

Material Safety Data Sheet

October 2015



Product Description:	READY- MIXED CONCRETE For further details of the specification refer to the relevant Technical Data Sheet or Design Certificate.
Manufacturer / Supplier:	Pat Munro (Alness) Ltd Caplich Quarry Alness Ross-shire IV17 0XU
Product Description / Material Composition:	Ready-mixed concrete is a mixture of: - A cementitious material which may be a 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 proportions of the components will vary according to the required properties of the product.

Hazards	<p>Classified as hazardous (irritant) in accordance with the Chemicals (Hazard Information and Packaging for Supply) Regulations.</p> <p>Xi - Wet concrete can cause serious alkali burns if in direct contact with skin or eyes.</p> <p>Skin - Alkali burns, a form of skin ulceration, may result from contact with freshly mixed concrete. Contact with strongly alkaline solutions such as concrete can initially cause nerve damage. 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 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 which may occur in cement.</p> <p>Eyes - Wet concrete in contact with eyes can cause irritation, inflammation or serious alkali burns, which may lead to blindness.</p> <p>Ingestion - Swallowing small amounts of fresh concrete is unlikely to cause any significant reaction. Larger amounts can cause irritation of the stomach and intestines.</p> <p>Inhalation - Wet concrete is not likely to create dust, but respirable dust may be released by the surface treatment and 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.</p> <p>Dusts containing Respirable Crystalline Silica (quartz) present a greater hazard. Long-term exposure to respirable dust can lead to respiratory system damage and disease. Respirable crystalline silica has been associated with the lung disease silicosis. The quartz content of the product will vary, and is related to the type of aggregate used in the production of the concrete. Advice on the quartz content and other chemical information is available from the Technical and Commercial Manager.</p>
----------------	---

First Aid Measures
<p>Inhalation: If concrete dust is inhaled, remove to fresh air. If breathing difficulties or inflammation are experienced, seek medical attention.</p> <p>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 or gloves, or saturates clothing, the article should be removed immediately and washed before further use.</p> <p>Eye Contact: Immediately and thoroughly irrigate with copious amounts of eye wash solution or clean water. Seek medical attention immediately.</p> <p>Ingestion: Remove to fresh air. If person is conscious, rinse out mouth and give water to drink. Seek medical advice.</p>

Material Safety Data Sheet

October 2015



Fire Fighting Measures	
Suitable Extinguishing Media:	Not Applicable
Unsuitable Extinguishing Media:	Not Applicable
Special Exposure Hazards in Fire:	None
Special Protective Equipment for Fire Fighters:	None

Accidental Release Measures
<p>Personal Precautions: Avoid contact with skin and eyes. Wear impervious clothing, gloves and boots. Wear eye protection. See Section 8 for guidance on personal protective equipment. See Section 7 for guidance on handling the product.</p> <p>Environmental Precautions: Prevent wet concrete from entering watercourses, ditches and drains.</p> <p>Methods for Cleaning: Clean up any spillage before the concrete hardens, using suction or mechanical removal methods.</p>

Handling and Storage
<p>Handling Avoid skin and eye contact. Wet concrete can cause serious alkali burns if in direct contact with skin or eyes. Contact with concrete may also cause skin disease 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 which may occur in cement. Do not sit or kneel on wet, un-hardened concrete without wearing the correct personal protective equipment. Where concrete enters boots or gloves, or saturates clothing, the article should be removed immediately and washed before further use. Refer to Section 8 for guidance on personal protection.</p> <p>Storage Ready-mixed concrete is normally used upon receipt. However, the hardening process of ready-mixed concrete can be delayed by the use of additions and/ or admixtures, extending the period during which the precautions given in this data sheet should continue to be taken and during which time access by unauthorised persons should be prevented. Refer to the relevant Technical Data Sheet or Design Certificate for the specific product.</p>

Exposure Controls / Personal Protection	
Take Measures to Prevent:	<p>a) Direct skin or eye contact with fresh concrete. It is also important not to kneel or sit on the fresh concrete as harmful contact can occur through saturated clothing.</p> <p>b) Inhalation of dust created by the surface treatment and cutting of hardened concrete which may contain quartz. If inhaled in excessive quantities over an extended period, respirable dust containing quartz can constitute a long term health hazard.</p>
Exposure Control Limits / Source:	<p>Total Dust - WEL 10mg/m³ 8 Hrs T.W.A. Respirable Dust - WEL 4mg/m³ 8 Hrs T.W.A. Respirable Quartz WEL 0.1 mg/m³ 8 Hrs T.W.A. Crystalline Silica SiO₂ WEL = Workplace Exposure Limit T.W.A. = Time Weighted Average Inhalation - Avoid breathing dust. Eyes, Skin & Hands - S24/25 - Avoid contact with skin and eyes. S36/ 37/ 39 - Wear suitable protective clothing, gloves and eye / face protection. Control Measures - Dust caused by cutting or drilling hardened concrete should be controlled by containment, suppression and extraction/ filtration where possible.</p>

