DYNA®
ADVANCED BUILDING SYSTEMS

SAFETY DATA SHEET (SDS) / OPTIMAX

Section 1 Product / Company Identification

Product Name		**OPTIMAX Grey, Beige**
Product Description		Cementitious Compound
Manufacturer & Address		DYNA Metro Inc. 37 Creditstone Road Concord, Ontario L4K 1N3 Canada
Manufacturer's Phone Number		+1 905.761.3309
Manufacturer's Facsimile		+1 905.761.2114
Date Of Issue		June 5, 2018
Prepared By		Mark Gagro
Emergency Phone Numbers	Canutech	1-613-996-6666 (Canada)
	Chemtrec	1-800-424-9300 (U.S.)

Section 2 Emergency And First Aid

Emergency Information

OPTIMAX Polymeric Sand (Product) contains a cementitious powder blend. When in contact with moisture in eyes or on skin, or when mixed with water, it becomes caustic (pH >12) and will damage or burn (as severely as third-degree) the eyes or skin. Inhalation may cause irritation to the moist mucous membranes of the nose, throat and upper respiratory system or may cause or may aggravate certain lung diseases or conditions. Use exposure controls or personal protection methods described in Section 12.

Eyes

Immediately flush eye thoroughly with water. Continue flushing eye for at least 15 minutes, including under lids, to remove all particles. Call physician immediately.

Skin

Wash skin with cool water and pH-neutral soap or a mild detergent. Seek medical treatment if irritation or inflammation develops or persists. Seek immediate medical treatment in the event of burns.

Inhalation

Remove person to fresh air. If breathing is difficult, administer oxygen. If not breathing, give artificial respiration. Seek medical help if coughing and other symptoms do not subside. Inhalation of large amounts of the Product requires immediate medical attention.

Ingestion

Do not induce vomiting. If conscious, have the victim drink plenty of water and call a physician immediately.

Section 3 Composition Information

Description

This product consists of a heterogeneous mixture of hydraulic cement and sand. The major compounds are:

$3CaO\ SiO_2$	Tricalcium Silicate	CAS # 12168-85-3
$2CaO\ SiO_2$	Dicalcium Silicate	CAS # 10034-77-2
$3CaO\ Al_2O_3$	Tricalcium Aluminate	CAS # 12042-78-3
$4CaO\ Al_2O_3\ Fe_2O_3$	Tetracalcium alumino ferrite	CAS # 12068-35-8
$CaSO_4\ 2H_2O$	Calcium Sulfate dihydrate (Gypsum)	CAS # 13397-24-5
SiO_2	Silica Sand	CAS # 14808-60-7

Section 4 Hazardous Ingredients

COMPONENT	CAS #	OSHA PEL	ACGIH TLV-TWA	NIOSH REL
Hydraulic Cement		5 mg respirable dust/m^3 15 mg total dust/m^3	10 mg total dust/m^3	
Calcium Sulfate	13397-24-5	5 mg respirable dust/m^3 15 mg total dust/m^3	10 mg total dust/m^3	
Iron Oxide	1309-37-1	10 mg/m^3	5 mg/m^3	
Cacium Carbonate	1317-65-3	5 mg respirable dust/m^3 15 mg total dust/m^3	10 mg total dust/m^3	
Magnesium Oxide	1309-48-4	15 mg total dust/m^3	10 mg total dust/m^3	
Calcium Oxide	1306-78-8	5 mg/m^3	2 mg/m^3	
Crystalline Silica	14808-60-7	10 mg respirable dust/m^3	0.5 mg respirable dust/m^3	0.05 mg respirable dust/m^3

Trace Ingregients — Due to the use of substances mined from the earth's crust, trace amounts of naturally occurring, potentially harmful constituents may be detected during chemical analysis.

Section 5 Hazardous Identification

Potential Health Effects

NOTE: Potential health effects may vary depending upon the duration and degree of exposure. To reduce or eliminate health hazards associated with this product, use exposure controls or personal protection methods as described in Section 12.

