

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product name : Ludowici Clay Roofing Tile - Glazed & Unglazed
Product code : Not available

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture : Roofing Product

1.3. Details of the supplier of the safety data sheet

Ludowici Roof Tile
4757 Tile Plant Road
New Lexington, Ohio 43764
T 800-945-8453
www.ludowici.com

1.4. Emergency telephone number

Emergency number : 740-342-1995

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GHS-US classification

Acute Toxicity 4 (Oral)
Skin Irritation 2
Eye Irritation 2A
Carcinogenicity 1A
Single Target Organ Toxicity Repeated Exposure 1 (STOT RE 1)

2.2. Label elements

GHS-US labelling

Hazard pictograms (GHS-US) :



Signal word (GHS-US) :

Danger

Hazard statements (GHS-US) :

Harmful if swallowed. Causes skin irritation. Causes serious eye irritation. May cause cancer. Causes damage to lungs through prolonged or repeated exposure.

Precautionary statements (GHS-US) :

Wash hands thoroughly after handling . Do not eat, drink or smoke when using this product. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves/protective clothing/eye protection/face protection. Do not breathe dust/fume/gas/mist/vapors/spray. If exposed or concerned: Get medical advice/attention. If swallowed: Immediately call a poison center/doctor. Rinse mouth. If on skin: Wash with plenty of water. Take off contaminated clothing and wash before reuse. If skin irritation occurs: Get medical advice/attention. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. Dispose of contents/container in accordance with local/regional/national/international regulations.

2.3. Other hazards

No additional information available.

2.4. Unknown acute toxicity (GHS-US)

2 percent of the mixture consists of ingredient(s) of unknown acute toxicity.

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable.

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according to the Hazard Communication Standard (CFR29 1910.1200) HazCom 2012.

3.2. Mixture

Name	Product identifier	%	GHS-US classification
Quartz	(CAS No) 14808-60-7	60 - 100	Acute Tox. 4 (Oral) Carc. 1A STOT RE 1
Aluminum oxide	(CAS No) 1344-28-1	10 - 30	Not classified.
Titanium dioxide	(CAS No) 13463-67-7	1 - 5	Carc. 2
Iron oxide (Fe ₂ O ₃)	(CAS No) 1309-37-1	1 - 5	Not classified.
Potassium oxide	(CAS No) 12136-45-7	0.5 - 1.5	Skin Corr. 1B

* The exact percentage (concentration) of composition has been withheld as a trade secret in accordance with paragraph (i) of §1910.1200.

SECTION 4: First aid measures

4.1. Description of first aid measures

- First-aid measures after inhalation : If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical advice/attention if you feel unwell.
- First-aid measures after skin contact : In case of contact, immediately flush skin with plenty of water. Remove contaminated clothing and shoes. Wash clothing before reuse. Call a physician if irritation develops and persists.
- First-aid measures after eye contact : In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. If easy to do, remove contact lenses, if worn. If irritation persists, get medical attention.
- First-aid measures after ingestion : If swallowed, do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Immediately call a POISON CENTER or doctor/physician.

4.2. Most important symptoms and effects, both acute and delayed

- Symptoms/injuries after inhalation : May cause respiratory tract irritation.
- Symptoms/injuries after skin contact : Causes skin irritation. Symptoms may include redness, edema, drying, defatting and cracking of the skin.
- Symptoms/injuries after eye contact : Causes serious eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva.
- Symptoms/injuries after ingestion : Harmful if swallowed. May cause stomach distress, nausea or vomiting.

4.3. Indication of any immediate medical attention and special treatment needed

Symptoms may not appear immediately. In case of accident or if you feel unwell, seek medical advice immediately (show the label or SDS where possible).

SECTION 5: Firefighting measures

5.1. Extinguishing media

- Suitable extinguishing media : Treat for surrounding material.
- Unsuitable extinguishing media : None known.

5.2. Special hazards arising from the substance or mixture

- Fire hazard : Products of combustion may include, and are not limited to: oxides of carbon.

5.3. Advice for firefighters

- Protection during firefighting : Keep upwind of fire. Wear full fire fighting turn-out gear (full Bunker gear) and respiratory protection (SCBA).

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

- General measures : Use personal protection recommended in Section 8. Isolate the hazard area and deny entry to unnecessary and unprotected personnel.

