SECTION 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY

1.1 Product identifier
Substance name: Calcium oxide
Synonyms: Lime, Burnt lime, Un-slaked lime, Building lime, Fat lime, Chemical lime, Fluxing lime, Hard burnt lime, Soft burnt lime, Pebble lime, Calcium oxide, Calcium monoxide, Quicklime, Calcined limestone.

Chemical name and formula: Calcium oxide - CaO
Trade name: Burnt Lime, Microlime®, Granulime®, Finelime®, Birch Biolime®, Biolime®, Microflo™
CAS: 1305-78-8
EINECS: 215-138-9
Molecular Weight: 56.08 g/mol
REACH Registration number: 01-2119475325-36-0061

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

Use of the substance: The substance is intended for the following non-exhaustive list of uses: Building material industry, Chemical industry, Agriculture, Biocidal use, Environmental protection (e.g. flue gas treatment, waste water treatment, sludge treatment), Drinking water treatment, Feed, food and pharmaceutical industry, Civil engineering, Paper and paint industry

1.2.1 Identified uses
All uses listed in table 1 of the Appendix of this SDS are identified uses.

1.2.2 Uses advised against
No use identified in Table 1 of the Appendix of this SDS is advised against.

1.3 Details of the supplier of the safety data sheet
Name: Singleton Birch Limited
Address: Melton Ross Quarries, Barnetby, North Lincolnshire DN38 6AE
Phone N°: +44(0)1652 686000
Fax N°: +44(0)1652 686081
E-mail of competent person(s) responsible for the SDS: kb@singletonbirch.co.uk; jt@singletonbirch.co.uk

1.4 Emergency telephone number
European Emergency N°: 112
National centre for Prevention & Treatment of Intoxications N°: National Chemicals Emergency Centre (NCEC) +44 (0) 870 190 6621
SECTION 2. HAZARDS IDENTIFICATION

2.1 Classification of the substance

2.1.1 Classification according to Regulation (EC) 1272/2008

STOT Single Exp. 3, H335 Route of exposure: Inhalation
Skin Irritation 2, H315
Eye Damage 1, H318

2.1.2 Classification according to Directive 67/548/EEC

Xi – irritant: R37, R38, R41

2.1.3 Additional information

For full text of H-statements and R-phrases: see SECTION 16

2.2 Label elements

2.2.1 Labelling according to Regulation (EC) 1272/2008

Signal word: Danger
Hazard pictogram:

Hazard statements:

H315: Causes skin irritation
H318: Causes serious eye damage
H335: May cause respiratory irritation

Precautionary statements:

P102: Keep out of reach of children
P280: Wear protective gloves/protective clothing/eye protection/face protection
P305+P351+P338: If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P302+P352: IF ON SKIN: Wash with plenty of water
P310: Immediately call a poison centre or doctor/physician
P261: Avoid breathing dust/spray
P304+P340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
P501: Dispose of contents/container in accordance with local, regional, national and international regulation – use a registered
2.3 Other hazards
The substance does not meet the criteria for PBT or vPvB substance. No other hazards identified.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Main constituent

<table>
<thead>
<tr>
<th>CAS number</th>
<th>EC number</th>
<th>Registration No</th>
<th>Identification name</th>
<th>Weight % content (or range)</th>
<th>Classification according to 67/548/EEC</th>
</tr>
</thead>
<tbody>
<tr>
<td>1305-78-8</td>
<td>215-138-9</td>
<td>01-2119475325-36-0061</td>
<td>Calcium oxide</td>
<td>&gt;90%</td>
<td>Xi: R37, R38, R41</td>
</tr>
</tbody>
</table>


SECTION 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
Move source of dust or move person to fresh air. Obtain medical attention immediately.

Following skin contact
Carefully and gently brush the contaminated body surfaces in order to remove all traces of product. Wash affected area immediately with plenty of water. Remove contaminated clothing. If necessary seek medical advice.

Following eye contact
Rinse eyes immediately with plenty of water and seek medical advice.

Following ingestion
Clean mouth with water and drink afterwards plenty of water. Do NOT induce vomiting. Obtain medical attention.

4.2 Most important symptoms and effects, both acute and delayed
Calcium oxide is not acutely toxic via the oral, dermal, or inhalation route. The substance is classified as irritating to skin and the respiratory tract, and entails a risk of serious damage to the
eye. There is no concern for adverse systemic effects because local effects (pH-effect) are the major health hazard.

