BOEHMERS

Operating under Hargest Block Ltd.

MATERIAL SAFETY DATA SHEET

SECTION 1: PRODUCT INFORMATION	**Product Name:** **CONCRETE MASONRY PRODUCTS** **Product Identifier:** Block, Lintels, Pavers, SRW units, ACB, and Concrete Brick **Product Code:** **Manufacturer's Name and Address:** **Business No.:** **Emergency No.:** **Supplier's Name and Address:** **Business No.:** **Emergency No.:** **Product Use:** Concrete masonry products are used in a vide variety of applications in buildings and civil engineering projects. This MSDS covers many concrete masonry products. Individual composition of hazardous constituents will vary between types of concrete masonry products.

SECTION 2: HAZARDOUS INGREDIENTS	**Ingredients:** Finished Concrete Masonry Products typically contain the following hazardous ingredients: Sand, Aggregates and Flyash (containing Crystalline Silica –Quartz and Cristobalite) Limestone Cement Finished concrete masonry products are made with ingredients that are primarily nuisance dusts although some ingredients may contain crystalline silica. Some finished concrete masonry products may contain traces of residual materials from material enhancement additives such as plasticizers, accelerators, pigments or water repellents. **CAS #:** Silicon Dioxide SiO_2 (CAS 14808-60-7) Limestone (CAS 1317-65-3) Cement (CAS 65997-15-1 for Portland Cement) Flyash (Coal Ash by-product CAS 68131-74-8) Sand is also known as Silica, Flint, Sand, Crystalline Free Silica, Quartz, Ground Silica, Silica Flour. Limestone is also known as marble, marble chips and calcium carbonate. Cement is also known as Portland cement, cement kiln dust, kiln precipitator catch, waste kiln dust, and Round Granulated Blast Furnace Slag cement. Flyash is also known as boiler ash, coal ash byproduct, coal dust, coal flyash and pulverized flyash. **LC50 (species and route):** NA **LD50 (species and route):** NA

SECTION 3: PHYSICAL DATA	**Physical State (gas, liquid or solid):** Solid **Odour and Appearance:** Odourless Solid (various colors and shapes) **Odour Threshold:** NA **Specific Gravity:** NA **Vapour Pressure:** NA **Vapour Density:** NA **Evaporation Rate:** NA **Boiling Point:** None, solid. **Freezing/Melting Point:** None, solid. **pH:** NA **Coefficient of Oil/Water Distribution:** NA **Solubility in water:** Not Soluble **Specific Gravity:** NA

SECTION 4: FIRE AND EXPLOSION HAZARD	**Conditions of Flammability:** Non-flammable / Non-combustible **Flash Point and Method of Determination:** NA **Lower Flammable (Explosive) Limit (LFL/LEL):** NA **Upper Flammable (Explosive) Limit (UFL/UEL):** NA **Auto-ignition Temperature:** NA **Means of Extinction:** NA **Hazardous Combustion Products:** NA **Explosion Data - Sensitivity to Mechanical Impact:** NA **Explosion Data - Sensitivity to Static Discharge:** NA

SECTION 5: REACTIVITY DATA	**Unstable:** [ ] yes [**X**] **no** **If unstable, under which conditions?** NA **Incompatible Materials:** NA but concrete and limestone react with strong acids to liberate carbon dioxide. **Conditions of Reactivity:** None **Hazardous Decomposition Products:** The curing process for concrete masonry products may consume oxygen that should produce no significant hazard under normal operating conditions. Under extreme conditions in an enclosed environment, it could possibly produce an oxygen deficient environment unsuitable for continuous human occupancy. In an enclosed environment, adequate fresh air should be provided and suitable atmospheric testing should be conducted to verify the oxygen content is suitable. Also, hazardous polymerization of concrete masonry products will not occur.

SECTION 6: TOXICOLOGICAL PROPERTIES / HEALTH HAZARD DATA

Routes of Entry/Exposure:

[ ] Skin Contact
[ ] Skin Absorption
[ ] Eye Contact
[**X**] **Inhalation**
[ ] Ingestion

Inhalation is the primary route of entry for substances present in concrete masonry products.
Wet concrete products may cause irritation of the skin after direct skin contact due to the alkaline nature of components blended into the wet concrete slurry. Trace amounts of hexavalent chromium have also been associated with chromate sensitive contact dermatitis in workers exposed to wet cement or concrete. Dry concrete dusts are unlikely to produce skin irritation under expected conditions of exposure; however, if skin irritation is experienced, efforts should be made to prevent skin contact using good hygiene and protective equipment practices. Handling finished concrete masonry products can be abrasive to the skin. Ingestion is an unlikely route of entry in most occupational settings.

