

CHEMICAL SAFETY DATA SHEET

1. IDENTIFICATION OF THE SUBSTANCE AND COMPANY

Product name: **Quicklime**

Other names: Calcium oxide, Burnt lime, Calbux, Biocal, Limbase

An alkali for use in sewage sludge treatment, effluent treatment, Flue gas treatment and construction products manufacture.

Tarmac Buxton Lime and Cement, Tunstead Quarry,
Buxton, Derbyshire, England. SK17 8TG

Tel 00 44 (0)1298 768444

In an emergency: Dial 999

For specialist advice
(transport emergency) 00 44 (0)1298 27500

2. COMPOSITION/INFORMATION ON INGREDIENTS

Calcium Oxide CaO > 90%.

Small quantities of calcium carbonate, magnesia and trace elements.

Hazardous Ingredient - calcium oxide.

R38, R41. See detail under sections 11 and 15.

CAS No: 1305-78-8

EINECS No: 215-138-9

UN No: 1910

3. HAZARD IDENTIFICATION

Irritating to eyes and skin. Risk of serious damage to eyes. May cause burns in the presence of moisture. Generates heat in contact with water.

4. FIRST AID MEASURES

Skin Contact - An irritant; may cause burns in presence of moisture. Remove contaminated clothing. Wash immediately with plenty of water.

Eye Contact - Causes very painful irritation and may cause serious damage to eyes unless immediate treatment is given. SPEED IS ESSENTIAL. Remove particles with cotton wool bud, irrigate with eyewash or clean water until medical help is obtained. Obtain medical attention immediately.

Inhalation - Irritating to the respiratory tract. May cause inflammation of respiratory tract. Remove from exposure and keep warm and at rest. Irrigate nose and throat with water for at least 20 minutes.

Ingestion - Unlikely to cause any reactions. Larger doses may irritate gastrointestinal tract. Do not induce vomiting, wash out mouth with water and give copious quantities of water to drink.

Further medical treatment

Symptomatic, if necessary. No known delayed effects. Prolonged or repeated contact with skin may result in more severe irritation or dermatitis.

Prolonged repeated inhalation of high dust concentrations may cause ulceration and perforation of the nasal septum and pneumonitis.

It is advisable to ensure that eyewash facilities are readily available where Quicklime may be handled.

5. FIRE FIGHTING MEASURES

Non combustible and inhibits the spread of flame. No special fire fighting procedure or explosion hazard is identified. Substance reacts violently with water and generates heat. Risk of igniting combustible materials when wetted.

6. **ACCIDENTAL RELEASE MEASURES**

Spillages. Contain spillage and keep dry if possible. Use vacuum suction unit, or shovel into bags (using appropriate protective clothing - see Section 8). Cover or enclose area if possible to avoid unnecessary dust hazard. Avoid contamination of drains and watercourses. Spillage into watercourses must be alerted to the Environment Agency or other appropriate regulatory body.

7. **HANDLING AND STORAGE**

7.1. Handling. Avoid contact with skin and eyes. Avoid inhalation of high concentration of dust. In the event of spillage see section 6.

7.2 Storage. Should be stored in a cool dry environment free from draughts. Bulk storage should be in a purpose-built silo. Product in bags should be stored in draught-free brick or concrete building. Quicklime must not be allowed to come into contact with water as it generates intense heat, nor should it be stored on a flammable structure or with flammable materials.

8. **EXPOSURE CONTROL/PERSONAL PROTECTION**

8.1 Workplace Exposure Limit Standard:
2 mg/m³ (8 hr TWA)

Wear suitable gloves, overalls and eye/face protection. Wear suitable respiratory protection equipment if exposure to atmospheric dust levels above the occupational exposure standard is likely.

8.2 Handling systems should preferably be enclosed, or suitable ventilation installed to maintain atmospheric dust below WES.

Wear suitable respiratory protection equipment if exposure to atmospheric dust levels above the workplace exposure standard is likely. Use approved dust respirators to EN149 category FFP2, or air-stream helmet for heavy exposure.

Rubber, leather or fabric/composite gloves provide suitable hand protection

Wide vision full goggles to BS EN 166 grade 4B, with anti-mist for eye protection

Long sleeved overalls, close fitting at openings. Boots that resist dust penetration.

9. **PHYSICAL AND CHEMICAL PROPERTIES**

Form	-	solid of varying sizes from large lumps to fine powder.
Colour	-	white or off-white
Odour	-	faint "earthy" odour
pH	-	12.4 (aqueous solution approx. 2 g/litre as Ca(OH) ₂)
Solubility in water	-	1.33 g/litre at 10° (reacts with water to form Calcium Hydroxide)
Vapour pressure	-	0 at 20°C
Specific Gravity	-	3.4
Melting point:	-	2570°C

10. **STABILITY AND REACTIVITY**

10.1 Stable

10.2 Conditions/Materials to avoid:
Minimise exposure to air to avoid degradation. Reacts vigorously with strong acids. Attacks aluminium, lead, tin, zinc and brass in the presence of moisture.
Reacts violently with moisture, generating heat.

10.3 Hazardous decomposition products: None.

11. **TOXICOLOGICAL INFORMATION**

Inhalation - High concentrations of dust are irritant to the respiratory tract. Gross inhalation may cause inflammation, ulceration, perforation of nasal septum and pneumonitis.

Skin Contact - Irritant in the presence of moisture. May cause burns.

Eye Contact - Very painful irritant, may cause burns. Risk of severe and permanent damage to eyes.

Ingestion - May cause corrosion damage to the gastrointestinal tract.

Long term exposure - Prolonged and repeated skin contact may cause dermatitis.

12. ECOLOGICAL INFORMATION

12.1 Ecotoxicity

The product is considered to be non toxic. LC50 aquatic toxicity values are > 100 mg/l. High concentrations (> 100 mg/l) may have a sterilising effect in sewage works. Product is extensively used in treatment of acid wastes and sewage sludges.

12.2 Mobility

Sparingly soluble in water (as hydroxide) to form alkaline solution. Low mobility in most ground conditions.

12.3 Persistence and degradation

Non bio-degradable - reacts with moisture to form calcium hydroxide, and reacts with atmospheric and dissolved carbon dioxide to form calcium carbonate (chalk).

12.4 Bioaccumulative Potential

The product has no potential to accumulate in the food chain.

13. DISPOSAL CONSIDERATIONS

Disposal should be in accordance with current local and national legislation. Quicklime can normally be disposed only to licensed waste facilities.

Contaminated packaging can be incinerated.

14. TRANSPORT INFORMATION

Not classified as hazardous for transport.

IMDG (Sea) Not classified

ADR (Road) Not classified

RID (Rail) Not classified

IATA (Air) Class 8 Packing Group III

15. REGULATORY INFORMATION

15.1 The Chemicals (Hazard Information and Packaging for Supply) Regulations 2002. Statutory Instrument 2002 No. 1689

Classification for conveyance: none.

Classification for supply: Irritant.

Risk phrases - R38 Irritating to skin

- R41 Risk of serious damage to eyes

Safety phrases - S26 In case of contact with eyes, rinse immediately with water and seek medical advice

- S37, Wear suitable gloves

S39 and eye/face protection.

- S2 Keep out of reach of children

15.2 Workplace Exposure Limits - HSE Guidance Note EH40/2005. WES 2 mg/m³ (8 hr TWA)

15.3 Data Sheet prepared in accordance with Directive 2001/58/EC

16. OTHER INFORMATION

Date of revisions – April 2007 (Issue 6)