6.2. Methods and material for containment and cleaning up

- For containment : Contain spill, then place in a suitable container. Do not flush to sewer or allow to enter waterways. Use appropriate Personal Protective Equipment (PPE).
- Methods for cleaning up : Scoop up material and place in a disposal container. Provide ventilation.

6.3. Reference to other sections

See section 8 for further information on protective clothing and equipment and section 13 for advice on waste disposal.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Precautions for safe handling : Avoid generating dust. Good housekeeping is important to prevent accumulation of dust. The use of compressed air for cleaning clothing, equipment, etc, is not recommended. Do not breathe dust/fume/gas/mist/vapors/ spray. Avoid contact with skin and eyes. Do not swallow. Handle and open container with care. When using do not eat, drink or smoke.
- Hygiene measures : Launder contaminated clothing before reuse. Wash hands before eating, drinking, or smoking.

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according to the Hazard Communication Standard (CFR29 1910.1200) HazCom 2012.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep out of the reach of children. Store in dust-tight, dry, labelled containers. Keep container tightly closed when not in use. Avoid any dust buildup by frequent cleaning and suitable construction of the storage area.

7.3. Specific end use(s)

Not available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Quartz (14808-60-7)		
USA ACGIH	ACGIH TWA	0.025 mg/m ³
USA OSHA	OSHA PEL (TWA)	((10 mg/m ³)/(%SiO ₂ +2) TWA (resp)); ((30 mg/m ³)/(%SiO ₂ +2) TWA (total)); ((250)/(%SiO ₂ +5) mppcf TWA (resp))
Aluminum oxide (1344-28-1)		
USA OSHA	OSHA PEL (TWA)	15 mg/m ³ (total) TWA 5 mg/m ³ (resp)
Titanium dioxide (13463-67-7)		
USA ACGIH	ACGIH TWA	10 mg/m ³
USA OSHA	OSHA PEL (TWA)	15 mg/m ³
Iron oxide (Fe ₂ O ₃) (1309-37-1)		
USA ACGIH	ACGIH TWA	5 mg/m ³
USA OSHA	OSHA PEL (TWA)	10 mg/m ³
Potassium oxide (12136-45-7)		
USA ACGIH	ACGIH TWA	Not available.
USA OSHA	OSHA PEL (TWA)	Not available.

8.2. Exposure controls

Appropriate engineering controls : Use ventilation adequate to keep exposures (airborne levels of dust, fume, vapor, etc.) below recommended exposure limits. Avoid generating dust.

Hand protection : Wear chemically resistant protective gloves.

Eye protection : Wear eye protection.

Skin and body protection : Wear suitable protective clothing.

Respiratory protection : A NIOSH approved dust mask or filtering facepiece is recommended in poorly ventilated areas or when permissible exposure limits may be exceeded. Respirators should be selected by and used under the direction of a trained health and safety professional following requirements found in OSHA's respirator standard (29 CFR 1910.134) and ANSI's standard for respiratory protection (Z88.2).

Environmental exposure controls : Maintain levels below Community environmental protection thresholds.

Other information : Do not eat, smoke or drink where material is handled, processed or stored. Wash hands carefully before eating or smoking. Handle according to established industrial hygiene and safety practices.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Solid.

Appearance : Clay tile.

Color : Red/brown.

Odor : Odorless.

Odor threshold : None.

pH : No data available.

Relative evaporation rate (butylacetate=1) : No data available.

Melting point : 1600 °C (2912 °F)

Freezing point : None.

Boiling point : 2230 °C (4046 °F)

Flash point : No data available.

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according to the Hazard Communication Standard (CFR29 1910.1200) HazCom 2012.

Auto-ignition temperature	: No data available.
Decomposition temperature	: No data available.
Flammability (solid, gas)	: Not flammable.
Vapor pressure	: No data available.
Relative vapor density at 20 °C	: No data available.
Relative density	: No data available.
Solubility	: Not soluble in water.
Log Pow	: No data available.
Log Kow	: No data available.
Viscosity, kinematic	: No data available.
Viscosity, dynamic	: No data available.
Explosive properties	: No data available.
Oxidising properties	: No data available.
Explosive limits	: No data available.

9.2. Other information

No additional information available.

SECTION 10: Stability and reactivity

10.1. Reactivity

No dangerous reaction known under conditions of normal use.