Material Safety Data Sheet

October 2015



Respiratory Protection:	Suitable respiratory protection should be used to protect against inhalation of dust, and to ensure exposure is below the Workplace Exposure Levels given at the start of this section.
Hand Protection:	Impermeable gloves should be worn.
Eye Protection:	Goggles should be worn if there is a risk of product entering the eyes (including dust).
Skin Protection:	Overalls and/or long-sleeved jackets and full length trousers should be worn to protect skin from contact with wet concrete. Outer clothing should be waterproof if contact with wet concrete is likely. Wear impermeable boots to protect feet. Safety wellington boots should be worn. If working with wet concrete, with waterproof trousers pulled over them to help prevent concrete entering the boots. If concrete saturates clothing, or enters gloves or boots, remove the articles immediately and wash before wearing again. In addition to the above, the use of skin barrier cream and aftercare products is also recommended.
NOTE: Hands should be washed thoroughly before handling or eating food or drink.	

Physical and Chemical Properties	
Appearance:	Appearance: Grey, granular paste unless pigmented.
Odour:	Odour: Slight, earthy odour
pH:	pH: Typically 10-14
Boiling Point / Range:	Not Determined
Melting Point / Range:	Not Determined
Flash Point:	Not Applicable
Auto Flammability:	Not Applicable
Explosive Properties:	Not Applicable
Oxidising Properties	Not Applicable
Vapour Pressure:	Not Applicable
Relative Density:	Above 2.0
Water Solubility:	Dependent on Aggregate Type
Fat Solubility:	Not Determined

Stability and Reactivity: No safety issues relating to stability and reactivity of product under normal conditions.

Toxicological Information
<p>Inhalation: If inhaled over a prolonged or extended period, respirable dust from drilling or cutting hardened concrete can lead to respiratory system damage and disease. Respirable crystalline silica has been associated with the lung disease silicosis.</p> <p>Skin Contact: Skin contact with wet concrete could result in serious alkali burns. Contact with concrete may also cause skin disease 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 which may occur in cement.</p>

Material Safety Data Sheet

October 2015



Eye Contact: Wet concrete in contact with eyes can cause irritation, inflammation or serious alkali burns, which may lead to blindness.
Ingestion: Ingestion is very unlikely. Ingestion of large amounts may cause irritation of the stomach and intestines. Seek medical attention.

Ecological Information

Environmental Assessment:	When used and disposed of as intended, no adverse environmental effects are foreseen, and concrete should not pose a significant ecological hazard. Prevent wet concrete entering watercourses, ditches & drains.
Mobility:	Will vary depending on physical state. Do not allow wet cement to enter watercourses.
Persistence and Degradability:	Hardened concrete is classed as inert and can be easily recycled.
Ecotoxicity:	Prevent wet concrete entering watercourses, ditches & drains. Wet cement will create anaerobic conditions in watercourses.

Disposal Considerations

Likely Residues / Waste Product:	Hardened concrete is readily recyclable.
Safe Handling of Residues / Waste Product:	Hardened concrete is classed as non-hazardous and 'inert' but should be disposed of in accordance with local and national legal requirements. Hardened concrete can be readily recycled.

Transport Information

Special Carriage Requirements:	None – not classified as dangerous for transport.
---------------------------------------	---

Regulatory, Other and Further Information

Classification: **Irritant**
Risk Phrases:
R34 - May cause burns.
R38 - Irritating to the skin. **Xi**
R41 - Risk of serious damage to the eyes.
R43 - May cause sensitisation by skin contact.
Safety Phrases:
S2 – Keep out of reach of children.
S24/25 - Avoid contact with skin and eyes.
S26 - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S36/ 37/ 39 - Wear suitable protective clothing, gloves and eye / face protection.

Material Safety Data Sheet

October 2015



16. Other Information

Training Advice:

Wearing and use of PPE.

Recommended Uses and Applications:

Industrial and construction applications.

Further Information:

Technical and Commercial Manager,

Email: info@patmunro.co.uk

Telephone: 01349 882377

Web: www.patmunro.co.uk

Key Data Used to Compile Data Sheet:

HSE Guidance Note EH40/2007

PPE Regulations 1992

COSHH Regulations 2002

Environmental Protection Act 1990

HSE Crystalline Silica EH59

Prepared in accordance with Annex II of the REACH Regulation (EC)

1907/2006

Legal Notice

The information in this Safety Data Sheet was believed to be correct at the time of issue. However, no warranty is made or implied as to the accuracy or completeness of this information. If you have purchased this product for supply to a third party for use at work, it is your duty to take all necessary steps to ensure that any person handling or using the product is provided with the information in this sheet. If you are an employer, it is your duty to tell your employees and others who may be affected of any hazards described in this sheet and any of the precautions which should be taken. This Safety Data Sheet does not constitute the user's own assessment of workplace risk. It is the user's sole responsibility to take all necessary precautions when using this product.