**PROCEDURE**

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**Title: MSDS For LimeX45 and LimeX70**

# SAFETY DATA SHEET

## SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

### 1.1. Product identifier

Product name: **LimeX45, or LimeX70**

| | |
|---|---|
| Other means of identification: | EC-No.: 932-124-4 |
| REACH registration number: | 01-2119557879-14-0016 |

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

Soil and land improver and conditioner, biomass co-firing ingredient, material for the construction industry.

### 1.3. Details of the supplier of the safety data sheet

Company: British Sugar PLC, Sugar Way, Peterborough,
PE2 9AY, England
Telephone : +44 (0)1733 563171
Grower Services +44 (0)800 090 2376
E-mail: limex@britishsugar.com

### 1.4. Emergency telephone number

Emergency telephone No.: +44 (0)1733 563171, or +44(0) 800 090 2376 (office hours)

## SECTION 2: HAZARDS IDENTIFICATION

Not classified as dangerous/hazardous according to Regulation (EC) No 1272/2008 and Directive 67/548/EEC

### 2.2. Label elements

None required according to Regulation (EC) No 1272/2008.

### 2.3. Other hazards

No special hazards known

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Calcium dihydroxide
precipitated with carbon dioxide during sugar juice purification
and containing 30-55% water

## SECTION 4: FIRST AID MEASURES

### 4.1. Description of first aid measures

| |
|---|
| **Eye contact**: Irrigate thoroughly with water. If discomfort persists **obtain medical attention** |
| **Inhalation**: Remove from exposure. If symptoms persist, **obtain medical attention** |
| **Skin contact**: Wash off thoroughly with soap and water |
| **Ingestion**: Wash out mouth thoroughly with water.<br>In severe cases **obtain medical attention.** |

### 4.2. Most important symptoms and effects, both acute and delayed

No toxic effects are to be expected when handled properly.

### 4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

## SECTION 5: FIRE FIGHTING MEASURES

### 5.1. Extinguishing media

Any extinguishing media that suits the local environment.

### 5.2. Special hazards arising from the substance or mixture

Not combustible. May release carbon dioxide in a fire.

### 5.3. Advice for fire-fighters

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|---|
| Exercise caution when fighting any chemical fire. |
| Only trained personnel should attempt to tackle a fire. |
| Do not stay in dangerous zone without respiratory protective equipment. |

## SECTION 6: ACCIDENTAL RELEASE MEASURES

### 6.1. Personal precautions, protective equipment and emergency procedures

Wear appropriate protective clothing. Avoid generation of dusts.

### 6.2. Environmental precautions

No special precautions necessary.

### 6.3. Methods and material for containment and cleaning up

| |
|---|
| Wear appropriate protective clothing. |
| Carefully sweep or shovel up and dispose of in accordance with local regulations. |
| Wash area with water to remove residues |

### 6.4. Reference to other sections

See Section 8 for advice on protective equipment and Section 13 for recommendations on disposal

## SECTION 7: HANDLING AND STORAGE

### 7.1. Precautions for safe handling

| |
|---|
| Do not breathe dust. |
| Avoid contact with skin, eyes and clothing. |
| Wash hands after working with substance. |
| Ensure adequate ventilation. |

### 7.2. Conditions for safe storage, including any incompatibilities

Store at room temperature (15 to 25°C recommended).
Keep well covered and protected from rain.

### 7.3. Specific end use(s)

Soil and land improver and conditioner, biomass co-firing ingredient, material for the construction industry.

