA and Canada: +1 703-527-3887 (collect calls accepted)

# 2. Hazard(s) identification

Physical hazards Not classified.

Health hazards Skin corrosion/irritation Category 2

Serious eye damage/eye irritation Category 1
Sensitization, skin Category 1
Carcinogenicity (inhalation) Category 1A

Specific target organ toxicity, single exposure Category 3 respiratory tract irritation

Specific target organ toxicity, repeated

exposure (inhalation)

Category 2 (Lungs)

Environmental hazards Hazardous to the aquatic environment, acute Category 3

hazard

OSHA defined hazards Not classified.

Label elements



Signal word Danger

Hazard statement Causes skin irritation. May cause an allergic skin reaction. Causes serious eye damage. May

cause respiratory irritation. May cause cancer by inhalation. May cause damage to organs (Lungs) through prolonged or repeated exposure by inhalation. Harmful to aquatic life.

**Precautionary statement** 

**Prevention** Obtain special instructions before use. Do not handle until all safety precautions have been read

and understood. Do not breathe dust. Wash thoroughly after handling. Use only outdoors or in a well-ventilated area. Contaminated work clothing must not be allowed out of the workplace. Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face

protection.

**Response** If inhaled: Remove person to fresh air and keep comfortable for breathing. If in eyes: Rinse

cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center/doctor. If skin irritation or rash occurs: Get

medical advice/attention. Take off contaminated clothing and wash it before reuse.

**Storage** Store in a well-ventilated place. Keep container tightly closed. Store locked up.

**Disposal** 

Hazard(s) not otherwise

Dispose of contents/container in accordance with local/regional/national/international regulations.

classified (HNOC)

None known.

Supplemental information

None

# 3. Composition/information on ingredients

#### **Mixtures**

Chemical name	CAS number	%
Flue dust, portland cement	68475-76-3	100
Calcium oxide	1305-78-8	5 - 50
Quartz	14808-60-7	1 - 10

**Composition comments** 

All concentrations are in percent by weight. Any concentration shown as a range is to protect confidentiality or is due to batch variation. Components not listed are either non-hazardous or are below reportable limits.

#### 4. First-aid measures

Inhalation

Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, give artificial respiration. Call a poison center or doctor/physician if you feel unwell.

Skin contact

Remove contaminated clothing immediately and wash skin with soap and water. In case of eczema or other skin disorders: Seek medical attention and take along these instructions. Wash contaminated clothing before reuse.

Eye contact

Do not rub eyes. Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention immediately.

Ingestion

Rinse mouth. Get medical attention if symptoms occur.

Most important

symptoms/effects, acute and

delayed

Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. Dusts may irritate the respiratory tract, skin and eyes. Coughing. Skin irritation. May cause redness and pain. May cause an allergic skin reaction. Dermatitis. Rash. Prolonged exposure may cause chronic effects.

Provide general supportive measures and treat symptomatically. Keep victim under observation.

Indication of immediate medical attention and special treatment needed

Symptoms may be delayed.

**General information** 

IF exposed or concerned: Get medical advice/attention. If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Wash contaminated clothing before reuse.

#### 5. Fire-fighting measures

Suitable extinguishing media

Unsuitable extinguishing media

Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).

Do not use water jet as an extinguisher, as this will spread the fire.

Specific hazards arising from

the chemical

Special protective equipment and precautions for firefighters During fire, gases hazardous to health may be formed. Combustion products may include: Silicon oxides.

Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Fire fighting

equipment/instructions

Use water spray to cool unopened containers. Water runoff can cause environmental damage.

Specific methods General fire hazards Use standard firefighting procedures and consider the hazards of other involved materials.

No unusual fire or explosion hazards noted.

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#### 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Do not breathe dust. Use a NIOSH/MSHA approved respirator if there is a risk of exposure to dust/fume at levels exceeding the exposure limits. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

# Methods and materials for containment and cleaning up

Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air). Minimize dust generation and accumulation. Collect dust using a vacuum cleaner equipped with HEPA filter. Prevent product from entering drains. Stop the flow of material, if this is without risk.

Large Spills: Wet down with water and dike for later disposal. Shovel the material into waste container. Following product recovery, flush area with water.

Small Spills: Sweep up or vacuum up spillage and collect in suitable container for disposal. Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use. Put material in suitable, covered, labeled containers. For waste disposal, see section 13 of the SDS.

#### **Environmental precautions**

Avoid release to the environment. Inform appropriate managerial or supervisory personnel of all environmental releases. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

#### 7. Handling and storage

#### Precautions for safe handling

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Minimize dust generation and accumulation. Provide appropriate exhaust ventilation at places where dust is formed. Do not breathe dust. Do not get this material in contact with eyes. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Should be handled in closed systems, if possible. Wear appropriate personal protective equipment. Avoid release to the environment. Observe good industrial hygiene practices. Persons susceptible to allergic reactions should not handle this product.

