1. Chemical Substance and Company Identification

Chemical Substance Name: Crystalline silica

[Product identification]

Product Name: KMEW siding “Excellage H” (Solid Core) and trim of same nature

General Name: Ceramic siding

Outline of Product: This product is made of cement and silicates as main raw materials, reinforced with organic fibrous materials and after molding cured in an autoclave.

[Manufacturer identification]

Company Name: KMEW Co. Ltd.

Address: 1-2-27 Shiromi, Chuo-ku, Osaka

Name of Section: Quality Assurance Department

Person in Charge (preparer): Manager of siding development

Telephone: +81-743-56-2124

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Serial number: KMH-BJ-001

2. Hazards Identification

GHS classification

Physical and Chemical Hazards:	1. Explosibility:	Not applicable
	2. Combustible/flammable gas:	Not applicable
	3. Combustible/flammable aerosol:	Not applicable
	4. Combustion support/oxidizing gas:	Not applicable
	5. High pressure gas:	Not applicable
	6. Flammable liquid:	Not applicable
	7. Combustible solid:	Not applicable
	8. Self-reactive substance and mixture:	Not applicable
	9. Self-igniting liquid:	Not applicable
	10. Self-igniting solid:	Not classified
	11. Self-heating substance and mixture:	Not classified
	12. Substance or mixture that liberates combustible/flammable gas on contact with water:	Not classified
	13. Oxidizing liquid:	Not applicable
	14. Oxidizing solid:	Classification not possible
	15. Organic peroxide:	Not applicable
	16. Metal-corrosive substance:	Classification not possible

Adverse Human Health Effects:	1. Acute toxicity (Oral):	Classification not possible
	1. Acute toxicity (Dermal):	Classification not possible
	1. Acute toxicity (Inhalation: gas):	Not applicable
	1. Acute toxicity (Inhalation: vapor):	Not applicable
	1. Acute toxicity (Inhalation: dust, mist):	Classification not possible
	2. Skin corrosivity/irritancy:	Classification not possible
	3. Serious eye damaging/irritating property:	Classification not possible
	4. Respiratory or skin sensitizing property:	Classification not possible
	5. Germ cell mutagenicity:	Not classified
	6. Carcinogenicity:	Category 1A
	7. Reproductive toxicity:	Classification not possible
	8. Specific target organ/systemic toxicity (single exposure):	Category 1 (respiratory system)
	9. Specific target organ/systemic toxicity (repeated exposure):	Category 1 (respiratory system, kidney)
	10. Aspiration hazard:	Classification not possible
Environmental Hazards:	11. Hazardous to the aquatic environment (acute):	Classification not possible
	11. Hazardous to the aquatic environment (chronic):	Classification not possible

GHS Label Elements:

Hazards Identification:

The product is typically solid that liberates dust when cut, ground or bored. Inhalation of suspended dust may cause pneumoconiosis and cancer. Water left in contact with the product for a long time takes on alkalinity, is irritating to eyes, nose and skin and may cause inflammation to cornea of the eye, internal tissue of the nose and skin.

Long term or repetition of exposure may cause lesion to organs (lung, kidney andrespiratory system).

It may be hazardous to aquatic lives.

Precaution Safety Measures:

When using the product, be sure to obtain the instruction manual, etc. Do not handle the product until having read and understood all the safety precautions.

Prepare personal-use protective equipment and ventilation equipment as needed, and use them to avoid exposure.

Do not inhale dust, fume, etc.

Dust off the clothes by vacuum cleaning after handling the product, and sufficiently wash hands, gargle, etc.

Do not eat, drink or smoke during handling the product.

First-aid Measures: *Inhalation* – Move the victim to fresh air and let the victim take a rest in a posture easy to breathe.

Skin contact – Remove extraneous matters. Wash skin with running water.

Eye contact – Immediately wash the eye with plenty of running water for several minutes.

Ingestion – Remove residue in the mouth and rinse well.

If the victim feels sick after handling the product, refer for treatment and examination by a physician.

Storage: Dust off the unused products by vacuum cleaning and store them covered with sheeting to avoid wetting.

Disposal: Dispose of the content and containers in accordance with regulations of the local government, or outsource it to professionals approbated by the prefectural governor.

3. Composition And Components Information

Substance/mixture: Mixture

General Name: Ceramic siding

Hazardous Components:

Chemical name or general name	CAS Number	Content (%)	Official gazette reference number	Reference number in gazette listing Japan (Chemical Substances Control Law)
Crystalline silica	14808-60-7	1-3%*	312 (silica)	(1)-548 silicon dioxide

*Result by the measurement method of KMEW

Composition:

Chemical Name or General Name	**Content (%)**
Calcium silicate compound	66-95%
Inorganic admixture	0-25%
Organic filament	4-6%
Organic admixture	1-3%

Asbestos is not contained.

4. Emergency Measures

Inhalation:	In the case of dust inhalation, move the victim to fresh air and let the victim gargle with water or warm water, and if there is a symptom, refer to medical attention.
Skin:	In the case of skin contact with water remained on the product, immediately rinse with water and refer to medical attention as needed.
Eyes:	In case dust entered eyes, immediately wash the eyes sufficiently with clean water. Do not rub the eyes. If pain remains, refer to medical attention.
Ingestion:	After having the victim drink plenty of water to vomit, refer to examination by a physician.

5. Fire-fighting Measures

Extinguishing Media:	Not required because the product is incombustible.
Extinguishing Media That Should Not Be Used:	Not applicable
Specific Fire Disaster:	Not applicable
Special Fire-fighting Procedures:	The product cannot cause fire because it is incombustible.
Protection of Fire Fighters:	Not applicable

6. Accidental Release Measures

Accidental Release Measures:	Leakage does not occur because the product is solid.
Recovery of the Leakage:	Leakage does not occur because the product is solid.