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1. Control parameters

| | |
|---|---|
| Calcium carbonate: | OES |
| Total inhalable dust. | Long term: 10 mg/m3 |
| Respirable dust. | Long term: 4 mg/m3 |
| DN(M)EL – | workers |
| Inhalation: | Long term systemic: 10mg/m³ |

### 8.2. Exposure controls

**As appropriate to the situation and the quantity handled**.
Engineering methods to control or prevent exposure are preferred if feasible

| | |
|---|---|
| - **Ventilation:** | The need for local extraction to control dust must be assessed.<br>Use only in a well ventilated area in any case |
| - **Respirator**: | Dust mask type FFP3 (EN149) required when dusts are generated |
| - **Gloves:** | Most rubber or plastic gloves are suitable |
| - **Eye Protection**: | Chemical resistant goggles |
| - **Other Precautions:** | Overalls - when handling large quantities |

**Environmental exposure controls:**

Dispose of rinse water in accordance with local and national regulations.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

### 9.1. Information on basic physical and chemical properties

**Appearance:**

| | |
|---|---|
| Form: | Friable solid |
| Colour: | Light brown |
| Odour: | Ranges from almost odourless to mildly organic. If LimeX becomes anaerobic then odour can be moderately organic, dissipating with aerobic transition. |
| Melting temperature: | >450°C (decomposition) |
| Density: (g/ml) | Typical, ex-factory LimeX70 – 1.0-1.1, LimeX45 1.4-1.6 |
| Solubility in water: | Practically insoluble (0.016g/l, 20°C) |
| pH value: | Typically pH8 > pH9 |
| Flammability: | Not combustible. |
| Decomposition temperature: | >450°C |

### 9.2. Other information

Additional data relevant to Trading Standards and the liming materials schedule from The Fertiliser Regulations 1991 (SI No.2197):

| Parameter | LimeX45 | LimeX70 |
|---|---|---|
| Neutralising Value (NV as %CaO) | 22% | 25% |
| Sieve testing: % passing 5.00mm | 99% | 99% |
| Sieve testing: % passing 3.35mm | 97% | 97% |
| Sieve testing: % passing 150 um | 85% | 85% |
| $P_2O_5$: kg/tonne | 7 | 10 |
| MgO: kg/tonne | 5 | 7 |
| $SO_3$: kg/tonne | 4 | 6 |

LimeX typically contains 3-5kg total N/tonne, or which <5% is readily available. On this basis there is no claim for nitrogen benefit.

### 9.3 Typical composition

| Product | $CaCO_3$ % | Organic % | Silicates % | Water % |
|---|---|---|---|---|
| LimeX45 | 40 | 13 | 4 | 45 |
| LimeX70 | 52 | 15 | 5 | 30 |

**These values are not absolute. There will be a range for each constituent**

## SECTION 10: STABILITY AND REACTIVITY

| | |
|---|---|
| **10.1. Reactivity** | Low reactivity |
| **10.2. Chemical stability** | Stable. |
| **10.3. Possibility of hazardous reactions** | Violent reactions possible with acids, liberating carbon dioxide. Liberation of ammonia can occur when pH is increased > 9.20, such as by mixing with strong alkalis – for example, cement. The possibility of reaction with other substances cannot be excluded. |
| **10.4. Conditions to avoid** | Strong heating. |
| **10.5. Incompatible materials** | acids |
| **10.6. Hazardous decomposition products** | Produces carbon dioxide at >600°C |
| | |

## SECTION 11: TOXICOLOGICAL INFORMATION

### 11.1. Information on toxicological effects

| | |
|---|---|
| **Acute toxicity*:*** | LD50: >2000mg/kg oral, rat (data on analogous product)<br>LD50: >2000mg/kg dermal, rabbit. (data on analogous product)<br>LC50: >3mg/l/4hr inhalation, rat. (data on analogous product) |
| **Skin corrosion/irritation*:*** | No irritation. (method OECD439) (in vitro) |
| **Serious eye damage/irritation:** | No irritation. (method OECD438) (in vitro) |
| **Respiratory or skin sensitisation:** | Not a skin sensitiser (data on analogous product) |
| **Germ cell mutagenicity:** | Negative (method OECD471) (data on analogous product) |
| **Carcinogenicity:** | No indication of carcinogenicity (data on analogous product) |
| **Reproductive toxicity:** | Negative (method OECD422) (data on analogous product) |