LD50: NA
LC50: NA
Effects of Acute Exposure to Product: Under normal conditions of handling and use, dust exposures from concrete masonry products should be minimal. Finishing processes such as sanding or cutting may release dusts containing respirable crystalline silica. Acute or rapidly developing silicosis may occur in a short period of time after heavy exposure. Silicosis is a form of disabling pulmonary fibrosis, which can be progressive and may lead to death. Bronchitis and tuberculosis are also diseases associated with inhalation of dusts containing respirable silica.
Effects of Chronic Exposure to Product: Under normal conditions of handling and use, dust exposures from concrete masonry products should be minimal. Finishing processes such as sanding or cutting may release dusts containing respirable crystalline silica. Prolonged exposure to dusts containing respirable crystalline silica may cause delayed (chronic) lung injury (silicosis). Some studies indicate an association with lung cancer from exposure to silica

Exposure Limits:

Substance	(1) OSHA PEL-TWA	(2) 2006 version of ACGIH TLV-TWA®	(3) NIOSH REL-TWA
Sand, Aggregates and Flyash containing crystalline silica (Quartz and Cristobalite)	See PEL formula below for Respirable silica-quartz	0.025 mg/m^3 (Respirable dust)	0.05 mg/m^3 (Respirable dust)
Limestone, Cement (as Portland Cement), Aluminum oxide and Flyash (All treated as Nuisance Particulates)	15 mg/m^3 Total dust 5 mg/m^3 Respirable dust	10 mg/m^3 Inhalable dust	10 mg/m^3 Total dust 5 mg/m^3 Respirable dust
Calcium oxide	5 mg/m^3 Total dust	2 mg/m^3 Inhalable dust	2 mg/m^3 Total dust

SECTION 6: TOXICOLOGICAL PROPERTIES / HEALTH HAZARD DATA **(CONTINUED)**	*Exposure Limits Standards Explanation* *(1) OSHA PEL*: The American Occupational Safety and Health Administration established Permissible Exposure Limits for the substances potentially present as components of concrete masonry dusts for 8-hour time-weighted average exposures. Exposure to respirable airborne crystalline silica shall not exceed an 8-hour time-weighted average limit as calculated using the formula below for Mineral Dusts: Silica, Crystalline Quartz (Respirable Dust): [10mg/m^3]/[%Quartz+2] For Cristobalite, use ½ the value calculated from the formula for Quartz. Respirable dusts are particles collected after passing through an appropriate size-selective sampling device meeting aerodynamic diameter criterion. *(2) ACGIH TLV*: The American Conference of Governmental Industrial Hygienists established Threshold Limit Values for the substances potentially present as components of concrete masonry dust for 8-hour time-weighted average exposures. The ACGIH TLVs are exposure standards recommended as a matter of good safety and health practice. *(3) NIOSH REL*: The American National Institute for Occupational Safety and Health (NIOSH) Recommended Exposure Limits established standard maximum permissible concentrations as determined by full shift sample up to a 10-hour work day, 40-hour work week. Note: The addition of Flyash and Round Granulated Blast Furnace cement may introduce trace metal contaminants. Exclusive use of Round Granulated Blast Furnace Cements in a typical concrete or masonry product mixture may add metallic oxides of Aluminum and Calcium. **Irritancy of Product:** NA **Sensitization to Product:** NA **Carcinogenicity:** Finished concrete masonry products are not considered to be carcinogenic. Concrete dusts created by mechanical finishing processes such as sawing and sanding may contain concentrations of respirable crystalline silica-quartz with carcinogenic classifications by the organizations listed below: The National Toxicology Program (NTP) published its Eleventh Annual Report on Carcinogens which concludes that “silica, crystalline (respirable)” is known to be a human carcinogen. The NTP conclusion is based on sufficient evidence for the carcinogenicity of respirable crystalline silica from studies in humans indicates a causal relationship between exposure and increasing lung cancer rates in workers exposed to crystalline silica was reviewed in IARC, 1997; Brown et. al., Horizdot, et. al., 1997 IARC Monographs on the Evaluation of the Carcinogenic Risk of Chemicals to Humans (volume 68, 1997) 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 Group 1 Carcinogenic to humans. **Reproductive Toxicity:** NA **Teratogenicity:** NA **Mutagenicity:** NA **Names of Toxicologically Synergistic Materials:** NA Signs and Symptoms of Exposure: Shortness of breath following physical exertion, severe cough, fatigue, loss of appetite, chest pains and fever. 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 may aggravate the effects of exposure.

