I. IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND OF THE COMPANY / UNDERTAKING

1.1. Product identifier

Name: Natural Hydraulic Lime (NHL) according to EN 459-1 Chemical name:

Natural Hydraulic Lime

Trade name: Natural Hydraulic Lime NHL-5 Transpira

CAS: 85117-09-5

EINECS: 285-561-1

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

Preparation of binder for masonry mortars, plastering and plastering, for the manufacture of other construction products and for civil engineering applications.

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

name:

ANNA CARULLA BECH

Data of the legal representative:

Anna Carulla Bech

DNI: **ES40866956-G**

Contact details:

Avinguda de Guissona, 9

25200 - Cervera (Lleida) Tel /

Fax: 973 530 108

info@cementonaturaltigre.com

www.cementonaturaltigre.com

1.4. Emergency telephone number

Emergency telephone number during working hours (08:00 - 13:00; 15:00 - 19:00): Tel +34 973 530 108

II. HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

2.1.1. According to Regulation (EC) No. 1272/2008 (CPL)

Hazard Class Hazard	Category	Hazard
Statements Skin irritation	2	H315: causes skin irritation
Serious eye damage / eye irritation	1	H318: causes serious eye damage
Specific Systemic Toxicity Target Organ (single exposure)	3	H335: may irritate the respiratory tract

2.2. Hazard characterization

H318 Causes serious eye damage.

H315 Causes skin irritation.

H335 May irritate the respiratory tract.

Precautionary statements:

P102 Keep out of the reach of children.

P280 Wear protective gloves / clothing / glasses / mask.

P305 + P351 + P338 + P310 IN CASE OF CONTACT WITH EYES: rinse carefully with water for several minutes. Remove contact lenses, if present and easy. Keep clarifying. Immediately call a POISON CENTER or doctor.

P302 + P352 + P333 + P313 IF ON SKIN: wash with plenty of soap and water. In case of skin irritation or rash: consult a doctor.

P261 + P304 + P340 + P312 Avoid breathing dust / fume / gas / mist / vapors / spray. IF INHALED: remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor if you feel unwell.

P501 Dispose of contents / container to appropriate waste collection point. **III.**

COMPOSITION / INFORMATION ON INGREDIENTS

3.1. Substances

Natural hydraulic lime (NHL) is a lime with hydraulic properties produced by the calcination of more or less clayey or siliceous limestones with reduction to dust by slaking with or without grinding.
It has the property of setting and hardening when mixed with water and by reaction with carbon dioxide present in the air (carbonation).

Main component

CAS	No. EINECS No.	Name	Content by Weight%	Classification according to Regulation (EU) No. 1272/2008

1305-62-0	215-137-3	Hydroxide Calcium	> 15%	H318, H315, H335
10034-77-2	233-107 -8	Silicate Dicalcium	> 30%	Not classified
471-34-1	207-439-9	Carbonate Calcium	> 10%	H318, H315, H335

3.2. Mixtures

Not applicable as the product is a substance, not a mixture.

IV. 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 your throat and blow your nose to remove dust. Seek medical assistance if symptoms persist. ("Inhaling" large amounts of natural hydraulic lime requires immediate medical attention).

Contact with the skin: If the natural hydraulic lime is dry, remove as much as possible and then wash with plenty of water. If the natural hydraulic lime is wet, wash thoroughly with water. Remove and thoroughly wash stained clothing, footwear, watches, etc., before reuse. Obtain medical assistance whenever irritation or caustic burn occurs.

Contact with the eyes: Do not rub the eyes to avoid damage to the cornea. Rinse immediately with plenty of water (if possible use 0.9% NaCl saline), to remove all particles and consult an ophthalmologist.

Accidental ingestion: Do not induce vomiting. If conscious, rinse mouth to remove material or dust, give plenty of water to drink, and consult a physician immediately.

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

Eye: contactdirect contact with natural hydraulic lime powder (wet or dry) can cause serious, potentially irreversible injuries.

Skin Contact: Contact between natural hydraulic lime powder and wet skin can cause irritation, dermatitis or burns.

Inhalation: Repeated inhalation of natural hydraulic lime dust over a long period of time increases the risk of developing lung diseases.

Environment: in normal use of the product, natural hydraulic lime does not present any particular risk to the environment.

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

Take this safety data sheet with you when you contact a doctor.

V. FIRE-FIGHTING MEASURES

5.1. Extinguishing media

Natural hydraulic lime is not flammable.

5.2. Specific hazards arising from the substance or mixture

Natural hydraulic lime is not flammable, it is not explosive and it neither facilitates nor fuels the combustion of other materials.

5.3. Advice for firefighters

Natural hydraulic lime does not pose a fire-related hazard. The use of special protective equipment by firefighters is not necessary.

SAW. MEASURES IN CASE OF ACCIDENTAL RELEASE

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For personnel who are not part of the emergency services

Wear the protective equipment described in section VIII and follow the advice for safe handling given in section VII.

6.1.2. For emergency personnelemergency

Noprocedures are required.

However, in situations with high levels of dust concentration, it is necessary to wear respiratory protection equipment.

6.2. Environmental precautions

Do not pour natural hydraulic lime into sewage systems or surface waters (eg

streams).

6.3. Methods and material for containment and cleaning up

Collect spilled material.

Use dry cleaning media that do not raise dust such as aspiration or extraction systems (portable industrial vacuum cleaners equipped with particle filters

High efficiency (EPA and HEPA filters, UNE-EN 1822-1: 2010) or equivalent technique Never use pressurized air

Make sure that all workers wear the appropriate protective equipment and prevent the dispersion of dust.