4.3 **Indication of any immediate medical attention and special treatment needed**

Follow the advises given in section 4.1

**SECTION 5. FIREFIGHTING MEASURES**

5.1 **Extinguishing media**

5.1.1 **Suitable extinguishing media**

Suitable extinguishing media: The product is not combustible. Use a dry powder, foam or CO₂ fire extinguisher to extinguish the surrounding fire. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

5.1.2 **Unsuitable extinguishing media**

Do not use water. Avoid humidification.

5.2 **Special hazards arising from the substance or mixture**

Calcium oxide reacts with water and generates heat. This may cause risk to flammable material.

5.3 **Advice for fire fighters**

Avoid generation of dust. Use breathing apparatus. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

**SECTION 6. ACCIDENTAL RELEASE MEASURES**

6.1 **Personal precautions, protective equipment and emergency procedures**

6.1.1 **For non-emergency personnel**

Ensure adequate ventilation.
Keep dust levels to a minimum.
Keep unprotected persons away.
Avoid contact with skin, eyes, and clothing – wear suitable protective equipment (see section 8).
Avoid inhalation of dust – ensure that sufficient ventilation or suitable respiratory protective equipment is used, wear suitable protective equipment (see section 8).
Avoid humidification.

6.1.2 **For emergency responders**

Keep dust levels to a minimum.
Ensure adequate ventilation.
Keep unprotected persons away.
Avoid contact with skin, eyes, and clothing – wear suitable protective equipment (see section 8).
Avoid inhalation of dust – ensure that sufficient ventilation or suitable respiratory protective equipment is used, wear suitable protective equipment (see section 8).
Avoid humidification.
6.2 Environmental precautions
Contain the spillage. Keep the material dry if possible. Cover area if possible to avoid unnecessary dust hazard. Avoid uncontrolled spills to watercourses and drains (pH increase). Any large spillage into watercourses must be alerted to the Environment Agency or other regulatory body.

6.3 Methods and material for containment and cleaning up
In all cases avoid dust formation.
Keep the material dry if possible.
Pick up the product mechanically in a dry way.
Use vacuum suction unit, or shovel into bags.

6.4 Reference to other sections
For more information on exposure controls/personal protection or disposal considerations, please check section 8 and 13 and the Annex of this safety data sheet.

SECTION 7. HANDLING AND STORAGE
7.1 Precautions for safe handling
7.1.1 Protective measures
Avoid contact with skin and eyes. Wear protective equipment (refer to section 8 of this safety data sheet). Do not wear contact lenses when handling this product. It is also advisable to have individual pocket eyewash. Keep dust levels to a minimum. Minimise dust generation. Enclose dust sources, use exhaust ventilation (dust collector at handling points). Handling systems should preferably be enclosed. When handling bags usual precautions should be paid to the risks outlined in the Council Directive 90/269/EEC.

7.1.2 Advice on general occupational hygiene
Avoid inhalation or ingestion and contact with skin and eyes. General occupational hygiene measures are required to ensure safe handling of the substance. These measures involve good personal and housekeeping practices (i.e. regular cleaning with suitable cleaning devices), no drinking, eating and smoking at the workplace. Shower and change clothes at end of work shift. Do not wear contaminated clothing at home.

7.2 Conditions for safe storage, including any incompatibilities
The substance should be stored under dry conditions. Any contact with air and moisture should be avoided. Bulk storage should be in purpose – designed silos. Keep away from acids, significant quantities of paper, straw, and nitro compounds. Keep out of reach of children. Do not use aluminium for transport or storage if there is a risk of contact with water.

7.3 Specific end use(s)
Please check the identified uses in table 1 of the Appendix of this SDS. For more information please see the relevant exposure scenario, available via your supplier/given in the Appendix, and check section 2.1: Control of worker exposure.
SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters

**DNEL’s**

<table>
<thead>
<tr>
<th>Route of exposure</th>
<th>Acute effect</th>
<th>Acute effects</th>
<th>Chronic effects</th>
<th>Chronic effects</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>local</td>
<td>systemic</td>
<td>local</td>
<td>systemic</td>
</tr>
<tr>
<td>Oral</td>
<td></td>
<td></td>
<td>Not required</td>
<td></td>
</tr>
<tr>
<td>Inhalation</td>
<td>4 mg / m³ (Respirable dust)</td>
<td>No hazard identified</td>
<td>1 mg / m³ (Respirable dust)</td>
<td>No hazard identified</td>
</tr>
<tr>
<td>Dermal</td>
<td>Hazard identified but no DNEL available</td>
<td>No hazard identified</td>
<td>Hazard identified but no DNEL available</td>
<td>No hazard identified</td>
</tr>
</tbody>
</table>