SECTION 7: FIRST AID MEASURES	**Inhalation:** For gross inhalation, remove person immediately to fresh air, give artificial respiration as needed, seek medical attention as needed. **Skin:** Wash with cool water and a pH neutral soap or a mild skin detergent. Seek medical attention for rash, irritation, dermatitis. **Eyes:** For sand in eyes during dry sawing or grinding operations, immediately flush generously with water for 15 minutes. **Ingestion:** Do not induce vomiting. If conscious, have person drink plenty of water. Seek medical attention or contact poison control center immediately.

SECTION 8: PREVENTIVE MEASURES	**Engineering Controls:** Use local exhaust or general dilution ventilation or other suppression methods to maintain dust levels below exposure limits. When finishing tasks produce concrete dusts in excess of applicable exposure standards, use sufficient local exhaust to reduce the level of respirable dust below the applicable exposure standard. **Personal Protective Equipment:** Wear suitable protective gloves to prevent mechanical abrasion of the skin when handling finished concrete masonry products. **Protective Clothing:** Optional but promptly remove and launder clothing that is dusty. Thoroughly wash skin after exposure to dust. **Eye Protection:** When sawing or grinding concrete masonry products, wear protective shield or tight fitting goggles (safety glasses). **Respiratory Protection:** Utilize suitable approved respiratory protection devices whenever finished concrete or masonry products are used in a manner that produces dusts in excess of applicable exposure standards. Respirators should be selected based upon the exposure level encountered using industrial hygiene data and accepted respiratory protection practices. Since it is the respirable fraction of primary medical concern for dusts containing crystalline silica, it is advisable to utilize respiratory protection devices with High Efficiency Particulate Arresting capabilities (HEPA filtered). Consult a trained safety and health professional for assistance with proper selection of respiratory protection devices based upon your exposure situation. All use of respiratory protection devices should be done consistent with local statutory or regulatory requirements. It is also recommended that smoking be prohibited in all areas where respirators must be used. **Storage Requirements:** None. **Handling Procedures and Equipment:** Use wet methods whenever feasible to prevent generation of airborne dusts when finishing concrete or masonry products. Utilize wet methods for cutting, sanding or cleaning tasks that produce airborne dust whenever feasible. Avoid creating and breathing dust. Minimize skin contact using good hygiene and protective equipment practices. **Leak/Spill Clean-up:** Utilize wet methods to minimize airborne dust concentrations whenever feasible. When dry sawing or grinding, use dustless systems for handling, storage, and cleaning so that airborne dust does not exceed the permissible exposure limits. Use adequate ventilation and dust control/suppression equipment. Practice good housekeeping. Do not permit dust to collect on walls, floors, sills, ledges, machinery, or equipment. Maintain, clean, and fit test respirators in accordance with local statutory or regulatory requirements. Maintain and test ventilation and dust collection equipment. Wash or vacuum clothing which has become dusty. **Waste Disposal:** 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 local statutory or regulatory requirements. **Special Shipping Information:** WARN YOUR EMPLOYEES (AND YOUR CUSTOMERS – USERS IN CASE OF RESALE) BY POSTING, AND OTHER MEANS, OF THE HAZARDS AND PRECAUTIONS TO BE USED. PROVIDE TRAINING FOR YOUR EMPLOYEES ABOUT THESE PRECAUTIONS.

SECTION 9: PREPARATION INFORMATION	**Prepared by (Person, Group, Department, etc.):** CompClaim Management Inc. **Phone #:** 416-495-1072 **Preparation Date:** August 10th 2014

DISCLAIMER INFORMATION	**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. We accept 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/users of concrete masonry products must comply with all applicable health and safety laws, regulations, and orders.**