

Safety Data Sheet

LIME BASED MORTARS

MORTARS

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

Substance Name: Lime Sand Mortars
 Limelite Heritage Mortars
 Bagged Lime
 Hydraulic Lime Mortar
 HHM Hydraulic Heritage Mortar
 Lime based products

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

Uses: Refer to relevant Technical Data Sheet
 Uses advised against: Refer to relevant Technical Data Sheet

1.3. Company identification

Name: **Tarmac Building Products Ltd**
 i10 Building
 Railway Drive
 Address: Wolverhampton
 WV1 1LH
 Telephone number: 0333 003 4555
 E-mail: mortar@tarmacbp.co.uk

1.4. Emergency telephone

UK/European Emergency N°: **999/112**
 Tarmac Building Products
 (during office hours): **0333 003 4555**

SECTION 2: HAZARDS IDENTIFICATION

Irritating to eyes and skin. Risk of serious damage to eyes.
 Risk of burns to skin when product wet due to generation of strong alkaline solution.
 Dust may cause irritation of the respiratory tract.

2.1 Classification of the substance or mixture:

2.1.1 Classification according to Regulation (EC) 1272/2008:

Hazard class	Hazard category	Classification procedure
Skin irritation	2	On the basis of test data
Serious eye damage/eye irritation	1	On the basis of test data
STOT Single Exposure; Inhalation	3	On the basis of test data

2.1.2 Classification according to Directive 1999/45/EEC:

Xi Irritant

Further Information: Further copies of this Safety Data Sheet may be obtained from Tarmac Building Products Limited.

Tarmac Building Products Limited

Registered in England and Wales No. 4026569

Registered Office: i10, Railway Drive, Wolverhampton, WV1 1LH

2.2 Label elements

2.2.1 Labelling according to Regulation (EC) 1272/2008:

Signal word: Danger

Hazard pictogram:



Hazard statements:

H318: Causes serious eye damage

H315: Causes skin irritation

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+P310: IF IN EYES: Rinse cautiously with water for several minutes. Immediately call a POISON CENTRE or doctor/physician

P302+P352: IF ON SKIN: Wash with plenty of water

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 according to local regulations

2.2.2 Labelling according to Directive 1999/45/EEC:

Signal word: Xi - Irritant

Hazard pictogram:



Risk phrases:

R37/38: Irritating to respiratory system and skin

R41: Risk of serious damage to eyes

Safety phrases:

S2: Keep out of 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 and

S39: Wear eye/face protection

2.3 Other hazards

The product does not meet the criteria for PBT or vPvB substance.

Lime based products can cause serious and permanent damage to the eyes.

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

3.2 Mixtures:

Lime Sand Mortars - Hydrated lime , Silica sands, water, additives and fillers

HHM Hydraulic Heritage Mortar- is a blend of Hydraulic Lime, Hydrated Lime, Fine Aggregate and Clay.

Hydraulic Lime Mortar – is a blend of natural hydraulic lime and selected aggregates

Heritage Mortar 1 - is a blend of lime, silica sand, filler and additives.

Heritage Mortar 2 - is a blend of calcium hydroxide and silica sands.

Heritage Mortar 3 - is a blend of Portland Cement, Hydraulic and Hydrated Lime, silica sand, fillers and additives.

Herritage Mortar 4 - is a blend of calcium hydroxide, silica sands and filler

Under CLP EC 1272/2008

Ingredient	%	Reach Reg No.	CAS No.	EC No.	CLP Hazard Category	Hazard Statements
Hydrated Lime – Calcium dihydroxide	5-15	TBA	1305-62-0	215-137-3	(1)STOT SE 3 (2)Skin irritation 2 (3) Serious eye damage/eye irritation 1	(1) H335 – May cause respiratory irritation. (2) H315 – Causes skin irritation (3) H318 – Causes serious eye damage

Under DPD EC1999/45

Ingredient	%	Reach Reg No.	CAS No.	EC No.	Symbol	Risk Phrase
Hydrated Lime – Calcium dihydroxide	5-15	TBA	1305-62-0	215-137-3	Xi - Irritant	R37/38 – Irritating to respiratory system and skin R41 – Risk of serious damage to eyes

SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures:

