Material Safety Data Sheet

Material Name: Precast Stone Veneer

* * * Section 1 - Chemical Product and Company Identification * * *

Manufacturer Information

Dutch Quality Stone
P.O. Box 308
Mount Eaton, OH 44624

Phone: 330-359-7866
Fax: 330-359-5990

* * * Section 2 - Hazards Identification * * *

Emergency Overview

No unusual conditions are expected from this product. Inhalation of dusts produced during dry cutting, sawing, grinding, sanding, breaking, or drilling of this product may cause irritation of the respiratory tract.

Potential Health Effects: Eyes

Dust from this product may cause slight irritation to the eyes including redness, tearing and blurred vision. Such exposures require immediate first aid (see Section 4) and may require medical attention to prevent damage to the eye.

Potential Health Effects: Skin

Dust from this product may cause itching and short-term irritation.

Potential Health Effects: Ingestion

Ingestion of this product is unlikely. However, ingestion of product may produce gastrointestinal irritation and disturbances.

Potential Health Effects: Inhalation

Exposure to dust generated from Precast Stone Veneer in excess of the applicable TLV or PEL's (see Section 2) may cause or aggravate other lung conditions. Concrete Precast Stone Veneer contain mineral dust and crystalline silica which may be released as dust when dry cutting, sawing, grinding, sanding, breaking or drilling. Dusts of this product may cause irritation of the nose, throat, and respiratory tract by mechanical abrasion. Prolonged and repeated inhalation of respirable crystalline silica can cause silicosis, a chronic lung disease characterized by fibrosis and scarring of the lung tissue resulting in a decrease in lung function, breathlessness, wheezing, coughing and sputum production.

Short-term overexposures to extremely high concentrations of respirable crystalline silica can produce acute silicosis. Acute silicosis is a rapidly progressive, incurable lung disease that can be fatal; over exposure has reportedly caused death within 1 to 2 years. Symptoms include (but are not limited to) shortness of breath, cough, fever, weight loss, and chest pain.

Medical Conditions Aggravated by Exposure

Chronic respiratory or skin conditions may temporarily worsen from exposure to dust from this product. Precast stone veneer is not listed as a carcinogen by NTP, OSHA, or IARC. It contains crystalline silica, and may contain trace amounts of substances listed as carcinogens by these organizations: hexavalent chromium, lead compounds, mercury compounds, nickel compounds, arsenic, cadmium and cadmium compounds, cobalt II oxide, aniline, and possibility other chemicals which may result in exposures which require the following warning pursuant to California Proposition 65.

HMIS Ratings: Health: 1 **Fire:** 0 **HMIS Reactivity** 0

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

* * * Section 3 - Composition / Information on Ingredients * * *

CAS #	Component	Percent
65997-15-1	Portland cement	30-40
14808-60-7	Quartz	0-60
112945-52-5	Silica, amorphous, fumed, crystal-free	0-30
1344-28-1	Aluminum oxide	0-13.5
1310-73-2	Sodium hydroxide	0-10
1309-37-1	Iron oxide	0-5
1305-78-8	Calcium oxide	0-4.5
1308-38-9	Chromium (III) oxide	0-3
1309-48-4	Magnesium oxide fume	0-1

* * * Section 4 - First Aid Measures * * *

First Aid: Eyes

Immediately flush eye(s) with plenty of clean water for at least 15 minutes, while holding the eyelid(s) open. Occasionally lift the eyelid(s) to ensure thorough rinsing to remove all particles. Beyond flushing, do not attempt to remove material from the eye(s). Contact a physician if irritation persists or later develops.

First Aid: Skin

For skin contact, wash with soap and water. Contact a physician if irritation persists or later develops.

First Aid: Ingestion

Ingestion of this material is unlikely. If it does occur, watch the person for several days to make sure that partial or complete intestinal obstruction does not occur. Do not induce vomiting unless directed to do so by medical personnel.

First Aid: Inhalation

Do not induce vomiting. If inhaled, immediately remove the affected person to fresh air. Dust in throat and nasal passages should clear spontaneously. Contact a physician if irritation persists or later develops.