### Further toxicological information

| |
|---|
| Sugar factory lime is primarily composed of inorganic substances. |
| The major constituent is calcium carbonate, along with sand and a small amount of other inorganic salts (including calcium salts) and the remainder is composed of organic plant material. |
| Sugar factory lime is not classified for human health. |
| Of its components, only calcium oxalate is classified as acutely toxic via the oral and dermal routes (category 4); however, this does not affect the overall classification of sugar factory lime. |
| As a result, it is considered that the properties of SFL are governed by those of calcium carbonate. |
| It is therefore considered appropriate for this data to be used for read-across purposes for toxicological endpoints. |

## SECTION 12: ECOLOGICAL INFORMATION

| | |
|---|---|
| **12.1. Toxicity** | Exceeds maximum solubility of the substance. (data on analogous product) |
| **12.2. Persistence and degradability** | The substance is inorganic and therefore will not undergo degradation. |
| **12.3. Bioaccumulative potential** | Bioaccumulation is not expected. |
| **12.4. Mobility in soil** | Not applicable |
| **12.5. Results of PBT and vPvB assessment** | This substance does not meet the criteria for classification as PBT or vPvB |
| **12.6. Other adverse effects** | None |

**Remarks:**

| |
|---|
| Sugar factory lime is primarily composed of inorganic substances. |
| The major constituent is calcium carbonate, along with sand and a small amount of other inorganic salts (including calcium salts) and the remainder is composed of organic plant material. |
| None of the components of sugar factory lime carry a classification for physical chemical properties or the environment and therefore sugar factory lime is not classified as hazardous to the environment. |
| Since the major component of sugar factory lime is calcium carbonate, it can therefore be assumed that the properties of sugar factory lime will be governed by those of calcium carbonate. |
| It is therefore considered appropriate for this data to be used for read-across purposes for the ecotoxicological endpoints. |

## SECTION 13: DISPOSAL CONSIDERATIONS

**13.1. Waste treatment methods**

| |
|---|
| Dispose of through an authorised waste contractor to a licensed site, or contact your local waste disposal authority, or British Sugar's Agricultural Helpdesk for additional guidance. |
| Contaminated product may be classified as hazardous or special waste, and as such would be covered by regulations which vary according to location. |
| Dispose of any packaging through an authorised waste contractor. |
| Empty and cleaned containers can be reused in conformity with regulations. |

## SECTION 14: TRANSPORT INFORMATION

| | |
|---|---|
| **14.1. UN number** | Not subject to transport regulations. |
| **14.2. UN proper shipping name** | Not applicable |
| **14.3. Transport hazard class(es)** | Not applicable |
| **14.4. Packing group** | Not applicable |
| **14.5. Environmental hazards** | Not applicable |
| **14.6. Special precautions for user** | Not applicable |
| **14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** | Not applicable |

## SECTION 15: REGULATORY INFORMATION

### 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

**Regional Regulations**

Compiled according to **Regulation (EU) 453/2010**

**Local Regulations**

Within the UK, the use of this material must be assessed under the Control of Substances Hazardous to Health **(COSHH)** regulations.

For details of other generally applicable Legislative/Regulatory Instruments, you should contact your National Helpdesk.
A list of those Helpdesks may be found at http://echa.europa.eu/help/nationalhelp_contact_en.asp

### 15.2. Chemical safety assessment

A chemical safety assessment has been performed, but no exposure scenario is attached as the substance is not classified as hazardous.

## SECTION 16: OTHER INFORMATION

**Source information**

In-house data
REACH registration data

**Abbreviations:**

| | |
|---|---|
| DN(M)EL | Derived no (minimum) effect level |
| OES | Occupational exposure standard |
| PBT | Persistent, bioaccumulative and toxic substance |
| PNEC | Predicted no effect concentration |
| STP | Sewage treatment plant |
| vPvB | Very persistent and very bioaccumulative |