EWI-747 LIME RENDER NHL 3.5 MORTAR SAFETY DATA SHEET

SECTION 1: IDENTIFICATION OF THE SUBSTANCE OR MIXTURE AND OF THE COMPANY OR UNDERTAKING

1.1 Product Identifier:

Product name: EWI-747 Lime Render NHL 3.5

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

Rendering and finishing mortar designed for use in the restoration of historical heritage, green building, and new constructions; intended for use on exterior and interior elements.

1.3 Details of the supplier of the safety data sheet:

Manufacturer:

EWI Pro Insulation Systems Ltd
Unit 1-2, King Georges Trading Estate, Davis Road, Chessington, England, KT9 1TT
0800 133 7072
info@ewipro.com
technical@ewipro.com

Producer:

COMCAL NATURAL, S.L.
Av. CAN BORDOLL, 55 Nau 2 P.I. Can Roqueta
SABADELL Provincia: BARCELONA
+34 93 729 42 54
comercial@com-cal.com

1.4 Emergency phone number:

Environment Agency Emergency Hotline: +44/(0)800 80 70 60

Emergency Services (UK): 999

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture:

Regulation (EU) 1272/2008 (CLP) for classification, packaging, and labelling:

Hazard Class	Hazard Category	Hazard Statement
Skin Irritation	2	H315: causes skin irritation
Serious Eye Damage / Eye Irritation	1	H318: causes serious eye damage
Specific Target Organ Toxicity (Single Exposure)	3	H335: may irritate the respiratory tract

2.2 Description of hazards:

➥ H318: Causes serious eye damage.

➥ H315: Causes skin irritation.

➥ H335: May irritate the respiratory tract.

Precautionary Statements:

➥ P102: Keep out of reach of children.

➥ P280: Wear protective gloves, protective clothing, protective glasses, mask.

➥ P305 + P351 + P338 + P310: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. Immediately call a POISON INFORMATION CENTRE or doctor.

➥ P302 + P352 + P333 + P313: IF ON SKIN: Wash with plenty of water and soap. If skin irritation or rash occurs: seek medical advice.

➥ P261 + P304 + P340 + P312: Avoid breathing dust/smoke/gas/mist/vapor/spray. IF INHALED: Move the person to fresh air and keep comfortable for breathing. Call a POISON INFORMATION CENTRE or doctor if feeling unwell.

➥ P501: Dispose of content/container at a designated waste collection point.

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

3.1 Composition:

➥ Selected marble and siliceous aggregates > 75% (by weight)

➥ Natural Hydraulic Lime NHL-3.5 Transpira TIGRE > 15% (by weight)

➥ Ultrafine Natural Pozzolana < 5% (by weight)

➥ Other organic and inorganic additives < 2% (by weight)

3.2 Hazardous Substances:

The natural hydraulic lime (NHL) 3.5 is a lime with hydraulic properties, produced by the calcination of clayey or siliceous limestone, followed by reduction to powder by slaking with or without grinding.

It has the ability to set and harden when mixed with water and by reaction with carbon dioxide present in air (carbonate formation).

Main Components:

CAS	EC	Name	Content by weight %	Classification according to Regulation (EU) 1272/2008
1305-62-0	215-137-3	Calcium Hydroxide	> 25%	H318, H315, H335
10034-77-2	233-107-8	Dicalcium Silicate	> 20%	Not classified
471-34-1	207-439-9	Calcium Carbonate	> 10%	H318, H315, H335

3.3 Mixtures:

The mixture does not contain cement and there is no soluble chromium VI present.

SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures:

➥ Inhalation: Move the person to a place where they can breathe fresh air. Drink water to clear the throat and blow the nose to expel the dust. Seek medical help if symptoms persist. (The "inhalation" of large amounts of natural hydraulic lime requires immediate medical attention).

➥ Skin contact: If the natural hydraulic lime is dry, remove as much as possible and then wash abundantly with water. If the natural hydraulic lime is wet, wash abundantly with water. Remove and thoroughly wash any affected clothing, shoes, watches, etc., before reuse. Seek medical help if irritation or caustic burn occurs.