* * * Section 5 - Fire Fighting Measures * * *

General Fire Hazards

See Section 9 for Flammability Properties.
None identified

Hazardous Combustion Products

None

Extinguishing Media

This product is non-combustible. Use any extinguishing media appropriate for the surrounding fires.

Fire Fighting Equipment/Instructions

Firefighters should wear full protective gear.

NFPA Ratings: Health: 1 **Fire:** 0 **Reactivity:** 0
Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

* * * Section 6 - Accidental Release Measures * * *

Containment Procedures

Scoop up materials and put into a suitable container for disposal as a non-hazardous waste. Dust from dry cutting, sawing, grinding, sanding, or drilling of this material will settle out of the air. If concentrated on land, it can then be scooped up for disposal as a non-hazardous waste.

Clean-Up Procedures

Sweep up or gather material and place in appropriate container for disposal. Wash spill area thoroughly; do not wash into storm drains or water way. Wear appropriate protective equipment during cleanup. Avoid the generation of dusts during clean up.

Evacuation Procedures

Isolate area. Keep unnecessary personnel away.

Special Procedures

None

* * * Section 7 - Handling and Storage * * *

Handling Procedures

No special procedures are required for this material. Avoid breathing dusts from this material. Avoid dust contact with eyes and skin. Minimize generation of dusts. Promptly remove dusty clothing and launder before use.

Storage Procedures

No special procedures are required for this material.

* * * Section 8 - Exposure Controls / Personal Protection * * *

Exposure Guidelines

A: General Product Information

Concrete stone veneer contains mineral dust and crystalline silica, which may be released as dust when dry cutting, sawing, grinding, sanding, or drilling. Follow all applicable exposure limits if dusts are generated.

B: Component Exposure Limits

Portland cement (65997-15-1)

ACGIH: 1 mg/m3 TWA (particulate matter containing no asbestos and <1% crystalline silica, respirable fraction)
OSHA: 10 mg/m3 TWA (total dust); 5 mg/m3 TWA (respirable fraction)
NIOSH: 10 mg/m3 TWA (total dust); 5 mg/m3 TWA (respirable dust)

Quartz (14808-60-7)

ACGIH: 0.025 mg/m3 TWA (respirable fraction)
OSHA: 0.1 mg/m3 TWA (respirable dust)
NIOSH: 0.05 mg/m3 TWA (respirable dust)

Aluminum oxide (1344-28-1)

OSHA: 10 mg/m3 TWA (total dust); 5 mg/m3 TWA (respirable fraction)

Sodium hydroxide (1310-73-2)

ACGIH: 2 mg/m3 Ceiling
OSHA: 2 mg/m3 Ceiling
NIOSH: 2 mg/m3 Ceiling

Iron oxide (1309-37-1)

ACGIH: 5 mg/m3 TWA (respirable fraction)
OSHA: 10 mg/m3 TWA (fume)
NIOSH: 5 mg/m3 TWA (dust and fume, as Fe)

Calcium oxide (1305-78-8)

ACGIH: 2 mg/m3 TWA
OSHA: 5 mg/m3 TWA (not in effect as a result of reconsideration)
NIOSH: 2 mg/m3 TWA

Magnesium oxide fume (1309-48-4)

ACGIH: 10 mg/m3 TWA (inhalable fraction)
OSHA: 10 mg/m3 TWA (total particulate)

Engineering Controls

ACGIH and OSHA have determined that adverse effects are not likely to occur in the workplace provided exposure levels do not exceed the appropriate TLV/PEL. However, because of the wide variation in individual susceptibility, lower exposure limits may be appropriate for some individuals, including persons with pre-existing medical conditions such as those described below.

Ventilation:
General dilution ventilation and/or local exhaust ventilation should be provided as necessary to maintain exposures below occupational exposure limits. Dust collection systems may be necessary in some operations.

Local Exhaust Ventilation:
When dry cutting, sawing, grinding, breaking, or drilling precast stone veneer, use sufficient local exhaust to reduce the level of respirable dust to the applicable standards set forth in Section II. See ACGIH “Industrial Ventilation, A Manual of Recommended Practice.” Latest edition.

Work/Hygienic Practices:
Avoid creating and breathing dust. Do not eat, drink, or smoke in the work area.

