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Joshua 1:7, 8

MATERIAL SAFETY DATA SHEET

SECTION I

DATE PREPARED: JUNE 7, 2005

MANUFACTURER'S NAME: THE HAGERSTOWN BLOCK COMPANY
860 OAK STREET
HAGERSTOWN MD 21740

EMERGENCY TELEPHONE NUMBER: 301-733-3510

SECTION II HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

Product Identification: Portland Cement Concrete

Chemical Name: Mixture
Common Name: Portland Cement Product
Chemical Formula: Mixture Cementitious Material, aggregates and water
Trade Name: Ready Mixed Concrete; Concrete

Concrete is a mixture of inert gravel or rock, sand, Portland Cement and water. It may also contain chemical admixtures and/or flyash and/or granulated slag and/or silica fume, which have no effect on the hazards associated with the use of the product. The chemical admixtures are present in quantities comprising less than 1% of the material.

Hazardous Ingredients:	%
Portland Cement (CAS 65997-15-1)	10 - 20
Quartz (Si02) (CAS 14808-60-7)	3 - 7
Portlandite (Ca (OH)2) (CAS 1305-62-0)	2 - 4

The hazardous ingredients in plastic (wet) concrete cannot become airborne. However, water added to the materials reacts with some of the ingredients to form calcium hydroxide, a corrosive chemical which will irritate the eyes and skin upon contact. Concrete dust from dried Portland Cement Concrete may also contain hazardous ingredients in sufficient concentrations to cause skin, eye, or respiratory irritation.

SECTION III PHYSICAL/ CHEMICAL CHARACTERISTICS

Boiling Point: N/A **Specific Gravity:** Normal Range 1.5 to 2.9

Vapor Pressure: N/A **Melting Point:** N/A

Vapor Density: N/A **Evaporation Rate:** N/A

Solubility in Water: 0.1% **Physical State:** Plastic until becoming solid upon setting

Appearance and Odor: Odorless, Gray, Plastic, Flowable and Granular

SECTION IV FIRE AND EXPLOSION HAZARD DATA

Flash Point (Method Used): N/A

Flammable Limits: N/A **LEL:** N/A **UEL:** N/A

Extinguishing Media: N/A

Special Fire Fighting Procedures: None

Unusual Fire and Explosion Hazards: None

SECTION V REACTIVITY DATA

Stability: Unstable: ☐ Stable: ☒ **Conditions to Avoid:** None

Incompatibility (Materials to Avoid): None

Hazardous Decomposition or Byproducts: None

Hazardous Polymerization: May Occur: ☐ Will Not Occur: ☒ **Conditions to Avoid:** None

SECTION VI HEALTH HAZARD DATA

Route(s) of Entry: Inhalation? Yes **Skin?** Yes **Ingestion?** Yes

Health Hazards (Acute and Chronic):

Plastic concrete has an alkalinity level of pH12 to pH 13 which can cause skin and eye irritation.

Acute Exposure: Plastic concrete can cause alkali burns, ingestion may cause irritation the throat.

Chronic Exposure: Damage to the epidermis and dermis

Sawing or grinding of set or hardened concrete will result in the release of respirable crystalline quartz. Using water on the blade is recommended to reduce dust. Prolonged exposure to respirable crystalline quartz may cause delayed (chronic) lung injury (silicosis). Acute or rapidly developing silicosis may occur in a short period of time in heavy exposure. Silicosis, a form of disabling pulmonary fibrosis can be progressive and lead to death.

Carcinogenicity:

NTP? Yes

The National Toxicology Program (NTP) published its Sixth Annual Report on Carcinogens which concludes that "silica, crystalline (respirable)' may reasonably be anticipated to be a carcinogen. The NTP conclusion is based on sufficient evidence for the carcinogenicity of respirable crystalline silica in experimental animals and limited evidence in humans.

IARC Monographs? Yes

IARC Monographs on the Evaluation of the Carcinogenic Risk of Chemicals to Humans (volume 42, 1987) concludes that there is sufficient evidence for the carcinogenicity of crystalline silica to experimental animals, and that there is limited evidence of the carcinogenicity of crystalline silica to humans. IARC Class 2A.

Signs and Symptoms of Exposure: Breathlessness, wheezing, cough, sputum production.

Medical Conditions Generally Aggravated by Exposure:

Pre-existing lung diseases such as emphysema or asthma. Pulmonary function may be reduced by inhalation of respirable crystalline silica. Also lung scarring produced by such inhalation may lead to a progressive massive fibrosis of the lung which may aggravate other pulmonary conditions and diseases and which increases susceptibility to pulmonary tuberculosis. Progressive massive fibrosis may be accompanied by right heart enlargement, heart failure, and pulmonary failure. Smoking aggravates the effects of exposure.