**Consumers**

<table>
<thead>
<tr>
<th>Route of exposure</th>
<th>Acute effect</th>
<th>Acute effects</th>
<th>Chronic effects</th>
<th>Chronic effects</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>local</td>
<td>systemic</td>
<td>local</td>
<td>systemic</td>
</tr>
<tr>
<td>Oral</td>
<td></td>
<td></td>
<td>No exposure expected</td>
<td>No exposure expected</td>
</tr>
<tr>
<td>Inhalation</td>
<td>4 mg / m³ (Respirable dust)</td>
<td>No hazard identified</td>
<td>1 mg / m³ (Respirable dust)</td>
<td>No hazard identified</td>
</tr>
<tr>
<td>Dermal</td>
<td>Hazard identified but no DNEL available</td>
<td>No hazard identified</td>
<td>Hazard identified but no DNEL available</td>
<td>No hazard identified</td>
</tr>
</tbody>
</table>

**PNEC’s**

<table>
<thead>
<tr>
<th>Environment protection target</th>
<th>PNEC</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fresh water</td>
<td>0.49 mg / L</td>
<td></td>
</tr>
<tr>
<td>Freshwater sediments</td>
<td>No PNEC available</td>
<td>Insufficient data available</td>
</tr>
<tr>
<td>Marine water</td>
<td>0.32 mg / L</td>
<td></td>
</tr>
<tr>
<td>Marine sediments</td>
<td>No PNEC available</td>
<td>Insufficient data available</td>
</tr>
<tr>
<td>Food (bioaccumulation)</td>
<td>No hazard identified</td>
<td>No potential for bioaccumulation</td>
</tr>
</tbody>
</table>
Microorganisms in sewage treatment | 3 mg / L
---|---
Soil (agricultural) | 1080 mg / kg soil dw
Air | No hazard identified

**Workplace Exposure Limit (WEL), 8 h TWA:** 5 mg/m³  
**Occupational Exposure Limit (OEL), 8h TWA:** 1 mg/m³ respirable dust of calcium oxide  
**Short-term exposure limit (STEL), 15 min:** 4 mg/m³ respirable dust of calcium oxide

### 8.2 Exposure controls

To control potential exposures, generation of dust should be avoided. Further, appropriate protective equipment is recommended. Eye protection equipment (e.g. goggles or visors) must be worn, unless potential contact with the eye can be excluded by the nature and type of application (i.e. closed process). Additionally, face protection, protective clothing and safety shoes are required to be worn as appropriate.  
Please check the relevant exposure scenario, given in the Appendix/available via your supplier.

#### 8.2.1 Appropriate engineering controls

If user operations generate dust, use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne dust levels below recommended exposure limits.

#### 8.2.2 Individual protection measures, such as personal protective equipment

##### 8.2.2.1 Eye/face protection

Do not wear contact lenses. For powders, tight fitting goggles with side shields, or wide vision full goggles. Eyewash facilities should be readily available.

##### 8.2.2.2 Skin protection

Since calcium oxide is classified as irritating to skin, dermal exposure has to be minimised as far as technically feasible. The use of protective gloves (nitrile), protective standard working clothes fully covering skin, full length trousers, long sleeved overalls, with close fittings at openings and shoes resistant to caustics and avoiding dust penetration are required to be worn.

##### 8.2.2.3 Respiratory protection

Local ventilation to keep levels below established threshold values is recommended. A suitable particle filter mask is recommended, depending on the expected exposure levels - please check the relevant exposure scenario, given in the Appendix/available via your supplier.