Eye Contact

(Acute/Chronic) Exposure to airborne dust may cause immediate or delayed irritation or inflammation of the cornea. Eye contact by larger amounts of dry powder or splashes of wet product may cause effects ranging from moderate eye irritation to chemical burns and blindness.

Skin Contact

(Acute) Exposure to dry product may cause drying of the skin with consequent mild irritation or more significant effects attributable to aggravation of other conditions. Discomfort or pain cannot be relied upon to alert a person to a hazardous skin exposure.

(Chronic) Dry Product coming in contact with wet skin or exposure to wet Product may cause more severe skin effects, including thickening, cracking or fissuring of the skin. Prolonged exposure can cause severe skin damage in the form of chemical (caustic) burns.

(Acute/Chronic) Some individuals may exhibit an allergic response upon exposure to the Product. The response may appear in a variety of forms ranging from a mild rash to severe skin ulcers.

Inhalation

(Acute) Exposure to the Product may cause irritation to the moist mucous membranes of the nose, throat and upper respiratory system. Pre-existing upper respiratory and lung diseases may be aggravated by inhalation.

(Chronic) Inhalation exposure to free crystalline silica may cause delayed lung injury including silicosis, a disabling and potentially fatal lung disease, and/or cause or aggravate other lung diseases or conditions.

Ingestion

(Acute/Chronic) Internal discomfort or ill effects are possible if large quantities are swallowed.

Carcinogenic Potential

The Product is not recognized as a carcinogen by NTP, OSHA, or IARC. However, it may contain trace amounts of heavy metals recognized as carcinogens by these organizations. In addition, it also contains crystalline silica which IARC classifies as a known human carcinogen (Group I). The NTP, in it's ninth Annual Report on Carcinogens, classified "silica, crystalline (respirable)" as a known carcinogen. (See also Sections 4 and 12.)

Section 6 Accidental Release Measures

Contain material to prevent contamination of soil, surface water or ground water. Use dry clean-up methods that do not disperse dust into the air or entry into surface water. Material can be used if not contaminated. Place in an appropriate labeled container for disposal or use. Avoid inhalation of dust and contact with skin and eyes. Use exposure control and personal protection methods as described in Section 12.

Section 7 Chemical And Physical Data

APPEARANCE/ODOR:	Grey, Beige Odorless	**PHYSICAL STATE:**	Solid (Powder mixed with sand.)
BOILING POINT:	> 1000°C	**MELTING POINT:**	> 1000°C
VAPOR PRESSURE:	Not applicable	**VAPOR DENSITY:**	Not applicable
pH (IN WATER) (ASTM D 1293-95)	12 to 13	**SOLUBILITY IN WATER:**	Slightly soluble (0.1% to 1.0%)
SPECIFIC GRAVITY (H2O = 1.0):	1.9	**EVAPORATION RATE:**	None

Section 8 Fire And Explosion

FLASH POINT:	None	**LOWER EXPLOSIVE LIMIT:**	None
AUTO IGNITION TEMPERATURE:	Not combustible	**UPPER EXPLOSIVE LIMIT:**	None
FLAMMABLE LIMITS:	Not applicable	**SPECIAL FIRE FIGHTING PROCEDURES:**	None
EXTINGUISHING MEDIA:	Not combustible	**UNUSUAL FIRE AND EXPLOSION HAZARDS:**	None
HAZARDOUS COMBUSTION PRODUCTS:	None		

Section 9 Stability And Reactivity Data

STABILITY:	Product is stable. Keep dry until used.
CONDITIONS TO AVOID:	Unintentional contact with water. Contact with water will result in hydration and produces (caustic) calcium hydroxide.
INCOMPATIBILITY:	Wet Product is alkaline. As such, it is incompatible with acids, ammonium salts and aluminum metal.
HAZARDOUS DECOMPOSITION:	Will not occur.