Other Control Measures:

Respirable dust and quartz levels should be monitored regularly. Dust and quartz levels in excess of appropriate exposure limits should be reduced by feasible engineering controls, including (but not limited to) wet sanding, wet suppression, ventilation, and process enclosures. Respirators must be worn when such controls are not feasible or do not completely control dust generation.

PERSONAL PROTECTIVE EQUIPMENT

Personal Protective Equipment: Eyes/Face

When engaged in activities where particulate matter (dust) could contact the eye, wear safety glasses with side shields. Face shields should also be used when dry sawing precast stone veneer. Dust goggles should be worn when excessively (visible) dusty conditions are present or are anticipated, (See ANSI Z87.1). Contact lenses should not be worn when dry cutting, sawing, grinding, sanding, breaking, or drilling precast stone veneer.

Personal Protective Equipment: Skin

Wear leather / PVC or other appropriate work glove for type of operation.

Personal Protective Equipment: Respiratory

A properly fitted NIOSH or MSHA approved particulate filter respirator should be used in the in the context of respiratory protection program meeting the requirements of the OSHA respiratory protection standard (29 CFR 1910.134) to control exposures when ventilation or other controls (engineering or administrative) are inadequate or discomfort or irritation is experienced. Respirator and / or filter selection should be based on American National Standards Institute (ANSI) Standard Z88.2 Practices for Respiratory Protection.

Use respiratory protection in accordance with your company's respiratory protection program, local and OSHA regulations.

Personal Protective Equipment: General

Head Protection:

When working in areas where there is potential for injury to the head from falling objects, wear protective helmets that comply with ANSI Z89.1 (latest edition).

Foot Protection:

Wear appropriate foot protection that complies with ANSI Z41 (latest edition).

*** Section 9 - Physical & Chemical Properties ***

Appearance:	Cured concrete product of various shapes, sizes and colors.	**Odor:**	NA
Physical State:	Solid	**pH:**	NA
Vapor Pressure:	NA	**Vapor Density:**	NA
Boiling Point:	NA	**Melting Point:**	NA
Solubility (H2O):	NA	**Specific Gravity:**	NA
Evaporation Rate:	NA	**VOC:**	NA
Octanol/H2O Coeff.:	NA	**Flash Point:**	NA
Flash Point Method:	NA	**Upper Flammability Limit (UFL):**	NA
Lower Flammability Limit (LFL):	NA	**Burning Rate:**	NA
Auto Ignition:	NA		

*** Section 10 - Chemical Stability & Reactivity Information ***

Chemical Stability

This is a stable material.

Chemical Stability: Conditions to Avoid

Avoid dispersion of dust in air.

Incompatibility

None expected.

Hazardous Decomposition

None

Possibility of Hazardous Reactions

Will not occur.

* * * Section 11 - Toxicological Information * * *

Acute Dose Effects

A: General Product Information

Dusts from dry cutting, sawing, grinding, sanding, breaking, or drilling of this product may cause mechanical irritation to eyes and skin. Ingestion may cause transient irritation of throat, stomach and gastrointestinal tract. Inhalation may cause coughing, nose and throat irritation, and sneezing. Higher exposures may cause difficulty breathing, congestion, and chest tightness.