4.1.1 Routes of exposure;

Inhalation (dust)	Move to fresh air. Dust in throat and nasal passages should clear spontaneously. Seek medical attention if irritation persists or later develops or if discomfort, coughing or other symptoms persist
Eye contact	Lime based products can cause serious and permanent damage to the eyes therefore speed is essential. Immediately wash eyes with plenty of eyewash solution or running water, holding eyelids apart for 15 minutes. Do not rub eyes in order to avoid possible cornea damage as a result of mechanical stress. Always seek immediate further specialist medical/eye specialist attention to check that all particles have been removed and examine eye for damage.
Skin contact	Remove affected clothing, footwear, watches, jewellery etc. Wash skin with soap and water immediately. Wash contaminated clothing before re-use. Seek medical attention if irritation occurs.
Ingestion	Immediately rinse mouth and drink plenty of water. Do not induce vomiting. Seek immediate medical advice if person becomes uncomfortable. Show the container or label used.

4.2 Most important symptoms and effects, both acute and delayed;

Calcium dihydroxide 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;

When contacting further medical advise. Show container, label or this SDS sheet.

SECTION 5: FIRE-FIGHTING MEASURES

5.1 Extinguishing media:

5.1.2 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.

5.1.3 Unsuitable extinguishing media;

None identified.

5.2 Special hazards arising from the substance or mixture:

None identified

5.3 Advice for fire fighters:

None identified

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures:

6.1.1. For Non-emergency personnel;

Wear suitable protective equipment (see section 8).

6.1.2 For emergency responders; N/a

6.2 Environmental precautions:

Do not wash product down sewage and drainage systems or into bodies of water (e.g. streams).

6.3 Methods and material for containment and cleaning up:

Dry product;

Use cleanup methods such as vacuum cleaning-up or vacuum extraction fitted with EPA/HEPA air filters which do not cause airborne dispersion. Never use compressed air.

Alternatively, wipe-up the dust by mopping, wet brushing or by using water spray or hoses (fine mist to avoid dust becoming airborne) and remove slurry.

If not possible, remove by slurring with water (see wet product).

If only dry cleaning by brushing can be done, ensure all appropriate personnel wear correct PPE including dust mask and eye protection at all times (see section 8).

Avoid inhalation of dust and place in a container and dispose of as detailed in section 13.

Wet product:

Clean up wet material and place in container or controlled location. Allow material to dry and solidify before disposal as detailed in section 13.

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 Appendix 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):

No additional information for the specific end users.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters:

SCOEL recommendation (SCOEL/SUM/137 February 2008; see Section 16.6):

Occupational Exposure Limit (OEL), 8 h TWA: 1 mg/m³ respirable dust of calcium dihydroxide

Short-term exposure limit (STEL), 15 min: 4 mg/m³ respirable dust of calcium dihydroxide

PNEC aqua = 490 µg/l

PNEC soil/groundwater = 1080

The following Workplace Exposure Limits (WEL's) for airborne dust are given in HSE Guidance Note EH40:

Total dust -	W.E.L.	10mg/m ³	8 Hrs	T.W.A.
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Respirable dust -	W.E.L.	4mg/m ³	8 Hrs	T.W.A.
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W.E.L. = Workplace Exposure Limit

T.W.A. = Time Weighted Average




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.

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		Lime based products can cause serious and permanent damage to the eyes. Do not wear contact lenses. For powders, tight fitting goggles with side shields, or wide vision full goggles. It is also advisable to have individual pocket eyewash.
8.2.2.2: Skin protection		Overalls and/or long-sleeved jackets and full length trousers should be worn to protect skin from contact with wet products. Outer clothing should be waterproof if contact with wet product is likely. Wear impermeable boots to protect feet. Safety wellington boots should be worn if working with wet product, with waterproof trousers pulled over them to help prevent product entering the boots. If the product saturates clothing, or enters gloves or boots, remove the articles immediately and wash before wearing again.
8.2.3.3: Respiratory protection		When a person is potentially exposed to dust levels above exposure limits, an appropriate respirator must be used dependant on expected exposure levels.
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 Control		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.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1.1 Information on basic physical and chemical properties:

Appearance:	Wet Product - a semi-solid state. Dry Product – a powder form.
Odour:	Slight, earthy odour
Odour threshold:	N/a
pH:	Typical 12 -14
Melting point:	N/a
Boiling point:	N/a
Flash point:	N/a
Evaporation rate:	N/a
Flammability:	Non flammable
Explosive limits:	Non explosive
Vapour pressure:	N/a
Vapour density:	0 at 20°C
Relative density:	3.0 (typical)
Solubility in water:	Some components sparingly soluble
Partition coefficient:	N/a
Auto ignition temperature:	N/a
Decomposition temperature:	N/a
Viscosity:	N/a
Oxidising properties:	No oxidising properties

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity:

In aqueous media $\text{Ca}(\text{OH})_2$ dissociates resulting in the formation of calcium cations and hydroxyl anions (when below the limit of water solubility).