##### 8.2.2.4 Thermal hazards

The substance does not represent a thermal hazard, thus special consideration is not required.
8.2.3 Environmental exposure controls
All ventilation systems should be filtered before discharge to atmosphere.
Avoid releasing to the environment.
Contain the spillage. Any large spillage into watercourses must be alerted to the regulatory authority responsible for environmental protection or other regulatory body.
For detailed explanations of the risk management measures that adequately control exposure of the environment to the substance please check the relevant exposure scenario, available via your supplier.
For further detailed information, please check the Appendix of this SDS.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties
Appearance: White or off white (beige) solid material of varying sizes: Lump, granular or fine powder
Odour: odourless
Odour threshold: not applicable
pH: 12.3 (saturated solution at 20 °C)
Melting point: > 450 °C (study result, EU A.1 method)
Boiling point: not applicable (solid with a melting point > 450 °C)
Flash point: not applicable (solid with a melting point > 450 °C)
Evaporation rate: not applicable (solid with a melting point > 450 °C)
Flammability: non flammable (study result, EU A.10 method)
Explosive limits: non explosive (void of any chemical structures commonly associated with explosive properties)
Vapour pressure: not applicable (solid with a melting point > 450 °C)
Vapour density: not applicable
Relative density: 3.31 (study result, EU A.3 method)
Solubility in water: 1337.6 mg/L (study results, EU A.6 method)
Partition coefficient: not applicable (inorganic substance)
Auto ignition temperature: no relative self-ignition temperature below 400 °C (study result, EU A.16 method)
Decomposition temperature: not applicable
Viscosity: not applicable (solid with a melting point > 450 °C)
Oxidising properties: no oxidising properties (Based on the chemical structure, the substance does not contain a surplus of oxygen or any structural groups known to be correlated with a tendency to react exothermally with combustible material)

9.2 Other information
Not available
SECTION 10. STABILITY AND REACTIVITY

10.1 Reactivity
Calcium oxide reacts exothermically with water to form Calcium hydroxide.

10.2 Chemical stability
Under normal conditions of use and storage (dry conditions), calcium oxide is stable.

10.3 Possibility of hazardous reactions
Calcium oxide reacts exothermically with acids to form calcium salts.

10.4 Conditions to avoid
Minimise exposure to air and moisture to avoid degradation.

10.5 Incompatible materials
Calcium oxide reacts exothermically with water to form calcium dihydroxide:
\[ \text{CaO} + \text{H}_2\text{O} \rightarrow \text{Ca(OH)}_2 + 1155 \text{ kJ/kg CaO} \]
Calcium oxide reacts exothermically with acids to form calcium salts.
Calcium oxide reacts with aluminium and brass in the presence of moisture leading to the production of hydrogen: \[ \text{CaO} + 2 \text{Al} + 7 \text{H}_2\text{O} \rightarrow \text{Ca(Al(OH))}_2 + 3 \text{H}_2 \]

10.6 Hazardous decomposition products
None.
Further information: calcium oxide absorbs moisture and carbon dioxide from air to form calcium carbonate, which is a common material in nature.

SECTION 11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects
a. Acute toxicity
Oral \( \text{LD}_{50} > 2000 \text{mg/kg bw} \) (OECD 425, rat)
Dermal \( \text{LD}_{50} > 2500 \text{mg/kg bw} \) (OECD 402, rabbit); by read across these results are also applicable to calcium oxide, since in contact with moisture calcium hydroxide is formed.
Inhalation no data available
Calcium oxide is not acutely toxic.
Classification for acute toxicity is not warranted.

b. Skin corrosion/irritation
Calcium oxide is irritating to skin (in vivo, rabbit).
Based on experimental results, calcium oxide requires classification as irritating to skin [R38, irritating to skin; Skin Irrit 2 (H315 – Causes skin irritation)].
c. Serious eye damage/irritation

Calcium oxide entails a risk of serious damage to the eye (eye irritation studies (in vivo, rabbit). Based on experimental results, calcium hydroxide requires classification as severely irritating to the eye [R41, Risk of serious damage to eye; Eye Damage 1 (H318 - Causes serious eye damage)].

d. Respiratory or skin sensitisation

No data available. Calcium oxide is considered not to be a skin sensitiser, based on the nature of the effect (pH shift) and the essential requirement of calcium for human nutrition. Classification for sensitisation is not warranted.

e. Germ cell mutagenicity

Bacterial reverse mutation assay (Ames test, OECD 471): Negative. In view of the omnipresence and essentiality of Ca and of the physiological non-relevance of any pH shift induced by lime in aqueous media, CaO is obviously void of any genotoxic potential, including germ cell mutagenicity. Classification for genotoxicity is not warranted.

f. Carcinogenicity

Calcium (administered as Ca-lactate) is not carcinogenic (experimental result, rat). The pH effect of calcium hydroxide does not give rise to a carcinogenic risk. Human epidemiological data support lack of any carcinogenic potential of calcium hydroxide. Classification for carcinogenicity is not warranted.

g. Reproductive toxicity

Calcium (administered as Ca-carbonate) is not toxic to reproduction (experimental result, mouse). The pH effect does not give rise to a reproductive risk. Human epidemiological data support lack of any potential for reproductive toxicity of calcium hydroxide. Both in animal studies and human clinical studies on various calcium salts no reproductive or developmental effects were detected. Also see the Scientific Committee on Food (Section 16.6). Thus, calcium hydroxide is not toxic for reproduction and/or development. Classification for reproductive toxicity according to regulation (EC) 1272/2008 is not required.