Conditions for safe storage, including any incompatibilities

Store locked up. Store in tightly closed container. Store in a well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS).

#### 8. Exposure controls/personal protection

US, OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

#### Occupational exposure limits

Components	Туре	Value		
Quartz (CAS 14808-60-7)	TWA	0.05 mg/m3	0.05 mg/m3	
US. OSHA Table Z-1 Permissible E Components	xposure Limits (PEL) for Air Type	Contaminants (29 CFR 1910.1 Value	000) Form	
Calcium oxide (CAS 1305-78-8)	PEL	5 mg/m3		
Limestone (CAS 1317-65-3)	PEL	5 mg/m3	Respirable fraction.	
		15 mg/m3	Total dust.	
Magnesium oxide (CAS 1309-48-4)	PEL	15 mg/m3	Total particulate.	
US. OSHA Table Z-3 Permissible E Components	xposure Limits (PEL) for Min Type	eral Dusts (29 CFR 1910.1000 Value	) Form	
Limestone (CAS 1317-65-3)	TWA	5 mg/m3	Respirable fraction.	
		15 mg/m3	Total dust.	
		50 mppcf	Total dust.	
		15 mppcf	Respirable fraction.	
Quartz (CAS 14808-60-7)	TWA	0.1 mg/m3	Respirable.	
		2.4 mppcf	Respirable.	
US. ACGIH Threshold Limit Values Components	(TLV) Type	Value	Form	
Calcium oxide (CAS 1305-78-8)	TWA	2 mg/m3		
Magnesium oxide (CAS 1309-48-4)	TWA	10 mg/m3	Inhalable fraction.	
Quartz (CAS 14808-60-7)	TWA	0.025 mg/m3	Respirable fraction.	

Components	Туре	Value	
Calcium oxide (CAS 1305-78-8)	IDLH	25 mg/m3	
Magnesium oxide (CAS 1309-48-4)	IDLH	750 mg/m3	
Quartz (CAS 14808-60-7)	IDLH	50 mg/m3	
US. NIOSH: Pocket Guide to Chem	ical Hazards		
Components	Туре	Value	Form
Calcium oxide (CAS 1305-78-8)	TWA	2 mg/m3	
Limestone (CAS 1317-65-3)	TWA	5 mg/m3	Respirable.
		10 mg/m3	Total
Quartz (CAS 14808-60-7)	TWA	0.05 mg/m3	Respirable dust.

Biological limit values Exposure guidelines No biological exposure limits noted for the ingredient(s).

Occupational exposure to nuisance dust (total and respirable) and respirable crystalline silica

should be monitored and controlled.

Appropriate engineering controls

Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. If engineering measures are not sufficient to maintain concentrations of dust particulates below the Occupational Exposure Limit (OEL), suitable respiratory protection must be worn. If material is ground, cut, or used in any operation which may generate dusts, use appropriate local exhaust ventilation to keep exposures below the recommended exposure limits. Provide eyewash station and safety shower.

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

**Eve/face protection** Wear chemical splash goggles and face shield.

Skin protection

**Hand protection** Wear appropriate chemical resistant gloves. Suitable gloves can be recommended by the glove

supplier.

Skin protection

Other Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.

Respiratory protection If engineering controls do not maintain airborne concentrations below recommended exposure

limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. Use a NIOSH/MSHA approved respirator if there is a risk of exposure to dust/fume at levels exceeding the exposure limits. Respirator type: Chemical respirator with organic vapor cartridge, full facepiece, dust and mist filter. In the United States of America, if respirators are used, a program should be instituted to assure compliance

with OSHA 29 CFR 1910.134.

**Thermal hazards** Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations

Observe any medical surveillance requirements. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Contaminated work clothing should not be allowed out of the workplace.

#### 9. Physical and chemical properties

**Appearance** 

Physical state Solid.
Form Powder.

**Color** Gray. Tan. White powder.

Odor Odorless.

Odor threshold Not applicable.
pH 10 - 13 (In Water)

Melting point/freezing point Property has not been measured.

Initial boiling point and boiling > 1832 °F (> 1000 °C)

range

Flash point

Not applicable, material is a solid.

Evaporation rate

Not applicable, material is a solid.

Not applicable, material is a solid.

The product is non-combustible.

Upper/lower flammability or explosive limits

Explosive limit - lower (%) Not applicable, material is a solid.

Explosive limit - upper (%) Not applicable, material is a solid.

Vapor pressure Not applicable, material is a solid.