10.2 Chemical Stability:

Stable product under recommended storage and handling conditions.

10.3 Possibility of hazardous reactions:

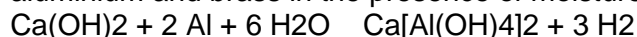
Calcium dihydroxide reacts exothermically with acids. When heated above 580 °C, calcium dihydroxide decomposes to produce calcium oxide (CaO) and water (H₂O): $\text{Ca}(\text{OH})_2 \rightarrow \text{CaO} + \text{H}_2\text{O}$. Calcium oxide reacts with water and generates heat. This may cause risk to flammable material.

10.4 Conditions to avoid:

Dry Products – avoid humid conditions which may cause lump formation and loss of product quality.

10.5 Incompatible Materials:

Calcium dihydroxide reacts exothermically with acids to form salts. Calcium dihydroxide reacts with aluminium and brass in the presence of moisture leading to the production of hydrogen.



10.6 Hazardous Decomposition Products:

Further information: Calcium dihydroxide reacts with carbon dioxide to form calcium carbonate, which is a common material in nature.

SECTION 11. TOXICOLOGICAL INFORMATION

11.1.1 Information on toxicological effects

<u>Toxicity endpoints</u>	<u>Outcome of the effects assessment</u>
Acute toxicity	Calcium dihydroxide is not acutely toxic. Oral LD50 > 2000 mg/kg bw (OECD 425, rat) Dermal LD50 > 2500 mg/kg bw (OECD 402, rabbit) Inhalation no data available Classification for acute toxicity is not warranted.
Skin corrosion/irritation	Calcium dihydroxide is irritating to skin (<i>in vivo</i> , rabbit). Based on experimental results, calcium dihydroxide requires classification as irritating to skin [R38, irritating to skin; Skin Irrit 2 (H315 – Causes skin irritation)].
Serious eye damage/irritation	Calcium dihydroxide entails a risk of serious damage to the eye corrosion (eye irritation studies (<i>in vivo</i> , rabbit). Based on experimental results, calcium dihydroxide requires classification as severely irritating to the eye [R41, Risk of serious damage to eye; Eye Damage 1 (H318 - Causes serious eye Damage)].
Respiratory or skin sensitisation	No data available. Calcium dihydroxide 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.
Repeated dose toxicity	Based on available data, the classification criteria are not met
Germ cell mutagenicity	Based on available data, the classification criteria are not met
Carcinogenicity	Calcium (administered as Ca-lactate) is not carcinogenic (experimental result, (rat). The pH effect of calcium dihydroxide does not give rise to a carcinogenic risk. Human epidemiological data support lack of any carcinogenic potential of calcium dihydroxide. Classification for carcinogenicity is not warranted.

Toxicity for reproduction	Based on available data, the classification criteria are not met
STOT – single exposure	Dust exposure may irritate the throat and respiratory tract. Coughing, sneezing, and shortness of breath may occur following exposures in excess of occupational exposure limits. As summarised and evaluated in the SCOEL recommendation (Anonymous, 2008), based on human data calcium dihydroxide is classified as irritating to the respiratory system [R37, Irritating to respiratory system; STOT SE 3 (H335 – May cause respiratory irritation)].
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 Ca(OH) ₂ 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 Ca(OH) ₂ 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/m ³ respirable dust (see Section 8.1). Therefore, classification of Ca(OH) ₂ for toxicity upon prolonged exposure is not required.
Aspiration hazard	Calcium hydroxide is not known to present an aspiration hazard.

Information on likely routes of exposure:

Contact with skin, eyes, ingestion and dust inhalation

Symptoms relating to the physical, chemical and toxicological characteristics:

Dust exposure may irritate the throat and respiratory tract. Coughing, sneezing, and shortness of breath may occur following exposures in excess of occupational exposure limits.

When in contact with wet skin may cause thickening, cracking or fissuring on the skin. Prolonged contact in combination with abrasion risk of severe burns.

Lime based products are severely irritating to the eyes and can cause serious permanent damage.

Direct contact may cause corneal damage by mechanical stress, immediate or delayed irritation or inflammation. Direct contact will cause effects ranging from moderate irritation to chemical burns and blindness.