h. STOT-single exposure

From human data it is concluded that CaO is irritating to the respiratory tract. As summarised and evaluated in the SCOEL recommendation (Anonymous, 2008), based on human data calcium hydroxide is classified as irritating to the respiratory system [R37, Irritating to respiratory system; STOT SE 3 (H335 – May cause respiratory irritation)].

i. STOT-repeated exposure

Toxicity of calcium via the oral route is addressed by upper intake levels (UL) for adults determined by the Scientific Committee on Food (SCF), being
UL = 2500 mg/d, corresponding to 36 mg/kg bw/d (70 kg person) for calcium. Toxicity of CaO via the dermal route is not considered as relevant in view of the anticipated insignificant absorption through skin and due to local irritation as the primary health effect (pH shift). Toxicity of CaO via inhalation (local effect, irritation of mucous membranes) is addressed by an 8-h TWA determined by the Scientific Committee on Occupational Exposure Limits (SCOEL) of 1 mg/m³ respirable dust (see Section 8.1). Therefore, classification of CaO for toxicity upon prolonged exposure is not required.

### j. Aspiration hazard

Calcium hydroxide is not known to present an aspiration hazard.

### SECTION 12. ECOLOGICAL INFORMATION

#### 12.1 Toxicity

**12.1.1 Acute/Prolonged toxicity to fish**

- LC$_{50}$ (96h) for freshwater fish: 50.6 mg/l (calcium hydroxide)
- LC$_{50}$ (96h) for marine water fish: 457 mg/l (calcium hydroxide)

**12.1.2 Acute/Prolonged toxicity to aquatic invertebrates**

- EC$_{50}$ (48h) for freshwater invertebrates: 49.1 mg/l (calcium hydroxide)
- LC$_{50}$ (96h) for marine water invertebrates: 158 mg/l (calcium hydroxide)

**12.1.3 Acute/Prolonged toxicity to aquatic plants**

- EC$_{50}$ (72h) for freshwater algae: 184.57 mg/l (calcium hydroxide)
- NOEC (72h) for freshwater algae: 48 mg/l (calcium hydroxide)

**12.1.4 Toxicity to micro-organisms e.g. bacteria**

At high concentration, through the rise of temperature and pH, calcium oxide is used for disinfection of sewage sludges.

**12.1.5 Chronic toxicity to aquatic organisms**

- NOEC (14d) for marine water invertebrates: 32 mg/l (calcium hydroxide)

**12.1.6 Toxicity to soil dwelling organisms**

- EC$_{10}$/LC$_{10}$ or NOEC for soil macro organisms: 2000 mg/kg soil dw (calcium hydroxide)
- EC$_{10}$/LC$_{10}$ or NOEC for soil microorganisms: 12000 mg/kg soil dw (calcium hydroxide)

**12.1.7 Toxicity to terrestrial plants**

- NOEC (21d) for terrestrial plants: 1080 mg/kg (calcium hydroxide)
12.1.8 General effect
Acute pH-effect. Although this product is useful to correct water acidity, an excess of more than 1 g/l may be harmful to aquatic life. pH-value of > 12 will rapidly decrease as result of dilution and carbonation.

12.1.9 Further information
The results by read across are also applicable to calcium oxide, since in contact with moisture calcium hydroxide is formed.

12.2 Persistence and degradability
Not relevant for inorganic substances.

12.3 Bioaccumulative potential
Not relevant for inorganic substances.

12.4 Mobility in soil
Calcium oxide reacts with water and/or carbon dioxide to form respectively calcium dihydroxide and/or calcium carbonate, which are sparingly soluble, and present a low mobility in most soils.

12.5 Results of PBT and vPvB assessment
Not relevant for inorganic substances.

12.6 Other adverse effects
No other adverse effects are identified.

SECTION 13. DISPOSAL CONSIDERATIONS
13.1 Waste treatment methods
Disposal of calcium oxide should be in accordance with local and national legislation. Processing, use or contamination of this product may change the waste management options. Dispose of container and unused contents in accordance with applicable member state and local requirements. The used packing is only meant for packing this product; it should not be reused for other purposes. After usage, empty the packing completely.

SECTION 14. TRANSPORT INFORMATION
Calcium oxide is not classified as hazardous for transport [ADR (Road), RID (Rail), AND (inland waterways) and IMDG (Sea)]. Calcium oxide is, however, classified as hazardous for air transport (ICAO/IATA).

