

SAFETY INFORMATION

READY-MIXED CONCRETE

1 IDENTIFICATION OF THE SUBSTANCE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier

Substance name READY-MIXED CONCRETE

This safety datasheet applies to cement-containing products
For further details of the specification refer to the relevant Technical Data Sheet.

1.2 Relevant identified uses of the substance or mixture and uses advised against

Please check the identified uses in Table 1 of the Appendix of this SDS. Uses advised against: There are no uses advised against.

1.3 Details of the supplier of the safety data sheet

Tarmac Limited, Portland House, Bickenhill Lane, Solihull, Birmingham B37 7BQ

Technical helpdesk: 0800 917 8888

Email: enquiries@tarmac.com

1.4 Emergency telephone

Emergency telephone number available during office hours:

Tel 0800 917 8888

Emergency telephone number available outside office hours: No

2 HAZARDS IDENTIFICATION

2.1 Classification of the substance

2.1.1 Classification according to Directive 67/548/EEC:

Hazardous - Irritant
R34, R38, R41, R43

2.1.2 Classification according to Regulation EC 1272/2008:

Signal Word: Danger

STOT SE3, Eye damage 1, Skin Sensitisation 1, Skin Irritation 2.

H315, H317, H318, H335, H372

Wet concrete can cause serious alkali burns if in direct contact with skin or eyes.

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 in cement.

Eyes:



Wet concrete in contact with eyes can cause irritation, inflammation or serious alkali burns, which may lead to blindness.

Ingestion:

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

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. 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 supplying unit.

*Any references to respirable silica in this document only apply if hardened concrete is cut, drilled, milled or planed

3 COMPOSITION/INFORMATION ON INGREDIENTS

Ready-mixed concrete is 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.

Hazardous Ingredients:

Substance Name	EC No	%	DSD Classification	CLP Classification
Portland Cement	266-043-4	10-20	Xi; R34, R38, R41, R43	H315, 317, 318, 335
Crystalline Silica	238-878-4	Variable	Xn; R48/20	H372

4 FIRST AID MEASURES

4.1 Description of first aid measures

General advice

No known delayed effects. Consult a physician for all exposures except for minor instances.

Following inhalation

If concrete dust is inhaled, remove to fresh air. If breathing difficulties or inflammation are experienced, seek medical attention.

Following 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.

If wet concrete enters boots or gloves, or saturates clothing, remove article immediately and wash before re-use.

Following eye contact

Immediately and thoroughly irrigate with copious amounts of eye wash solution or clean water. Seek medical attention immediately.

After ingestion

Remove to fresh air. If person is conscious, rinse out mouth and give water to drink. Seek medical advice.

5 FIRE FIGHTING MEASURES

5.1 Extinguishing media

5.1.1 Suitable extinguishing media

Not applicable

5.1.2 Unsuitable extinguishing media

Not applicable

5.2 Special exposure hazards

None

5.3 Special Protective Equipment for Firefighters

None

6 ACCIDENTAL RELEASE MEASURES

6.1 For 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.

6.2 Environmental precautions

Prevent wet concrete from entering watercourses, ditches and drains.

6.3 Methods and material for containment and cleaning up

Clean up any spillage before the concrete hardens, using suction or mechanical removal methods.

7 HANDLING AND STORAGE

7.1 Precautions for safe handling

7.1.1 Protective measures

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.

7.2 Conditions for safe 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 for the specific product.

8 EXPOSURE CONTROLS /PERSONAL PROTECTION

8.1 Take measures to Prevent

- 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.
- 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.

8.2 Exposure Control Limits / Source

Total Dust W.E.L. 10mg/m³ 8 Hrs T.W.A.

Respirable Dust W.E.L. 4mg/m³ 8 Hrs T.W.A

Respirable Quartz W.E.L. 0.1mg/m³ 8 Hrs T.W.A

Crystalline Silica* SiO₂

W.E.L. = Workplace Exposure Limit

T.W.A. = Time Weighted Average

8.3.1 Control measures

Dust caused by cutting or drilling hardened concrete should be controlled by containment, suppression and extraction/ filtration where possible.

8.3.2 Inhalation

S22 – Do not breathe dust.