Long term exposure to dust can lead to the lung disease.

Delayed and immediate effects as well as chronic effects from short and long-term exposure:

Delay in treating eye contact can lead to serious and permanent eye damage.

SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity:

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.

12.2 Persistence and Degradability:

Not relevant as this product is an inorganic material. After hardening, it presents no toxicity risks.

12.3 Bioaccumulative potential:

Not relevant as this product is an inorganic material. After hardening, it presents no toxicity risks.

12.4 Mobility in Soils:

Not relevant as this product is an inorganic material. After hardening, it presents no toxicity risks.

12.5 Results of PBT and vPvB assessment:

Not relevant as this product is an inorganic material. After hardening, it presents no toxicity risks.

12.6 Other adverse effects:

No other adverse effects are identified.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods:

Product – unused residue or dry spillage;

Pick up dry unused residue or dry spillage as is (refer to Section 6). Mark up containers. Possibly reuse depending upon shelf life considerations and the requirements to avoid dust exposure. In case of disposal, harden with water and dispose of as below.

Product – slurries;

Allow to harden, avoid entry in sewerage and drainage systems or into bodies of water. Dispose of as solid waste. This is not classed as a dangerous waste.

LoW/EWC entries; 16 03 04 - inorganic wastes containing no dangerous substances.

17 01 01 - construction and demolition wastes – concrete.

Packaging;

Completely empty, clean packaging to be disposed in accordance with local legislation.

LoW/EWC entry: 15 01 01 - waste paper and cardboard packaging (clean)

15 01 02 - plastic packaging (clean)

If packaging is contaminated;

20 03 01 – mixed municipal waste

SECTION 14: TRANSPORT INFORMATION

These products are not classified as hazardous for transport. No special precautions are needed apart from those mentioned under Section 8.

14.1 UN number – not relevant

14.2 UN proper shipping name – not relevant

14.3 Transport hazard class(es) – not relevant

14.4 Packing group – not relevant

14.5 Environmental hazards - not relevant

14.6 Special precautions for user - not relevant

14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code - not relevant

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance:

Workplace Exposure Limits – HSE Guidance note EH40.

Control of Substances Hazardous to Health latest Regulations.

SCOEL recommendation (SCOEL/SUM/137 February 2008; see Section 16.6):

15.2 Chemical Safety Assessment:

A chemical safety assessment has not been carried out for this substance.

SECTION 16: OTHER INFORMATION

16.1 Hazard Statements:

H318: Causes serious eye damage

H315: Causes skin irritation

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

P305+P351: IF IN EYES: Rinse cautiously with water for several minutes

P310: Immediately call a POISON CENTRE or doctor/physician

P302+P352: IF ON SKIN: Wash with plenty of soap and water

P261: Avoid breathing dust/fume/gas/mist/vapours/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 current waste regulations.

16.3 Risk Phrases:

R37/38 Irritating to respiratory system and skin

R41 Risk of serious damage to eyes

16.4 Safety Phrases:

S2 Keep out of 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

S46 If swallowed, seek medical advice immediately and show this container or label

16.5 Abbreviations:

STEL: short-term exposure limit.

TWA: time weighted average.

vPvB: very persistent, very bioaccumulative chemical.

OEL: occupational exposure limit

PBT: persistent, bioaccumulative, toxic chemical

PNEC: predicted no-effect concentration

SCOEL: Scientific Committee on occupational exposure limits

STEL: short-term exposure limit

TWA: time weighted average

vPvB: very persistent, very bioaccumulative chemical

16.6 Key Literature References:

Suppliers; Safety Data Sheets.

In-house data files.

HSE Guidance Note EH40.

Supplier's safety data sheets.

PPE Regulations.

COSHH Regulations.

Environmental Protection Act.

(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

16.7 Revision:

Version Number:1

Date Prepared:11/04/2013

Supersedes; N/a

Nature of Revision - This version produced in reference to Annex II of the REACH Regulation (EC) 1907/2006; article 31, as amended by Regulation 453/2010.

Disclaimer

Although we try to ensure that the information in this publication is accurate, it is not intended as technical advice applicable to your particular circumstances and we accept no liability if you use it in this way. 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. The advice shown on this sheet is given as a guide to good practice but Tarmac Building Products Ltd. can accept no responsibility for any loss, damage or injury howsoever caused in following it.

This version of the SDS supersedes all previous versions.

APPENDIX: Exposure Scenarios: N/a

End of the safety data sheet