B: Component Analysis - LD50/LC50

Quartz (14808-60-7)
Oral LD50 Rat 500 mg/kg

Silica, amorphous, fumed, crystal-free (112945-52-5)
Oral LD50 Rat 3160 mg/kg

Aluminum oxide (1344-28-1)
Oral LD50 Rat >5000 mg/kg

Sodium hydroxide (1310-73-2)
Dermal LD50 Rabbit 1350 mg/kg

Iron oxide (1309-37-1)
Oral LD50 Rat >10000 mg/kg

Calcium oxide (1305-78-8)
Oral LD50 Rat 500 mg/kg

Carcinogenicity

A: General Product Information

CRYSTALLINE SILICA: The International Agency for Research on Cancer (IARC) concluded that there was “sufficient evidence in humans for the carcinogenicity of crystalline silica in the forms of quartz or cristobalite from occupational sources”, and that there is “sufficient evidence in experimental animals for the carcinogenicity of quartz and cristobalite.” The overall IARC evaluation was that “crystalline silica inhaled in the form of quartz or cristobalite from occupational sources is carcinogenic to humans (Group 1).” The IARC evaluation noted that all “carcinogenicity was not detected in all industrial circumstances studies. 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 noted that increased rates of lung cancer were reported among some workers in ore-mines, quarries, foundries, ceramics, granite and stone cutting industries. The workers in some of these occupational studies were exposed to other potential respiratory carcinogens such as arsenic, radon, diesel exhaust, polycyclic aromatic hydrocarbons or cadmium. The IARC reviewed animal studies and concluded that there is sufficient evidence in experimental animals for the carcinogenicity of quartz.

Silica-crystalline quartz has resulted in liver, blood, and lung tumors in rats by inhalation, intraperitoneal and intravenous injection, intratrachael, and intrapleural administration.

B: Component Carcinogenicity

Portland cement (65997-15-1)
ACGIH: A4 - Not Classifiable as a Human Carcinogen

Quartz (14808-60-7)

ACGIH: A2 - Suspected Human Carcinogen
NIOSH: potential occupational carcinogen
NTP: Known Human Carcinogen (Select Carcinogen)
IARC: Monograph 100C [in preparation] (listed under Crystalline silica inhaled in the form of quartz or cristobalite from occupational sources); Monograph 68 [1997] (Group 1 (carcinogenic to humans))

Silica, amorphous, fumed, crystal-free (112945-52-5)

IARC: Monograph 68 [1997] (listed under Amorphous silica) (Group 3 (not classifiable))

Iron oxide (1309-37-1)

ACGIH: A4 - Not Classifiable as a Human Carcinogen
IARC: Supplement 7 [1987]; Monograph 1 [1972] (Group 3 (not classifiable))

Chromium (III) oxide (1308-38-9)

IARC: Monograph 49 [1990]; Supplement 7 [1987]; Monograph 23 [1980]; Monograph 2 [1973] (Group 3 (not classifiable))

Magnesium oxide fume (1309-48-4)

ACGIH: A4 - Not Classifiable as a Human Carcinogen

*** Section 12 - Ecological Information ***

Ecotoxicity

A: General Product Information

No data available for this product.

B: Component Analysis - Ecotoxicity - Aquatic Toxicity

Sodium hydroxide (1310-73-2)

Test & Species		Conditions
96 Hr LC50 Oncorhynchus mykiss	45.4 mg/L [static]	

Calcium oxide (1305-78-8)

Test & Species		Conditions
96 Hr LC50 Cyprinus carpio	1070 mg/L [static]	

*** Section 13 - Disposal Considerations ***

US EPA Waste Number & Descriptions

Component Waste Numbers

No EPA Waste Numbers are applicable for this product's components.

Disposal Instructions

Precast Stone Veneer scrap is classified as a non-hazardous solid waste for disposal. Dispose of in accordance with existing federal, state and local environmental regulations.

Scrap Precast Stone Veneer as supplied do not meet any of the RCRA characteristics of hazardous waste (Ignitable, Corrosive, Reactive, or Toxic), nor are they listed Hazardous Waste [40 CFR § 261]

Dispose of packaging material by either recycling or at an appropriate landfill.
See Section 7 for Handling Procedures. See Section 8 for Personal Protective Equipment recommendations.

*** Section 14 - Transportation Information ***

US DOT Information

Shipping Name: Not regulated for transport

* * * Section 15 - Regulatory Information * * *

US Federal Regulations

A: General Product Information

No information available for the product.

B: Component Analysis

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 313 (40 CFR 372.65) and/or CERCLA (40 CFR 302.4).

Aluminum oxide (1344-28-1)

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

Sodium hydroxide (1310-73-2)

CERCLA: 1000 lb final RQ; 454 kg final RQ

State Regulations

A: General Product Information

No information available for the product.