8.3.2.1 Eye/Skin/Hands protection

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.

8.3.2.2 Respiratory protection

Respiratory protection is not usually required when working with wet concrete. If work creates dust (e.g. when cutting or drilling hardened concrete), and engineering controls do not keep dust levels below the levels shown in the table above, then suitable respiratory protection should be used to protect against inhalation of dust, and to ensure exposure is below the Workplace Exposure Levels given in the table.

8.4.2.2 Hand Protection

Impermeable gloves should be worn.

8.4.2.2 Eye Protection

Goggles should be worn to prevent the product entering the eyes (including dust).

8.4.2.2 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. se of skin barrier cream and aftercare products is also recommended.

9 PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance	Grey, granular paste unless pigmented
Odour	Slight, earthy odour
pH	Typically 10-14
Melting point	Not determined
Boiling point	Not determined
Flash point	Not applicable
Auto Flammability	Not applicable
Flammability	Not applicable
Explosive Properties	Not applicable
Oxidising Properties	Not applicable
Vapour Pressure	Not applicable
Relative Density	Above 2.0
Water Solubility	Dependant on aggregate type
Fat Solubility	Not determined

10 STABILITY AND REACTIVITY

10.1 Conditions to avoid

None

10.2 Materials to avoid

None

10.6 Hazardous decomposition products

None.

11 TOXICOLOGICAL INFORMATION

11.1 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.

11.2 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.

11.3 Eye Contact

Wet concrete in contact with eyes can cause irritation, inflammation or serious alkali burns, which may lead to blindness.

11.4 Ingestion

Ingestion is very unlikely. Ingestion of large amounts may cause irritation of the stomach and intestines. Seek medical attention.

12 ECOLOGICAL INFORMATION

12.1 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.

13 DISPOSAL CONSIDERATION

13.1 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.

14. TRANSPORT INFORMATION

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

15. REGULATORY INFORMATION

A chemical safety assessment has been carried out for this substance

67/548/EEC: Irritant

Risk Phrases:

R34 - May cause burns.
 R38 - Irritating to the skin.
 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.

EC 1272/2008: Danger

Eye Dam. 1, Skin Sens. 1, Skin Irrit 2; STOT SE3 (Inhalation of dust)

Hazard Statements:

H315 - Causes skin irritation
 H317 - May cause allergic skin reaction
 H318 - Causes serious eye damage
 H335 - May cause respiratory irritation
 H372 - Causes damage to organs through prolonged and repeated exposure (inhalation of respirable silica if hardened concrete is cut or drilled)

Precautionary Statements:

P102 - Keep out of reach of children
 P261 - Avoid breathing dust
 P262 - Do not get in eyes, on skin, or on clothing.
 P281 - Use personal protective equipment as required (see Section 8)

16. OTHER INFORMATION

Training Advice: Wear and use of PPE.

Recommended Uses and Applications: Industrial and construction applications.

FURTHER INFORMATION:

Contact Product Technical Support at Tarmac Limited using the details given in Section 1.

HSE Guidance Note EH40/2007

PPE Regulations 1992

COSHH Regulations 2002

Environmental Protection Act 1990

HSE Crystalline Silica EH59

Dangerous Substances Directive (DSD) 67/548/EEC

Classification, Labelling and Packaging Regulations (CLP) EC1272/2008

Further copies of this Safety Data Sheet may be obtained from Tarmac Limited.

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, and it is the user's sole responsibility to take all necessary precautions when using this product.

For further information

Technical helpdesk

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Customer services & sales

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DISCLAIMER:

This material safety data sheet (MSDS) is based on the legal provisions of the REACH Regulation (EC 1907/2006; article 31 and Annex II), as amended. Its contents are intended as a guide to the appropriate precautionary handling of the material. It is the responsibility of recipients of this MSDS to ensure that the information contained therein is properly read and understood by all people who may use, handle, dispose or in any way come in contact with the product. Information and instructions provided in this MSDS are based on the current state of scientific and technical knowledge at the date of issue indicated.

It should not be construed as any guarantee of technical performance, suitability for particular applications, and does not establish a legally valid contractual relationship. This version of the MSDS supersedes all previous versions.