7. Handling and Storage Precautions

Handling:	Wear protective equipment such as rubber gloves and rain cape as needed to prevent skin contact with water deposited on the product. Wear protective glasses, dust mask, etc. as needed to prevent eye contact and nasal inhalation of dust released by cutting. Thoroughly remove dust deposited on work wears. Be sure to gargle and wash hands after handling. Install local ventilation equipment, etc., in indoor handling work sites where dust is released.
Storage:	Store in firm flat place. In construction sites, use palettes and fillers to avoid placing the products directly on the earth, put them on firm flat place, and be sure to store them covered with water-proof sheeting to prevent wetting.

8. Exposure Controls and Personal Protection

Not applicable because the product is typically solid, but refer to the following when dust is released due to cutting, etc.

Control Concentration: Mass concentration (inhalant dust) of working environment assess ment standard partially amended on April 1, 2005 by Ministerial Notification No. 79 of MHLW: 3.0 %/(0.59×Q+1) mg/m^3 (Q: free silicic acid content %)

Permissible Concentration:

Type 2 dust: (mineral dust containing less than 10% of free silicic acid) of Japan Society for Industrial Health (permissible concentration of 2009 edition)	Water absorbing crystalline silica	0.03mg/m^3	(TWA)
	Water absorbing dust	1 mg/m^3	(TWA)
	Total dust	4 mg/m^3	(TWA)
ACGIH (2006):	Crystalline silica	0.025 mg/m^3	(TWA)
	Water absorbing dust	3 mg/m^3	(TWA)
	Total dust	10 mg/m^3	(TWA)

Technical Facility Measures: For dust works such as cutting, grinding and boring, seal the source of dust release or install a dust collector (local exhaust equipment, dust removal equipment) to keep dust concentration below the control concentration.

Protective Equipment:

[Respiratory organ protective equipment]

Dust mask	Wear dust mask if concentration in work environment may exceed the standard written above. Concerning types of dust mask, use exchangeable dust masks or air fed dust masks that passed national assay. Pay special attention to contact with facial surface, and appropriately implement maintenance management such as inspection and exchange of filters.
[Eye protective equipment]	
Protective glasses	Use protective equipment suitable to works such as goggles and side shield safety glasses as needed.
[Skin protective equipment]	
Protective glasses	Wear work gloves as needed. Further, wear rubber gloves to prevent contact with water kept in contact with the product for a long time.
Hygiene measures	Be sure to gargle and wash hands after handling.

9. Physical and Chemical Properties

Physical state:

Appearance	Physical state····· Solid, plate Color ····· Product surface is colored Odor ····· No special odor
Density	0.9-1.3 g/cm3
Solubility	Difficult solubility in water, slightly soluble in acid
Other	Involatile

10. Stability and Reactivity

Stability:	Stable under typical handling conditions
Possibility of Hazardous Reaction:	Not applicable
Condition to be Avoided:	Dust proliferation
Hazardous Decomposition Products:	Not applicable

11. Toxicological Information

Acute Toxicity:

[Oral]	Classification not possible
[Dermal]	No data
[Inhalation (dust)]	No data
Skin corrosive and irritant properties	Skin contact for a long time may cause inflammation.
Serious eye damage, eye irritant property	Eye contact may cause inflammation.
Respiratory organ or skin sensitizing property	No data
Germ cell mutagenicity	Not classified
Carcinogenicity	Category 1A IARC68 (1997) 1 The U. S. National Toxicology Program (NTP) K Recommendation by Japan Society for Industrial Health (2009) 1 American Conference of Industrial Hygienists (ACGIH) A2
Reproductive toxicity	No data
Specific target Organ/systemic toxicity (Single exposure)	Category 1 (respiratory system)
Specific target Organ/systemic toxicity (Repeated exposure)	Category 1 (respiratory system, kidney)
Aspiration hazard	No data

12. Ecological Information

Ecotoxicity:	No data
Persistence and Biodegradability:	No data
Bioaccumulation Potential:	No data
Mobility in Soi:l	No data

13. Disposal Consideration

Dispose in accordance with laws concerning waste disposal and cleaning.

Alternatively, outsource to professionals approbated by the prefectural governor.

Classification: Wastes discharged from site of work-pieces: [Rubbles]
Wastes discharged from other than site of work-pieces: [Glass and pottery wastes]

Concerning disposal classification, ask related sections of prefectures.

14. Transport Information

Pay attention to water wetting.

Be sure to lay flat avoiding standing or stacking, and transport keeping levelness.

Strong vibration or impact may cause breakage.

After unpacking, carry the products vertically paying attention not to break corners by hitting or dropping.

15. Regulatory Information

Industrial Safety and Health Act: Notifiable substances (Article 57-2, Appended table 9 of Enforcement Order Article 18-2)

Appended table 1 of Ordinance on Prevention of Hazards Due to Dust

Pneumoconiosis Act:

Waste Disposal and Public Cleaning Law:

16. Other Information

References: Text for training method for creation of MSDS of mixture (chemical substance) corresponding to GHS (Japan Industrial Safety and Health Association)

Handout for the briefing session concerning “Display and MSDS notification system in the Industrial Safety and Health Act” (Osaka Labor Bureau)

Chemical substance safety data sheet (JIS Z 7250: 2005 Edition)

* This product safety data sheet offers information owned by KMEW at this time to business operators handling the product as the “Reference Information” for securing safety handling.

Although the content was prepared based upon the documents, information and data obtained so far, it may be revised with new knowledge.

Values of content, physical and chemical properties, hazards information and so forth are not guaranteed values.

Since the content applies to normal handling, we cordially ask you, in the case of special handling, to handle after implementing safety measures suitable for new usage and use method.