BIG 5 CONCRETE

MEGAFLEX

MATERIAL SAFETY DATA SHEET

1. IDENTIFICATION OF SUBSTANCE / PREPARATION AND THE COMPANY / UNDERTAKING

Product Name	MegaFlex Part A 10kg
Product Code	C400
Company	Epoxerite Products 5 van der Bijl Street Westonaria Gauteng South Africa
Telephone	086 1127 425
Telefax	086 6766 232
Website	www.treadstonecpm.co.za
Product	Portland Cement,pozolanics and extenders

2. HAZARD IDENTIFICATION

Identification	No GHS (Globally Harmonised System of classification and labelling of chemicals) identity. Classification and label as per SANS 10234.
Emergency Overview	C400 part A is a light grey powder that poses little immediate hazard. A single short-term exposure to the dry powder is not likely to cause serious harm. However, exposure of sufficient duration to wet Portland cement can cause serious, potentially irreversible tissue (skin or eye) destruction in the form of chemical (caustic) burns. The same type of tissue destruction can occur if wet or moist areas of the body are exposed for sufficient duration to dry C400
Potential Health Effects:	Relevant Routes of Exposure: Eye contact, skin contact, inhalation, ingestion. Effects resulting from eye contact: Exposure to airborne dust may cause immediate or delayed irritation or inflammation. Eye contact by larger amounts of dry powder or splashes of wet Portland cement may cause effects ranging from moderate eye irritation to chemical burns and blindness. Calcium oxide may cause acute corneal damage if sufficient amounts contact the cornea. Such exposures require immediate first aid (see Section 4) and medical attention to prevent significant damage to the eye. Effects resulting from skin contact: Discomfort or pain cannot be relied upon to alert a person to a hazardous skin exposure. Consequently, the only effective means of avoiding skin injury or illness involves minimising skin contact, particularly contact with wet cement. Exposed persons may not feel discomfort until hours after the exposure has ended and significant injury has occurred. Exposure to dry Portland cement may cause drying of the skin with consequent mild irritation or more significant effects attributable to aggravation of other conditions. Dry Portland cement contacting wet skin or exposure to moist or wet Portland cement 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 (alkali) chemical burns and could cause “contact dermatitis”. Persons already sensitised may react to their first contact with the product. Other persons may only experience this effect, for the first time, after years of contact with Portland cement products.

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Potential Health Effects:	Effects resulting from inhalation: Exposure to Portland cement may cause irritation to the moist mucous membranes of the nose, throat, and upper respiratory system. It may also leave unpleasant deposits in the nose. Portland cement may contain trace amounts of free crystalline silica. Prolonged exposure to respirable free crystalline silica can aggravate other lung conditions and cause silicosis, a disabling and potentially fatal lung disease. Iron oxide contained in fly ash, upon chronic exposure, may result in iron pigmentation of the lungs, siderosis, and benign pneumoconiosis. (Also see Carcinogenic potential" below) Effects resulting from ingestion: Although small quantities of dust are not known to be harmful, ill effects are possible if larger quantities are consumed. Portland cement should not be eaten. Carcinogenic potential: NTP, OHSA, or IARC do not list Portland cement as a carcinogen. It may, however, contain trace amounts of substances listed as carcinogens by these organisations. Crystalline silica, a potential trace level contaminant in Portland cement, is now classified by IARC as a known human carcinogen (Group 1). NTP has characterised respirable silica as "reasonably anticipated to be [a] carcinogen". Medical conditions, which may be aggravated by inhalation or dermal exposure: Pre-existing upper respiratory and lung diseases.

3. COMPOSITION

Tri-Calcium Silicate	<70 12168-85-3
Di-Calcium Silicate	<40 10034-77-2
Tetra-Calcium-Alumino-Ferrite	<18 12068-35-8
Tri-Calcium Aluminate	<15 12042-78-3
Calcium Sulphate	<10 Various
Magnesium Oxide	<5 1309-48-4
Calcium Oxide	<0.5 1305-78-8
Crystalline Silica	<0.2 14808-60-7
Chromates	<0.005 Various
Note: CAS = Chemical Abstract	Note: CAS = Chemical Abstract

4. FIRST AID

Inhalation	Remove exposed person to fresh air. If airways become inflamed, Seek medical advice
Skin	Wash with water & non-sensitizing soap
Eyes	Wash eyes with large volumes of water. Seek medical attention.
Ingestion	Ingestion in harmful quantities is unlikely to occur. If ingested drink plenty of water and consult a doctor immediately.
DO NOT INDUCE VOMITING.	
Other	Wet cement or Concrete: Treat as per caustic burns
Spillage Handling	Sweep or vacuum to minimize dust dispersion
Storage Requirements	Keep dry. Do not stack more than 12 loose bags high
Packaging and Labelling	In terms of SANS 10228
Inhalation	Exposure over long periods of time to very high concentrations may cause a cough with phlegm.
Skin Contact	Prolonged exposure could sensitize skin causing mild irritation or allergic dermatitis in extreme cases.
Ingestion	Ingestion in harmful quantities is unlikely to occur. If ingested drink plenty of water and consult a doctor immediately.
Materials to Avoid	Water

DO NOT INDUCE VOMITING.

Back Strain	As bags are heavy, prevent back & neck injuries by using proper bending & Lifting maneuvers.