➥ Eye contact: Do not rub the eyes to avoid damaging the cornea. Rinse immediately with plenty of water (preferably saline solution 0.9% NaCl) to remove all particles and consult an ophthalmologist.

➥ Accidental ingestion: Do not induce vomiting. If the person is conscious, rinse the mouth to clear material or dust, give plenty of water to drink, and seek medical help immediately.

4.2 Main symptoms and effects, acute and delayed:

➥ Eye contact: Direct contact with natural hydraulic lime powder (wet or dry) can cause severe, potentially irreversible damage.

➥ Skin contact: Contact between natural hydraulic lime powder and moist skin may cause irritation, dermatitis, or burns.

➥ Inhalation: Repeated inhalation of natural hydraulic lime dust over a long period may increase the risk of developing lung disorders.

➥ Environment: When used normally, natural hydraulic lime does not present a particular risk to the environment.

4.3 Indications for medical attention and special treatments to be administered immediately:

➥ Whenever contacting a doctor, bring this Safety Data Sheet with you.

SECTION 5: FIRE-FIGHTING MEASURES

5.1 Extinguishing media:

Natural hydraulic lime is non-flammable.

5.2 Specific hazards arising from the mixture:

Natural hydraulic lime is non-flammable, non-explosive, and neither supports nor feeds the combustion of other materials.

5.3 Advice for firefighters:

Natural hydraulic lime does not present any danger related to fire. The use of special protective equipment by firefighters is not necessary.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal Precautions, Protective Equipment and Emergency Procedures:

6.1.1. For non-emergency personnel:

Wear protective equipment described in Section 8 and follow the recommendations for safe handling provided in Section 7.

6.1.2. For emergency personnel:

Emergency procedures are not required.

Nevertheless, in cases of elevated dust concentrations, it is necessary to wear respiratory protective equipment.

6.2 Precautions for the environment:

Do not dispose of natural hydraulic lime into sewers or surface waters (such as streams).

6.3 Methods and material for containment and cleaning:

Gather the spilled material.

Use dry cleaning methods that do not raise dust, such as vacuum systems or extraction (portable industrial vacuum cleaners equipped with high-efficiency particulate filters (EPA and HEPA, UNE-EN 1822-1:2010) or equivalent techniques).

Do not use compressed air.

Make sure all workers wear appropriate protective equipment and avoid dispersion of dust.

Prevent inhalation of natural hydraulic lime dust and contact with eyes and skin.

Dispose of collected material in a suitable container.

6.4 Reference to other sections:

For more information, see Sections 8 and 13.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for Safe Handling:

7.1.1. Protection measures:

Follow the recommendations given in Section 8.

To clean natural hydraulic lime in a dry state, refer to Section 6.3.

Bulk natural hydraulic lime should be stored in waterproof, dry, clean, and sheltered silos.

To avoid the risk of burial or asphyxiation, do not enter confined spaces such as silos, containers, tanks, or other storage recipients without appropriate safety measures. Naturally hydraulic lime may pile up or stick to the walls of confined spaces and may suddenly collapse or fall.

Bags should be kept off the ground, in a cool, dry place, and sheltered from strong airflows that may affect the material's quality.

To maintain its properties optimally, do not store for more than 12 months.

When handling bags, follow Council Directive 90/269/EEC on minimum health and safety requirements for manual handling of loads, particularly to avoid back injuries in workers.

7.1.2. Measures to Prevent Fires:

Not applicable.

7.1.3. Measures to Prevent Airborne Particles and Dust:

Do not sweep; use dry cleaning methods that do not raise dust, such as vacuum or extraction systems.

7.1.4. Measures to Protect the Environment:

No special measures are required.

7.1.5. General Occupational Hygiene Measures:

Avoid clouds of dust during handling. If this cannot be avoided, wear protective glasses and a dust mask.

Avoid direct contact of natural hydraulic lime with skin and mucous membranes.

Handle bags with care and use mechanical aids wherever possible.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters:

SCOEL [1] Recommendations:

➥ Natural Hydraulic Lime (NHL):

Acute effects: DNEL: 4 mg/m³ (respirable dust)

Long-term effects: DNEL: 1 mg/m³ (respirable dust)

Occupational Exposure Limit Values (VLA):

➥ Calcium Hydroxide: VLA-ED: 5 mg/m³

8.2 Exposure controls:

8.2.1. Appropriate technical controls:

➥ Measures to reduce the formation of airborne particles and the spread of dust, such as dust extraction, vacuum systems, and dry cleaning methods that do not raise dust.