Section 10 Precautions For Handling And Storage

HANDLING AND STORAGE: Keep dry until used. Handle and store in a manner so that airborne dust does not exceed applicable exposure limits. Use adequate ventilation and dust collection. Use exposure control and personal protection methods as described in Section 10.

SPILLS: Use dry clean-up methods that do not disperse dust into the air or entry into surface water. Material can be used if not contaminated. Place in an appropriate container for disposal or use. Avoid inhalation of dust and contact with skin and eyes. Use exposure control and personal protection methods as described in Section 10.

Section 11 Toxological Information

See Section 5 for Hazard Identification. No recognized unusual toxicity to plants and animals.

Conditions Aggravated By Exposure: Eye disease, Skin disorders and Chronic Respiratory conditions.

Section 12 Personal Protection / Exposure Control

RESPIRATORY PROTECTION: Use local exhaust or general dilution ventilation to control dust levels below applicable exposure limits. Minimize dispersal of dust into the air.

If local or general ventilation is not adequate to control dust levels below applicable exposure limits or when dust causes irritation or dis comfort, use MSHA/NIOSH approved respirators.

EYE PROTECTION: Wear safety glasses with side shields or goggles to avoid contact with the eyes. In extremely dusty environments and unpredictable environments, wear tight-fitting unvented or indirectly vented goggles to avoid eye irritation or injury. Contact lenses should not be worn when handling cement or cement containing products.

SKIN PROTECTION: Wear impervious abrasion- and alkali-resistant gloves, boots, long-sleeved shirt, long pants or other protective clothing to prevent skin contact. Promptly remove clothing dusty with dry Product or clothing dampened with moisture mixed with the Product, and launder before re-use. If contact occurs, wash areas contacted by material with pH neutral soap and water.

Section 13 Personal Protection / Exposure Control

DISPOSAL: DO NOT DUMP INTO ANY SEWERS, ON THE GROUND OR INTO ANY BODY OF WATER. All disposal methods must be in compliance with all Federal, State/ Provincial and local laws and regulations of unusable or contaminated materials. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. Dispose of pack aging/containers according to local, state and federal regulations.

IF THIS MATERIAL AS PACKAGED, BECOMES A WASTE, IT DOES NOT MEET THE CRITERIA FOR A HAZARDOUS WASTE AS DEFINED BY THE ENVIRONMENTAL PROTECTION AGENCY UNDER THE AUTHORITY OF THE RESOURCE CONSERVATION AND RECOVER ACT (40CFR 261), DISPOSE OF IN ACCORDANCE WITH FEDERAL, STATE AND LOCAL REGULATIONS.

Section 14 Transportation Data

The Product is not hazardous under U.S. DOT or TDG regulations.

Section 15 Other Regulatory Information

Status under US OSHA Hazard Communication Rule 29 CFR 1910.1200:	The Product is considered a hazardous chemical under this regulation and should be included in the employer's hazard communication program.
Status under CERCLA/Superfund, 40 CFR 117 and 302:	Not listed.
Hazard Category under SARA (Title III), Sections 311 and 312:	The Product qualifies as a hazardous substance with delayed health effects.
Status under SARA (Title III), Section 313:	Not subject to reporting requirements under Section 313.
Status under TSCA (as of May 1997):	Some substances in the Product are on the TSCA inventory list.
Status under the Federal Hazardous Substances Act:	The Product is a hazardous substance subject to statutes promulgated under the subject act.
Status under California Proposition 65:	This product contains crystalline silica, a substance known to the State of California to cause cancer. This product also may contain trace amounts of heavy metals known to the State of California to cause cancer, birth defects or other reproductive harm.
Status under Canadian Environmental Protection Act:	Not listed.
Status under Canadian WHMIS:	The Product is considered to be a hazardous material under the Hazardous Products Act as defined by the Controlled Products Regulations (Class D2A, E - Corrosive Material) and subject to the requirements of WHMIS.

Section 15 Other 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. It is the user's obligation to determine the conditions of safe use of this product.