Vapor density Not applicable, material is a solid.

Relative density 2.6 - 2.8

Solubility(ies)

Solubility (water) 10 - 99 %

Partition coefficient

Not applicable, material is inorganic.

(n-octanol/water)

Auto-ignition temperature

Not applicable, material is a solid.

Not applicable, material is a solid.

Not applicable, material is a solid.

Property has not been measured.

Other information

Explosive properties Not explosive.

**Kinematic viscosity** Not applicable, material is a solid.

Oxidizing properties Not oxidizing.

# 10. Stability and reactivity

**Reactivity**The product is stable and non-reactive under normal conditions of use, storage and transport.

Chemical stability Material is stable under normal conditions.

Possibility of hazardous

reactions

No dangerous reaction known under conditions of normal use.

Conditions to avoid Contact with incompatible materials.

Incompatible materials Acids. Powerful oxidizers. Chlorine. Fluorine. Ammonium salts. Aluminum metal. Hydrofluoric acid.

silicon tetrafluoride gas. calcium hydroxide. manganese trifluoride. Boron trifluoride. Chlorine

trifluoride. Oxygen difluoride.

Hazardous decomposition

products

No hazardous decomposition products are known. In the event of fire: See Section 5.

#### 11. Toxicological information

#### Information on likely routes of exposure

**Inhalation** May cause cancer by inhalation. Dust may irritate respiratory system. Prolonged inhalation may

be harmful.

**Skin contact** Causes skin irritation. May cause an allergic skin reaction.

**Eye contact** Causes serious eye damage.

**Ingestion** May cause discomfort if swallowed.

Symptoms related to the physical, chemical and toxicological characteristics

Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. Dusts may irritate the respiratory tract, skin and eyes. Coughing. Skin irritation. May cause redness and pain. May cause an allergic skin reaction. Dermatitis. Rash. Prolonged exposure may cause chronic effects.

#### Information on toxicological effects

Acute toxicity Not expected to be acutely toxic.

Components Species Test Results

Flue dust, portland cement (CAS 68475-76-3)

Acute Dermal

LD50 Rat > 2000 mg/kg, 24 Hours

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Components Species Test Results

Inhalation

Dust

LC50 Rat > 6.04 mg/l, 4 Hours

Magnesium oxide (CAS 1309-48-4)

<u>Acute</u>

Oral

LD50 Rat 3870 mg/kg

Quartz (CAS 14808-60-7)

Chronic Inhalation

LOEC Human 0.0563 mg/m3

**Skin corrosion/irritation** Causes skin irritation.

Serious eye damage/eye

irritation

Causes serious eye damage.

Respiratory or skin sensitization

**Respiratory sensitization** Not a respiratory sensitizer.

**Skin sensitization** May cause an allergic skin reaction.

**Germ cell mutagenicity**No data available to indicate product or any components present at greater than 0.1% are

mutagenic or genotoxic.

Carcinogenicity In 1997, IARC (the International Agency for Research on Cancer) concluded that crystalline silica

inhaled from occupational sources can cause lung cancer in humans. However in making the overall evaluation, IARC noted that "carcinogenicity was not detected in all industrial circumstances studied. Carcinogenicity may be dependent on inherent characteristics of the crystalline silica or on external factors affecting its biological activity or distribution of its polymorphs." (IARC Monographs on the evaluation of the carcinogenic risks of chemicals to humans, Silica, silicates dust and organic fibres, 1997, Vol. 68, IARC, Lyon, France.) In June 2003, SCOEL (the EU Scientific Committee on Occupational Exposure Limits) concluded that the main effect in humans of the inhalation of respirable crystalline silica dust is silicosis. "There is sufficient information to conclude that the relative risk of lung cancer is increased in persons with silicosis (and, apparently, not in employees without silicosis exposed to silica dust in quarries and in the ceramic industry). Therefore, preventing the onset of silicosis will also reduce the cancer risk..." (SCOEL SUM Doc 94-final, June 2003) According to the current state of the art, worker protection against silicosis can be consistently assured by respecting the existing regulatory occupational exposure limits. May cause cancer by inhalation. Occupational exposure to respirable dust and respirable crystalline silica should be monitored and controlled.

IARC Monographs. Overall Evaluation of Carcinogenicity

Quartz (CAS 14808-60-7) 1 Carcinogenic to humans.

NTP Report on Carcinogens

Quartz (CAS 14808-60-7) Known To Be Human Carcinogen.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Quartz (CAS 14808-60-7) Cancer

**Reproductive toxicity**This product is not expected to cause reproductive or developmental effects.

Specific target organ toxicity -

single exposure

May cause respiratory irritation.