8.2.2. Individual protective measures, such as personal protective equipment:

➥ Respiratory protection:

When exposed to clouds of dust, it is necessary to use appropriate and approved masks.

➥ Skin protection:

Use waterproof gloves (EN ISO 374-1) suitable for the kind of work, protective boots, long-sleeve protective clothing, and additional products to protect the skin during prolonged contact with wet or dry natural hydraulic lime.

Special care must be taken to avoid wet paste entering the boots or staying trapped in clothing, watches, etc.

Avoid kneeling directly on natural hydraulic lime. If this is absolutely necessary, waterproof kneepads must be worn.

➥ Eye protection:

When handling natural hydraulic lime or fresh paste, protective glasses certified according to harmonized Standard UNE-EN 166 must be worn to avoid the risk of dust or paste projection into the eyes.

8.2.3. Environmental exposure controls:

➥ Air:

Controls to avoid dispersion of natural hydraulic lime particles into the environment must be in keeping with available technology and regulations on particulate emissions.

➥ Water:

Avoid discharging natural hydraulic lime into sewers or surface water to avoid raising pH. A pH above 9 can cause harmful ecotoxic effects.

➥ Soil and terrestrial environment:

Special control measures for terrestrial exposure are not required.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on Basic Physical and Chemical Properties:

➥ Physical appearance:

Appearance: Natural hydraulic lime is a solid, inorganic material (fine powder of light ochre-beige color)

Particle size: According to EN 459-1 standard

➥ Odour: Odourless

➥ Odour threshold: None; it is odourless

➥ pH: Alkaline, between 11 and 13.5 (saturated solution at 20°C)

➥ Melting point: > 450°C

➥ Boiling point: > 450°C

➥ Flash point: Not applicable as it is not a liquid

➥ Evaporation rate: Not applicable as it is not a liquid

➥ Flammability: Not applicable; it is a non-flammable solid and cannot cause or contribute to a fire by friction

➥ Explosive limits: Not applicable

➥ Vapor pressure: Not applicable (boiling point > 450°C)

➥ Vapor density: Not applicable (boiling point > 450°C)

➥ Relative density: 2.4–2.9 g/cm³

➥ Water solubility: Moderately soluble

➥ Partition coefficient: Not applicable due to its inorganic nature

➥ Auto-ignition temperature: Not applicable (not pyrophoric)

➥ Decomposition temperature: Not applicable

➥ Viscosity: Not applicable as it is not a liquid

➥ Oxidizing properties: Not applicable; it neither causes nor assists the combustion of other substances

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity:

When mixed with water, natural hydraulic lime sets, forming a stone-like mass that is stable and resistant under normal environmental conditions.

In water, $Ca(OH)_2$ dissociated, forming calcium cations and hydroxide ions.

10.2 Chemical stability:

Natural hydraulic lime is chemically stable as long as it is stored properly.

Contact with incompatible materials should be avoided.

10.3 Possibility of hazardous reactions:

Natural hydraulic lime reacts exothermically with acids.

When heated above 580°C, calcium hydroxide ($Ca(OH)_2$) decomposes to produce calcium oxide (CaO).

Calcium oxide reacts with water and generates heat.

This release of heat may pose a risk of ignition.

10.4 Conditions to avoid:

Moisture may affect the product's quality and cause it to set.

10.5 Incompatible materials:

Natural hydraulic lime reacts exothermically with acids to form salts.

It reacts with aluminium and brass in the presence of moisture, yielding hydrogen.

10.6 Hazardous decomposition products:

Natural hydraulic lime does not decompose into hazardous products.

It is not capable of undergoing a self-sustaining exothermic reaction.

It neither causes nor supports the combustion of other materials.