B: Component Analysis - State

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

Component	CAS	CA	MA	MN	NJ	PA	RI
Portland cement	65997-15-1	No	Yes	Yes	Yes	Yes	Yes
Quartz	14808-60-7	No	Yes	Yes	Yes	Yes	Yes
Aluminum oxide	1344-28-1	Yes	Yes	Yes	Yes	Yes	Yes
Sodium hydroxide	1310-73-2	Yes	Yes	Yes	Yes	Yes	Yes
Iron oxide	1309-37-1	Yes	Yes	Yes	Yes	Yes	Yes
Calcium oxide	1305-78-8	Yes	Yes	Yes	Yes	Yes	Yes
Chromium (III) oxide	1308-38-9	No	Yes	No	Yes	No	No
Magnesium oxide fume	1309-48-4	Yes	Yes	Yes	Yes	Yes	Yes

The following statement(s) are provided under the California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65):

WARNING! This product contains a chemical known to the state of California to cause cancer.

Component Analysis - WHMIS IDL

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

Component	CAS #	Minimum Concentration
Quartz	14808-60-7	1 %
Aluminum oxide	1344-28-1	1 %
Sodium hydroxide	1310-73-2	1 %
Iron oxide	1309-37-1	1 %
Calcium oxide	1305-78-8	1 %
Chromium (III) oxide	1308-38-9	1 %

Additional Regulatory Information

Component Analysis - Inventory

Component	CAS #	TSCA	CAN	EEC
Portland cement	65997-15-1	Yes	DSL	EINECS
Quartz	14808-60-7	Yes	DSL	EINECS
Silica, amorphous, fumed, crystal-free	112945-52-5	No	DSL	No
Aluminum oxide	1344-28-1	Yes	DSL	EINECS
Sodium hydroxide	1310-73-2	Yes	DSL	EINECS
Iron oxide	1309-37-1	Yes	DSL	EINECS
Calcium oxide	1305-78-8	Yes	DSL	EINECS
Chromium (III) oxide	1308-38-9	Yes	DSL	EINECS
Magnesium oxide fume	1309-48-4	Yes	DSL	EINECS

* * * Section 16 - Other Information * * *

Other Information

THE INFORMATION AND RECOMMENDATIONS CONTAINED HEREIN ARE BASED UPON THE DATA REASONABLY BELIEVED TO BE CORRECT. HOWEVER, NO GUARANTEE OR WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, IS MADE WITH RESPECT TO THE INFORMATION CONTAINED HEREIN. THE PREPARER ACCEPTS NO RESPONSIBILITY AND DISCLAIMS ALL LIABILITY FOR ANY HARMFUL HEALTH EFFECTS WHICH MAY BE CAUSED BY EXPOSURE TO AIRBORNE DUST PARTICLES CREATED BY DRY CUTTING, SAWING, GRINDING, SANDING, BREAKING, OR DRILLING OF PRECAST STONE VENEER, NOR ANY OTHER INJURY RESULTING FROM THEIR USE. CUSTOMERS / USERS OF PRECAST STONE VENEER MUST COMPLY WITH ALL APPLICABLE HEALTH, SAFETY, AND ENVIRONMENTAL LAWS, REGULATIONS, AND ORDERS APPLICABLE TO THE SAFE HANDLING AND USE OF THE PRODUCT, TO DETERMINE.

Key/Legend

ACGIH = American Conference of Governmental Industrial Hygienists;
CAS #: CHEMICAL ABSTRACTS SERVICE REGISTRY NUMBER
CERCLA = Comprehensive Environmental Response, Compensation and Liability Act;
CFR = Code of Federal Regulations
DSL = Canadian Domestic Substance List
EPA = Environmental Protection Agency; TSCA = Toxic Substance Control Act;
HMIS = Hazardous Material Identification System;
IARC = International Agency for Research on Cancer;
LC50 = The concentration of material in air expected to kill 50% of a group of test animals;
LD50 =The lethal dose expected to kill 50% of a group of test animals;
mg/m3 = milligrams of substance per cubic meter;
NFPA = National Fire Protection Association;
NIOSH = National Institute for Occupational Safety and Health;
NTP = National Toxicology Program;
OSHA = Occupational Safety and Health Administration,
PEL = Permissible Exposure Limit;
SARA = Superfund Amendments and Reauthorization Act;
TLV = Threshold Limit Value;
TWA = Time Weighted Average;
WHMIS = Workplace Hazardous Materials Information System;