14.1 UN-Number
UN 1910
14.2 UN proper shipping name
Calcium oxide

14.3 Transport hazard class
Class 8 (ICAO/IATA)

14.4 Packing group
Group III (ICAO/IATA)

14.5 Environmental hazards
None

14.6 Special precautions for user
Avoid any release of dust during transportation, by using air-tight tanks for powders and covered trucks for pebbles.

14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code
Not regulated.

SECTION 15. REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance
Authorisations: Not required
Restrictions on use: None
Other EU regulations: Calcium oxide is not a SEVESO substance, not an ozone depleting substance and not a persistent organic pollutant.
National regulations: Water endangering class 1 (Germany)

15.2 Chemical safety assessment
A chemical safety assessment has been carried out for this substance.

SECTION 16. OTHER INFORMATION
Data are based on our latest knowledge but do not constitute a guarantee for any specific product features and do not establish a legally valid contractual relationship.

16.1 Hazard Statements
H315: Causes skin irritation
H318: Causes serious eye damage
H335: May cause respiratory irritation

16.2 Precautionary Statements
P102: Keep out of reach of children
P280: Wear protective gloves/protective clothing/eye protection/face protection
16.3 Risk Phrases
R37: Irritating to respiratory system
R38: Irritating to skin
R41: Risk of serious damage to eyes

16.4 Safety Phrases
S2: Keep out of the reach of children
S25: Avoid contact with eyes
S26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice
S37: Wear suitable gloves
S39: Wear eye/face protection

16.5 Abbreviations
EC50: median effective concentration
LC50: median lethal concentration
LD50: median lethal dose
NOEC: no observable effect concentration
WEL: workplace exposure limit
OEL: occupational exposure limit
PBT: persistent, bioaccumulative, toxic chemical
PNEC: predicted no-effect concentration
STEL: short-term exposure limit
TWA: time weighted average
vPvB: very persistent, very bioaccumulative chemical
EULA: European Lime Association

16.6 Key literature references
**SD20 Safety Data Sheet**

**Quicklime Range**


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**Anonymous, 2008: Recommendation from the Scientific Committee on Occupational Exposure Limits (SCOEL) for calcium oxide (CaO) and calcium dihydroxide (Ca(OH)$_2$), European Commission, DG Employment, Social Affairs and Equal Opportunities, SCOEL/SUM/137 February 2008**

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**16.7 Revision**

SDS revised in accordance with EULA SDS format

The word “SECTION” has been included in each chapter.

Section 1.2 Relevant identified uses of the substance and uses advised against amended.

Section 2.1.1 Classification of the substance – ‘H’ numbers added.

Section 2.1.2 Classification of the substance – ‘R’ numbers added.

Section 2.1.3 ‘Additional information’ added.

Section 2.2.2 ‘Labelling according to Directive 67/548/EEC’ removed.

Section 3.1 ‘Substances’ tabulised.

Section 8, 8.1 Control parameters, DNEL’s, Oral ‘No exposure expected’ changed to ‘Not required’. Information tabulised.

Section 8, 8.2.2.1 Eye/Face protection - It is also advisable to have individual pocket eyewash.‘ replaced with ‘Eyewash facilities should be readily available.’

Section 11, 11.1 Information on toxicological effects amended.

Section 14: TRANSPORT INFORMATION - ‘Calcium oxide is not classified as hazardous for transport (ADR (Road), RID (Rail), IMDG / GGVSea (Sea).’ replaced with ‘Calcium oxide is not classified as hazardous for transport [ADR (Road), RID (Rail), AND (inland waterways) and IMDG (Sea)]. Calcium oxide is, however, classified as hazardous for air transport (ICAO/IATA).’.

Section 14.3 ‘Class 8. Calcium oxide is listed in IMDG (Amendment 34-08).’ replaced with ‘Class 8 (ICAO/IATA).’

Section 14.4 ‘Group III (Air transport (ICAO/IATA))’ replaced with ‘Group III (ICAO/IATA).’

Section 2.2.1 and 16.2 wording changed from....

Precautionary statements:

‘P305+P351: IF IN EYES: Rinse cautiously with water for several minutes’ replaced with ‘P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.’

**Disclaimer**

This safety data sheet (SDS) 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 SDS 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 SDS 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 SDS supersedes all previous versions.

**ANNEX**

Addition of exposure Scenarios as applicable -Please see Appendix SD20A SDS – Quicklime Range.