SECTION 11: TOXICOLOGICAL INFORMATION

Inhalation:

Natural hydraulic lime may cause irritation to the respiratory tract and nasal mucosa. In severe cases, erosion of the mucous membrane may be observed. Chronic exposure to respirable dust at concentrations above occupational exposure limits may produce coughing, shortness of breath, and chronic obstructive pulmonary diseases.

Ingestion:

If a significant amount is swallowed, natural hydraulic lime is caustic to the digestive tract; it may cause burns in the mouth, esophageal, and stomach tissues.

Eye contact:

Natural hydraulic lime may cause irritation of the eyelids (blepharitis) and cornea (conjunctivitis) and damage to the eyeballs.

Skin contact:

Natural hydraulic lime may irritate moist skin due to the high pH of the lime pastes. Contact of the skin without proper protection with natural hydraulic lime pastes may cause damage to the dermis, such as cracking or caustic burns, without prior symptoms.

Chronic skin conditions:

Prolonged exposure without proper protective gloves may lead to irritative dermatitis. Continuous contact without protection may cause other injuries. Generally, these appear on the fingers: dermatitis with fissuring, ulceration, hyperkeratosis.

Carcinogenicity:

A causal relationship between exposure to natural hydraulic lime and the development of cancer has not been established.

SECTION 12: ECOLOGICAL INFORMATION

12.1 Ecotoxicity:

The product is not considered hazardous to water (LC50 for aquatic toxicity has not been determined). Nevertheless, in cases of accidental spillage of large amounts of natural hydraulic lime into water, a slight pH rise may be observed, which under certain conditions could be toxic to aquatic life.

12.2 Persistence and degradability:

Not relevant, as natural hydraulic lime is an inorganic material.

Once set, natural hydraulic lime forms a stable material that fixes its components and makes them insoluble; therefore, it poses no toxicity risk.

12.3 Bioaccumulative potential:

Not relevant, as natural hydraulic lime is an inorganic material.

Once set, it forms a stable material that fixes its components and makes them insoluble; therefore, it poses no risk of toxicity.

12.4 Soil mobility:

Not relevant, as natural hydraulic lime is an inorganic material.

Once set, it forms a stable material that fixes its components and makes them insoluble; therefore, it poses no risk of toxicity.

12.5 PBT and vPvB assessment results:

Not relevant, as natural hydraulic lime is an inorganic material.

Once set, it forms a stable material that fixes its components and makes them insoluble; therefore, it poses no risk of toxicity.

12.6 Other adverse effects:

Not relevant.

SECTION 13: DISPOSAL CONSIDERATION

After setting, natural hydraulic lime may be disposed of in the same way as other construction waste and may be stored in suitable containers in conformity with applicable regulations.

SECTION 14: TRANSPORT INFORMATION

Natural hydraulic lime is not affected by international regulations for the transport of dangerous goods.

Non-dangerous goods according to transport regulations.

It is not necessary to take any special precaution other than those mentioned in Section 8.

14.1. UN Number:

Not relevant.

14.2. 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 MARPOL Annex II and the IBC Code:

Not relevant.

SECTION 15: REGULATORY INFORMATION

15.1 Regulations and legislation on health, safety, and environment specific to the mixture:

Natural hydraulic lime is exempt from registration.

15.2 Chemical Safety Assessment:

No chemical safety assessment has been performed.

SECTION 16: OTHER INFORMATION

16.1. Abbreviations and Acronyms:

➥ CAS – Chemical Abstracts Service, a division of the American Chemical Society

➥ EINECS – European Inventory of Existing Chemical Substances

➥ EPA – Air Filter with High Particle Efficiency

➥ INSHT – National Institute for Occupational Safety and Health

➥ HEPA – High Efficiency Particulate Air Filter

➥ LC50 – Lethal Concentration for 50% of organisms under specified conditions

➥ REACH – Registration, Evaluation, Authorization, and Restrictions of Chemicals (EU Regulation 1907/2006)

➥ mPmB – Very Persistent and Very Bioaccumulative

➥ VLA-ED – Occupational Daily Exposure Limit

16.2. References:

(1) Portland Cement Dust – Hazard Assessment Document EH 75/7, UK Health and Safety Executive, 2006.

(2) Observations on the effects of skin irritation by cement, Kietzman et al, Dermatosen, 47, 5, 184-189 (1999).