Specific target organ toxicity -

repeated exposure

May cause damage to organs (Lungs) through prolonged or repeated exposure by inhalation.

Aspiration hazard Not an aspiration hazard.

**Chronic effects** Prolonged inhalation may be harmful. May cause damage to organs through prolonged or

repeated exposure by inhalation. Prolonged exposure may cause chronic effects.

12. Ecological information

**Ecotoxicity** Harmful to aquatic life.

Components Species Test Results

Flue dust, portland cement (CAS 68475-76-3)

**Aquatic** 

Acute

Crustacea EL50 Daphnia magna > 100 mg/l, 48 Hours
Fish NOEC Danio rerio 11.1 mg/l, 96 Hours

Chronic

Crustacea NOELR Daphnia magna 50 mg/l

**Persistence and degradability** The product contains inorganic compounds which are not biodegradable.

Bioaccumulative potential No data available.

Mobility in soil The product is insoluble in water. Not expected to be mobile in soil.

Other adverse effects No data available.

# 13. Disposal considerations

**Disposal instructions**Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not allow

this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches

with chemical or used container. Dispose of contents/container in accordance with

local/regional/national/international regulations.

**Local disposal regulations** Dispose in accordance with all applicable regulations.

Hazardous waste code The waste code should be assigned in discussion between the user, the producer and the waste

disposal company.

Waste from residues / unused

Contaminated packaging

products

Dispose of in accordance with local regulations. Empty containers or liners may retain some

product residues. This material and its container must be disposed of in a safe manner.

Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or

disposal.

## 14. Transport information

DOT

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

**IMDG** 

Not regulated as dangerous goods.

Transport in bulk according to Annex II of MARPOL 73/78 and

Not applicable.

the IBC Code

## 15. Regulatory information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication

Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

**CERCLA Hazardous Substance List (40 CFR 302.4)** 

Not listed.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Quartz (CAS 14808-60-7) Cancer lung effects

iung enecis

immune system effects

kidney effects

Toxic Substances Control Act (TSCA)

All components of the mixture on the TSCA 8(b) inventory are designated

"active"

Superfund Amendments and Reauthorization Act of 1986 (SARA)

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous

chemical

Yes

Classified hazard

categories

Skin corrosion or irritation

Serious eye damage or eye irritation Respiratory or skin sensitization

Carcinogenicity

Specific target organ toxicity (single or repeated exposure)

#### SARA 313 (TRI reporting)

Not regulated.

#### Other federal regulations

#### Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

## Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act

Not regulated.

(SDWA)

## **US** state regulations

#### **US. Massachusetts RTK - Substance List**

Calcium oxide (CAS 1305-78-8) Limestone (CAS 1317-65-3) Magnesium oxide (CAS 1309-48-4)

Quartz (CAS 14808-60-7)

# US. New Jersey Worker and Community Right-to-Know Act

Calcium oxide (CAS 1305-78-8) Limestone (CAS 1317-65-3) Magnesium oxide (CAS 1309-48-4) Quartz (CAS 14808-60-7)

## US. Pennsylvania Worker and Community Right-to-Know Law

Calcium oxide (CAS 1305-78-8) Limestone (CAS 1317-65-3) Magnesium oxide (CAS 1309-48-4) Quartz (CAS 14808-60-7)

## **US. Rhode Island RTK**

Calcium oxide (CAS 1305-78-8) Limestone (CAS 1317-65-3) Magnesium oxide (CAS 1309-48-4) Quartz (CAS 14808-60-7)

### **California Proposition 65**



WARNING: This product can expose you to Quartz, which is known to the State of California to cause cancer.

For more information go to www.P65Warnings.ca.gov.

### California Proposition 65 - CRT: Listed date/Carcinogenic substance

Quartz (CAS 14808-60-7) Listed: October 1, 1988

#### **International Inventories**

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Industrial Chemicals (AICIS)	No
Canada	Domestic Substances List (DSL)	No
Canada	Non-Domestic Substances List (NDSL)	Yes
China	Inventory of Existing Chemical Substances in China (IECSC)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	No
Taiwan	Taiwan Chemical Substance Inventory (TCSI)	No

Country(s) or region Inventory name On inventory (yes/no)\*

United States & Puerto Rico Toxic Substances Control Act (TSCA) Inventory

\*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

# 16. Other information, including date of preparation or last revision

Issue date 15-May-2025

Revision date - 01

HMIS® ratings Health: 3\*

Flammability: 0 Physical hazard: 0

**Disclaimer** Amrize Inc. cannot anticipate all conditions under which this information and its product, or the

products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the

sheet was written based on the best knowledge and experience currently available.

Cement Kiln Dust (CKD) SDS US

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