

PRODUCT HEALTH AND SAFETY DATA SHEET, No. 72

QUICKLIME

Updated October 2010

1. Identification of the Substance and Company

QUICKLIME Alternative names: Lime, Burnt Lime

Tata Steel
Shapfell
Shap
Cumbria
CA10 3QG

Telephone: 01931 716 647 / 01931 717 130

2. Composition / Information on Ingredients

Calcium Oxide CaO >90%. Small quantities of calcium carbonate, magnesia and trace elements.

3. Hazards Identification

Irritating to eyes and skin. Risk of serious damage to eyes. May cause burns in the presence of moisture.

4. First Aid Measures

Skin Contact: Remove contaminated clothing and wash skin thoroughly with running water.

Eye Contact: SPEED IS ESSENTIAL. Irrigate with eyewash or clean water until medical help is obtained. OBTAIN IMMEDIATE MEDICAL ATTENTION.

Inhalation: Remove from exposure and keep warm and at rest.

Ingestion: Wash out mouth with water and give copious quantities of water to drink. Do not attempt to induce vomiting,

Further medical treatment - Symptomatic, if necessary. Remove particles from eyes with cotton wool bud. No known delayed effects.

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

When handling, avoid contact with skin and eyes. Avoid inhalation of high concentration of dust. It is advisable to ensure that eyewash facilities are readily available where Quicklime may be handled. 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 Controls and Personal Protection

Handling systems should preferably be enclosed, or suitable ventilation installed to maintain atmosphere dust below the OES. Wear suitable gloves, overalls and eye/face protection. Rubber, leather or fabric/composite gloves provide suitable hand protection. Long sleeved overalls are recommended, close fitting at openings. Wide vision full goggles with anti-mist for eye protection. Wear suitable and approved respiratory protection equipment if exposure to atmospheric dust levels above the occupational exposure standard is likely.

Current Occupational Exposure Limit:

	Type of Limit	Reference Period 8 hr TWA* (15 min)
Calcium oxide	Occ. Exposure Standard	2 mg/m ³ -

*TWA - Time weighted average

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°C (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

Stable. Minimise exposure to air to avoid degradation. Reacts vigorously with strong acids. Attacks aluminium, lead and brass in the presence of moisture. Reacts violently with moisture, generating heat. No hazardous decomposition products.

11. Toxicological Information

High concentrations of dust are irritant to the respiratory tract. Gross inhalation may cause inflammation, ulceration, perforation of nasal septum and pneumonitis. Prolonged repeated inhalation of high dust concentrations may cause similar effects. Irritant to the skin in the presence of moisture. May cause burns. Prolonged or repeated contact with skin may result in severe irritation or dermatitis. Very painful irritant to the eye - may cause burns. Risk of severe and permanent damage to eyes. If swallowed, may cause corrosion damage to the gastrointestinal tract.

12. Ecological Information

Sparingly soluble in water (as hydroxide) to form alkaline solution. Low mobility in most ground conditions. Non bio-degradable - reacts with moisture to form calcium hydroxide, and reacts with atmospheric and dissolved carbon dioxide to form calcium carbonate (chalk). LC50 aquatic toxicity values are >100 mg/l. The product is considered to be non-toxic. 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.

13. Disposal Considerations

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

14. Transport Information

Not classified as hazardous for transport.

15. Regulatory Information

Classified under the Chemicals (Hazard Information and Packaging for Supply) Regulations

Irritant. Irritating to skin (R38). Risk of serious damage to eyes (R41)

Wear suitable gloves and eye/face protection (S37/39)

In case of contact with eyes, rinse immediately with water and seek medical advice (S26)

Keep out of reach of children (S2)

16. Other Information

(a) HSE Guidance Notes

EH40: Occupational Exposure Limits (current edition)

EH42: Monitoring Strategies for Toxic substances

EH44: Dust in the Workplace: General Principles of Protection