SAFETY DATA SHEET *CONCRETE*

COMPANY INFORMATION

Eastern Concrete Ltd
Ernest Nunn Road
Stowmarket Business Park
Stowmarket
IP14 2ED
Tel: 01449 773822

COMPOSITION / DESCIPTION OF MATERIAL

A mixture of:
A cementitious material which may be cement or a mixture of cement with an addition (e.g. fly ash, ground granulated blast furnace slag or silica fume)
Fine and coarse aggregate
Water
Admixtures or additives may be added to modify the properties of the fresh or hardened concrete. Pigments may be added to colour the product.
The resultant mixture is abrasive and alkaline

HAZARD IDENTIFICATION

Due to the high alkalinity, wet concrete may provoke skin and eye irritation. Contact with strongly alkaline solutions such as concrete can initially cause nerve damage and chemical burns may occur without the person being aware because they do not feel any pain.
Contact with wet cement mixes such as wet concrete can also cause skin disease. Irritant contact dermatitis is caused by the combination of the wetness, alkalinity and abrasiveness of the ready-mixed concrete. Allergic contact dermatitis may be caused by individual sensitivity to chromium compounds in cement. Levels of soluble chromium VI are kept below 2 ppm (0.0002%) of the total dry weight of the cement according to legislation
Wet concrete is not likely to create dust, but respirable dust may be released by the surface treatment, cutting or drilling of hardened concrete. If inhaled in excessive quantities over a prolonged period or extended period, respirable dust can constitute a long term health hazard. Respirable crystalline silica (quartz) has been associated with the lung disease silicosis. The quartz content of the aggregate used in concrete will vary depending on the type of mineral deposit from which the aggregate originated.

FIRST AID MEASURES

Eye Contact: Immediately irrigate with clean water for at least 10 minutes. Seek medical attention.
Inhalation: Inhalation is unlikely, but if concrete dust is inhaled, remove to fresh air. If breathing difficulties, discomfort or inflammation are experienced, seek medical attention.
Skin Contact: Where skin contact occurs with wet concrete, either directly or through saturated clothing, the concrete must be washed off immediately with soap and water. Where concrete enters boots, gloves or saturates clothing, the article should be removed immediately and washed before further use. Seek medical attention if skin irritation (redness, rash, blistering) or burns occur.
Ingestion: If person is conscious, rinse out mouth and give plenty of water to drink and seek further medical attention. Do not induce vomiting and never give anything by mouth to an unconscious person.

FIRE FIGHTING MEASURES

None Required. Material is not flammable

ACCIDENTAL RELEASE MEASURES

Personal Protection

Avoid skin and eye contact. Wear protective clothing

Environmental measures

Avoid entering drains, sewers or water courses

HANDLING AND STORAGE

Wet Concrete

Avoid skin and eye contact. The mixture is abrasive and highly alkaline

Concrete dust

Cutting and surface treatment of hardened concrete should be worked to minimise the creation of airborne dust. Engineering control measures such as containment and local exhaust ventilation should be applied when airborne dust exposure levels are approached.

EXPOSURE CONTROLS/PERSONAL PROTECTION

Take measures to prevent

Direct skin contact with fresh concrete should be avoided. It is also important not to kneel or sit on the material as harmful contact can occur through saturated clothing.

The surface treatment and cutting of hardened concrete can create dust which may contain quartz. If inhaled in excessive quantities over an extended period, respirable dust containing quartz can constitute a long term health hazard

Exposure Control Limits / Source

Total Dust: O.E.S 10mg/m^3	8 Hours T.W.A.
Respirable Dust: O.E.S 4mg/m^3	8 Hours T.W.A.
Respirable Quartz: M.E.L. 0.3mg/m^3	
Crystalline Silica SiO_2	8 Hours T.W.A.

O.E.S. Occupational Exposure Standard
M.E.L. Maximum Exposure Level
T.W.A. Time Weighted Average [2]

Concrete dust protection

Respiratory protection: Suitable respiratory protective equipment to HSE approved standard.
Hand protection: Abrasive resistant gloves.
Eye protection: To HSE approved standard for dust goggles.
Skin protection: Overalls.

Wet concrete personal protection

Hand protection: Impervious gloves.
Eye protection: Goggles to HSE approved standard.
Skin protection: Long sleeved clothing, full length trousers and impervious boots.

PHYSICAL AND CHEMICAL PROPERTIES

A mixture of aggregate, cementitious materials and water.
Abrasive and Alkaline typically **pH10-14**

TOXICOLOGICAL INFORMATION

Wet Concrete

Eye contact: May cause irritation or in severe cases, alkali burns.

Skin contact: Short term exposure may cause alkali burns; may cause acute allergic dermatitis in people sensitised to chromium compounds. Long term exposure may cause irritant contact dermatitis; may lead to sensitisation of the skin to chromium compounds

Dry Concrete Dust

Eye contact: May cause transient irritation

Skin contact: Unlikely to cause harm on brief or occasional contact.

Inhalation: Inhalation of large quantities of respirable silica may lead to progressive lung damage. This may cause permanent disability and in extreme cases, may be fatal.

Ingestion: No harm likely.

Chronic: Exposure to high levels of silica may case silicosis.

ECOLOGICAL INFORMATION

Environmental Assessment When used and disposed of as intended, no adverse environmental effects are foreseen.

DISPOSAL INFORMATION

Not classified as hazardous waste. However, disposal subject to local authority current requirements and regulations

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TRANSPORT INFORMATION

Not hazardous: no vehicle labelling required

REGULATORY INFORMATION

Statutory provisions

Health and Safety at Work, Act 1974
Consumer Protection Act 1987
Environmental Protection Act 1990
Control of Substances Hazardous to Health Regulations (COSHH) 1994

Guidance notes

Occupational Exposure Limits (EH40)
Local Exhaust Ventilation (HS(G)37)
Crystalline Silica (EH59)
Control of Respirable Silica in Quarries (HS(G)73)
Dust, General Principles of Protection (EH44)
Waste Management - The Duty of Care

The above publications are available from HMSO or HSE