HEALTH & SAFETY DATA SHEET

Issue Date: November 2016

1a Identification of Substance

Ready-mixed Concrete

1b Name of Company

Grange Quarry Ltd
Kirkburn Industrial Estate
Lockerbie
Dumfries and Galloway
DG11 2FF

2 Composition/Information on Ingredients

Ready mixed concrete is a mixture of:

Cement - or a mixture of cement with ground granulated blastfurnace slag or pulverised fly ash or silica fume.

Aggregate.

Water.

Admixtures - may be added to improve the properties of fresh or hardened concrete. Pigments may be added to colour the concrete.

Proportions vary depending on the requirements of the concrete.

The resultant mixture is abrasive and highly alkaline.

3 Hazards Identification

Skin
Contact with wet cement and concrete can cause the following skin damage:

Cement burns – a form of skin ulceration, caused by extended contact with wet concrete. Wet cement is highly alkaline and has a pH value of about 12.5.

Irritant contact dermatitis - caused by the combination of the alkalinity and abrasiveness of wet concrete.

Allergic contact dermatitis – may be caused by individual sensitivity to haxavalent chromate ions, which can occur in cement.

Eyes
Contact can cause irritation, inflammations or burns.

Ingestion
Swallowing small amounts of concrete is unlikely to cause any significant reaction. Larger amounts can cause irritation of the stomach and intestines.

4 First Aid Measures

Summary of First Aid Procedures

Inhalation
Not applicable.

Skin Contact
Where contact occurs, whether directly or through saturated clothing, wash immediately with soap and water.
If concrete enters boots or gloves or saturates clothing, the article should be removed immediately and washed before further use.

Eye Contact
Immediately and thoroughly irrigate with water.

Ingestion
Wash out mouth. Drink plenty of water. Do not induce vomiting. Seek medical advice if a large amount is swallowed.

5 Fire Fighting Measures

Suitable Extinguishing Media
Not required.

Unsuitable Extinguishing Media
Not applicable.

Special Exposure Hazards in Fire
None.

Special Protective Equipment for Fire Fighters
None.

6 Accidental Release Measures

Personal Precautions
Use Personal Protection Equipment – see Section 8.

Environmental Precautions
Entry into watercourses should be avoided.

Methods for Cleaning
No special requirements but clean without delay before concrete hardens.

7 Handling and Storage

Handling
Skin contact should be avoided. Wet concrete is abrasive and highly alkaline.

Storage
The hardening process of wet concrete takes time. Until the concrete has hardened the precautions given in this data sheet should continue to be taken and access by unauthorised persons should be prevented.

8 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 concrete as harmful contact can occur through saturated clothing.

The surface treatment and cutting of hardened concrete, which may contain high silica aggregates, can create dust. If inhaled in excessive quantities over a long period, concrete dust containing silica can constitute a long-term hazard.

Exposure Control Limits / Source

O.E.S. = Occupational Exposure Standard
T.W.A. = Time Weighted Average
M.E.L. = Maximum Exposure Limit

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: Crystalline Silica SiO_2	M.E.L. 0.1mg/m^3 8 hours T.W.A.

Respiratory Protection
Suitable respiratory protective equipment to HSE standards.

Hand Protection
Impervious gloves.

Skin Protection
Long sleeved, full length trousers, knee pads if kneeling on concrete and impervious boots.

Eye Protection
Goggles if there is a risk of accidental splashing.

9 Physical and Chemical Properties

Appearance	Grey, granular paste
Odour	None
pH	Highly alkaline, pH10 - 14
Boiling Point/Range	Not determined
Melting Point/Range	Not determined
Flash Point (^{0}C)	Not applicable
Flammability	Not applicable
Auto Flammability	Not applicable
Explosive Properties	Not applicable
Oxidising Properties	Not applicable
Vapour Pressure	Not applicable
Relative Density	Above 2.0, Ave. 2.3
Water Solubility	Dependant on rock type
Fat Solubility	Not determined

10 Stability and Reactivity

Conditions to Avoid
None.

Materials to Avoid
None.

Hazardous Decomposition Products
None.

11 Toxicological Information

Skin contact could result in dermatitis and skin burns or disease. Eye contact may cause irritation or in severe case alkali burns

Inhalation of respirable dust from the surface treatment or cutting of hardened concrete can cause permanent lung damage.

12 Ecological Information

Possible Effects
None.

Behaviour
Non hazardous.

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

13 Disposal Consideration

Likely Residues / Waste Product
Alkaline slurry.

Inert hardened material.

Safe Handling of Residues / Waste Product
Aggregates are inert but should be disposed of in accordance with local and national legal requirements. See the Environmental Protection Act 1990 “Duty of Care” and other current legislation.

14 Transport Information

Special Carriage Requirements
Not hazardous – no vehicle labelling required.

15 Regulatory Information

Chemicals Regulations 1997
Danger Classification: IRRITANT (+ hazard symbol)

16 Other Information

Training Advice
Wear and use of Personal Protective Equipment.

Emergency Contact
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Key Data Used to Compile this Data Sheet
HSE Guidance Note EH40/99
PPE Regulations 1992
COSHH Regulations 1994
Environmental Protection Act 1990
HSE Crystalline Silica EH59
HSE CHAN 35