5. FIRE FIGHTING MEASURES

Flash point*	None
Lower Explosion Limit	Limit None
Upper Explosion Limit	Limit None
Auto ignition temperature	Not combustible
Extinguishing media	Not combustible
Special fire fighting procedures	None
Hazardous combustion products	None
Unusual fire and explosion hazards	None

6. ACCIDENTAL RELEASE MEASURES

Collect dry material using a scoop. Avoid actions that cause dust to become airborne.
Avoid inhalation of dust and contact with skin. Wear appropriate personal protective equipment as described in Section 8.
Scrape up wet material and place in a disposable container. Allow the material to “dry” before disposal. Do not attempt to wash Portland cement down drains. Dispose of waste material according to local municipal regulations.

7. HANDELING AND STORAGE PROCEDURES

Keep C400 dry until used. Normal temperatures and pressures do not affect the material.
Promptly remove dusty clothing or clothing which is wet with GROUT liquids and launder before reuse. Wash thoroughly after exposure to dust or wet mixtures or liquids.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Skin protection	Prevention is essential to avoiding potentially severe skin injury. Avoid contact with unhardened Portland cement. If contact occurs, promptly wash affected area with soap and water. Where prolonged exposure to unhardened Portland cement products might occur, wear impervious clothing and gloves to eliminate skin contact. Where required, wear sturdy boots that are impervious to water to eliminate foot and ankle exposure. Do not rely on barrier creams: barrier creams should not be used in place of gloves. Periodically wash areas contacted by dry C400 Part A or by wet cement or concrete liquids with a pH neutral soap. Wash again after the task has been completed. If, at any time, skin irritation is experienced, immediately wash the affected area and seek treatment. Clothing that has become saturated with wet concrete should be removed and replaced with clean dry clothing, after washing any affected areas of skin.
Respiratory protection	Avoid actions that cause dust to become airborne. Use local and general ventilation to control exposures below applicable exposure limits. Use NIOSH/MHSA-approved (under 30 CFR 11) or NIOSH approved (under 42 CFR 84) respirators in poorly ventilated areas, if an applicable exposure limit is exceeded, or when dust causes discomfort or irritation.
Ventilation	Use local exhaust or general dilution ventilation to control exposure within applicable limits.
Eye protection	Where eyes are exposed to the risk of splashes or puffs of cement, wear safety glasses with side shields or goggles. In extremely dusty environments and unpredictable Environments, wear unvented or indirectly vented goggles to avoid eye irritation or injury. Contact lenses should not be worn when working with Portland cement or fresh cement products.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Grey powder
Odour	No distinct odour
Physical state	Solid (powder)
Solubility in water	Slightly soluble (0.1 to 1.0%)
Vapour pressure	Not applicable
Vapour density	Not applicable

Boiling point	(i.e. > 1000C)
Melting point	(> 1 500C)
Specific gravity	2,5
Flammability	Not applicable
Evaporation rate	Not applicable

10. STABILITY AND REACTIVITY

Stability	Stable
Conditions to avoid	Unintentional contact with water
Incompatibility	Wet Portland cement is alkaline. As such, it is incompatible with acids, ammonium salts and phosphorous. Fly ash will react violently with bromine difluoride, fluorine, hydrogen fluoride, and phosphorus
Hazardous decomposition	Will not spontaneously occur. Adding water produces (caustic) calcium hydroxide
Hazardous polymerisation	Will not occur

11. TOXILOGICAL INFORMATION

Summary of toxicology
Cement dust may irritate the eyes and may cause dermatitis. There are reports of increased incidence of bronchitis and chest x-ray changes after prolonged heavy exposure to undefined mixtures of cement and other dusts. Exposure to cement can cause chronic conjunctivitis, blepharitis, and skin ulcers of the nose. Repeated and prolonged skin contact with cement can result in dermatitis of the hands, forearms and feet – this is a primary irritant dermatitis and may be complicated in some instances by allergic reactions.

12. ECOLOGICAL INFORMATION

Dispose of waste material according to local municipal, provincial and national regulations. (Since Portland cement is stable, dry uncontaminated material may be saved for future use.) Dispose of bags in an approved landfill or incinerator.

Eco-toxicity	No recognised unusual toxicity to plants or animals
Aquatic toxicity (Fish, Daphnia and Algae)	Non-toxic in small quantities. Large quantities especially in static water will result in an increase in pH up to pH 12 or more. pH changes may result in death of aquatic life

13. DISPOSAL CONCIDERATIONS

Dispose of waste material according to local municipal, provincial and national regulations. (Since Portland cement is stable, dry uncontaminated material may be saved for future use.) Dispose of bags in an approved landfill or incinerator

14. TRANSPORT

Hazardous materials description/proper shipping name Portland cement is not hazardous under National Road Traffic Act, Act 93 of 1996 regulations and SANS 10228 (The identification and classification of dangerous goods for transport).

Hazard class	Not applicable.
Identification number	Not applicable.
Required label text	Not applicable.
Hazardous substances/ reportable quantities (RQ)	Not applicable.
U.N. number	Portland cement and cement blends are not hazardous cargo in terms of the International Maritime Dangerous Goods Code and as such do not have a U.N. number

15. REGULATORY INFORMATION

REGULATORY INFORMATION	Status under OHSA, Act 85 of 1993 Reg.1179 dd 25/08/95 Portland cement is considered a "hazardous chemical" under this regulation*, and should be part of any hazard communication programme. Recommended exposure limits are for dust concentrations only

16. OTHER INFORMATION

C400 part A should only be used by knowledgeable persons. While the information provided in this Material Safety Data Sheet is believed to provide a useful summary of the hazards of C400 part A that may be needed in every situation. Inexperienced product users should obtain proper training before using this product.