10.2. Chemical stability

Stable under normal storage conditions.

10.3. Possibility of hazardous reactions

No dangerous reaction known under conditions of normal use.

10.4. Conditions to avoid

Heat. Incompatible materials.

10.5. Incompatible materials

Hydrofluoric acid. Silica products, when in contact with hydrogen fluoride will dissolve and produce silicon tetrafluoride (SiF₄), a corrosive gas.

10.6. Hazardous decomposition products

May include, and are not limited to: oxides of carbon.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Harmful if swallowed.

Ludowici Clay Roofing Tile - Glazed & Unglazed	
LD50 oral rat	>300 but ≤2000
LD50 dermal rabbit	> 2000 mg/kg
LC50 inhalation rat	Not data available.
Quartz (14808-60-7)	
LD50 oral rat	500 mg/kg
Aluminum oxide (1344-28-1)	
LD50 oral rat	> 5000 mg/kg
Titanium dioxide (13463-67-7)	
LD50 oral rat	> 10000 mg/kg
LD50 dermal rabbit	> 10000 mg/kg
Iron oxide (Fe ₂ O ₃) (1309-37-1)	
LD50 oral rat	> 10000 mg/kg

Skin corrosion/irritation	: Causes skin irritation.
Serious eye damage/irritation	: Causes serious eye irritation.
Respiratory or skin sensitization	: Based on available data, the classification criteria are not met.

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Germ cell mutagenicity : Based on available data, the classification criteria are not met.
Carcinogenicity : May cause cancer.

Quartz (14808-60-7)	
IARC group	1 - Carcinogenic to humans
National Toxicity Program (NTP) Status	2 - Known Human Carcinogens

Titanium dioxide (13463-67-7)	
IARC group	2B - Possibly carcinogenic to humans

Iron oxide (Fe2O3) (1309-37-1)	
IARC group	3 - Not classifiable

Reproductive toxicity : Based on available data, the classification criteria are not met.
Specific target organ toxicity (single exposure) : Based on available data, the classification criteria are not met.
Specific target organ toxicity (repeated exposure) : Causes damage to lungs through prolonged or repeated exposure. Excessive exposure to silica dust causes a disabling scarring of the lungs, or pneumoconiosis, called 'silicosis,' which gradually reduces lung capacity and efficiency.
Aspiration hazard : Based on available data, the classification criteria are not met.
Symptoms/injuries after inhalation : May cause respiratory tract irritation.
Symptoms/injuries after skin contact : Causes skin irritation. Symptoms may include redness, edema, drying, defatting and cracking of the skin.
Symptoms/injuries after eye contact : Causes serious eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva.
Symptoms/injuries after ingestion : Harmful if swallowed. May cause stomach distress, nausea or vomiting.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : May cause long-term adverse effects in the aquatic environment.

12.2. Persistence and degradability

Ludowici Clay Roofing Tile - Glazed & Unglazed	
Persistence and degradability	Not established.

12.3. Bioaccumulative potential

Ludowici Clay Roofing Tile - Glazed & Unglazed	
Bioaccumulative potential	Not established.

12.4. Mobility in soil

No additional information available.

12.5. Other adverse effects

Effect on ozone layer : No additional information available.
Effect on the global warming : No known ecological damage caused by this product.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal recommendations : This material must be disposed of in accordance with all local, state, provincial, and federal regulations. The generation of waste should be avoided or minimized wherever possible.

SECTION 14: Transport information

In accordance with DOT

14.1. UN number

Not regulated for transport.

14.2. UN proper shipping name

Not applicable.

14.3. Additional information

Other information : No supplementary information available.
Special transport precautions : Do not handle until all safety precautions have been read and understood.

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according to the Hazard Communication Standard (CFR29 1910.1200) HazCom 2012.

SECTION 15: Regulatory information

15.1. US Federal regulations

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory.

Aluminum oxide (1344-28-1)

Listed on United States SARA Section 313

SARA Section 313 - Emission Reporting	1.0 % (fibrous forms)
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15.2. US State regulations

Ludowici Clay Roofing Tile - Glazed & Unglazed

State or local regulations	This product contains chemicals known to the State of California to cause cancer.
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SECTION 16: Other information

Indication of changes : None.
Date of issue : 10/06/2014
Other information : None.

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