Emergency and First Aid Procedures:

Eyes: For sand or dust in eyes during dry sawing or grinding, immediately flush generously with water for 15 minutes. If irritation persists seek medical attention.

Inhalation: Remove from exposure to airborne particulate, give artificial respiration as needed, seek medical attention as needed.

SECTION VII PRECAUTIONS FOR SAFE HANDLING AND USE

Steps to be taken in case material is released or spilled:

When dry sawing or grinding, use dustless system for handling, storage, and clean-up so that airborne dust does not exceed the PEL. Use adequate ventilation and dust equipment. Practice good housekeeping, do not permit dust to collect. Maintain, clean, and fit test respirators in accordance with OSHA regulations. Maintain and test ventilation and dust collection equipment. Using water on the blade is recommended may reduce dust. See control measures in Section VIII.

Waste Disposal Method:

Sweep and shovel into waste disposal containers. Flush with water hose for final clean-up of floors, or walkways. Normal breakage may be picked up and discarded as common waste. Residue from dry sawing and grinding operations should be disposed of in accordance with Federal, State, and Local regulations.

Precautions to be Taken in Handling and Storing: None

Other Precautions:

See OSHA Hazard Communication Rule 29 CFR Sections 1910.1200, 1915.99, 1917.28, 1918.90, 1926.59, and 1928.21 and State and local worker or community "right to know" laws and regulations. We recommend that smoking be prohibited in all areas where respirators must be used. WARN YOUR EMPLOYEES AND YOUR CUSTOMERS BY POSTING AND OTHER MEANS, OF THE HAZARD AND OSHA PRECAUTIONS TO BE USED. PROVIDE TRAINING FOR YOUR EMPLOYEES ABOUT THE OSHA PRECAUTIONS.

SECTION VIII CONTROL MEASURES

Respiratory Protection:

The following chart specifies the type of respirators which may provide respiratory protection for crystalline silica.

CONDITION	*RESPIRATORY PROTECTION FOR CRYSTALLINE SILICA MINIMUM RESPIRATORY PROTECTION**
Particulate Concentration	
Up to 5 X PEL	Any dust respirator
Up to 10 x PEL	Any dust respirator, except single-use or quarter-mask respirator. Any fume respirator or high efficiency particulate filter respirator. Any supplied -air respirator. Any self-contained breathing apparatus

CONDITION	*RESPIRATORY PROTECTION FOR CRYSTALLINE SILICA MINIMUM RESPIRATORY PROTECTION**
Particulate Concentration	
Up to 50 x PEL	A high efficiency particulate filter respirator with a full facepiece. Any supplied-air respirator with a full facepiece, helmet, or hood. Any self-contained breathing apparatus with a full facepiece.
Up to 500 x PEL	A powered air-purifying respirator with a high efficiency particulate filter. A type C supplied-air respirator operated in pressure-demand or other positive pressure or continuous-flow mode.
Greater than 500 x PEL or entry and escape from unknown concentration	Self-contained breathing apparatus with a full facepiece operated in pressure-demand or other positive mode. A combination respirator which includes a Type C supplied-air respirator with a full facepiece operated in pressure-demand or other positive pressure continuous-flow mode and an auxiliary self contained breathing apparatus operated in pressure-demand or other positive pressure mode.

**Only NIOSH-approved or MSHA-approved equipment should be used. (See 29 CFR 1910.134)*

Ventilation:

Local Exhaust: When dry sawing or grinding set or hardened concrete, use sufficient local exhaust to reduce the level of respirable dust to the PEL.

Mechanical:

See " Other Precautions" under Section VIL

Protective Gloves/Clothing or Equipment: Use gloves, boots and clothing to prevent skin contact. Wear safety glasses or goggles to prevent contact with eyes. Wear an approved respirator if exposed to dust from hardened concrete when sawing or using other demolition methods.

Eye Protection

When sawing or grinding hardened or set concrete, wear protective shield or tight fitting goggles (safety glasses).

The information and recommendations contained herein are based upon data 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 Hagerstown Block Company accepts no responsibility and disclaim all liability for any harmful health effects which may be caused by exposure to airborne dust particles created by dry sawing or grinding of our products. Customers or users of concrete masonry products must comply with all applicable health and safety laws, regulations, and orders.