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

the collected material in a container.

6.4. References to other sections

For more information consult ar sections VIII and XIII.

VII. HANDLING AND STORAGE

7.1. Precautions for safe handling

7.1.1. Protection measures

Follow the recommendations given in section VIII. To dry clean natural hydraulic lime,

see section 6.3.

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

To prevent the risk of burial or suffocation, do not enter confined spaces such as silos, containers, vats or other containers that are used to store or contain natural hydraulic lime without adopting the appropriate safety measures. Natural hydraulic lime can build up or stick to the walls of confined spaces, causing it to come loose, collapse or fall unexpectedly.

The bags must be stored off the ground, in a cool and dry place and protected from excessive drafts that may affect the quality of the natural hydraulic lime.

Do not store for more than 12 months to optimally preserve its properties.

When handling the bags, follow Council Directive 90/269 / EEC , on the minimum health and safety provisions relating to the manual handling of loads that entail risks, in particular the lower back, for workers.

7.1.2. Fire prevention measures:

Not applicable.

7.1.3. Measures to prevent the formation of suspended particles and dust

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

7.1.4. Measures to protect the environment

No special measures required.

7.1.5. General hygiene measures at work

Avoid dust clouds during handling. If it cannot be avoided, wear goggles and a dust mask.

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

Handle bags with care and use mechanical aids whenever possible.

VIII. EXPOSURE CONTROLS / PERSON PROTECTION

8.1. Control parameters

SCOEL recommendations [1]:

Natural Hydraulic Lime (NHL): Acute effects: DNEL: 4 mg / m^3 (respirable dust)

Long-term effects: DNEL: 1 mg / m^3 (respirable dust)

Exposure Limit Values (ALV):

(Calcium Hydroxide): VLA-ED: 5 mg / m^3

** Ref. legal: "List of Professional Exhibition for Chemical agents of Spain" of the INSHT.* **8.2.**

Exposure controls

8.2.1. Appropriate engineering controls

Measures to reduce the formation of suspended particles and the spread of dust such as: dusting, vacuum systems and dry cleaning methods that do not raise dust.

8.2.2. Individual protection measures, such as personal

protective equipment Respiratory protection: When exposed to possible dust clouds it is necessary to use suitable and approved masks.

Skin protection: Use waterproof gloves suitable for the type of work, boots, long-sleeved protective clothing and additional products to protect the skin from prolonged contact with dry or wet natural hydraulic lime paste.

Special care must be taken to prevent the wet paste of natural hydraulic lime from entering the boots, getting between clothing, watches, etc.

Avoid kneeling in contact with natural hydraulic lime. If it is absolutely necessary to carry out the work, it is mandatory to wear waterproof knee pads.

Eye protection: When handling natural hydraulic lime or fresh natural hydraulic lime paste, wear protective glasses certified according to the harmonized UNE Standard to prevent risk of dust or paste projection on the eyes.

8.2.3. Environmental exposure controls

Air: The control to avoid the dispersion of the natural hydraulic lime particles by the environment must be in accordance with the available technology and the regulations on emissions of dust particles.

Water: Do not pour natural hydraulic lime into sewage systems or surface waters to avoid raising the pH. A pH higher than 9 can cause negative ecotoxicological impacts.

Soil and terrestrial environment: No special emission control measures are required for exposure to the terrestrial environment.

IX. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Natural Hydraulic Lime is a solid inorganic material (Fine powder of light ocher-beige color)
Granulometry according to EN 459-1 standard

Odor: Odorless Odor

threshold: There is no threshold, odorless

pH: Basic between 11 and 13 , 5 (saturated solution at 20 ºC) Melting point:> 450 ºC

Boiling point:> 450 ºC

Flash point: Not applicable as it is not a liquid Evaporation rate: Not

applicable as it is not a liquid

Flammability: Not applicable since it is a non-flammable solid and cannot cause fire nor does it contribute to fire by friction

Explosive limits: Not applicable

Vapor pressure: Not applicable (boiling point is> 450 ºC) Vapor density: Not applicable (boiling point is> 450 ºC) Relative density: 2.4 - 2.9 g / cm^3

Solubility in water: Moderately soluble

Partition coefficient: Not applicable as it is an inorganic substance Auto-ignition temperature: Not applicable (not pyrophoric)

Decomposition temperature: Not applicable

Viscosity: Not applicable as it is not a liquid

Oxidizing properties: Not applicable since it neither causes nor facilitates the combustion of other substances

X. STABILITY AND REACTIVITY

10.1. Reactivity

When mixed with water, natural hydraulic lime sets to form a stable stone mass resistant to normal environmental conditions.

In aqueous media $Ca(OH)_2$ dissociates resulting in the formation of calcium cations and hydroxyl ions.

10.2. Chemical stability

Natural hydraulic lime is stable; as long as it is properly stored. Contact with incompatible materials must be avoided.

10.3. Possibilities 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 heat generation may cause a flammability risk.

10.4. Conditions to avoid

Humidity can cause a loss of quality of the product as well as its setting.

10.5. Materials to avoid

Natural hydraulic lime reacts exothermically with acids to form salts. Reacts with aluminum and brass in the presence of moisture leading to the production of hydrogen.

10.6. Hazardous decomposition products

Natural hydraulic lime does not decompose into hazardous products.

It is not capable of producing a self-sustaining exothermic chemical

reaction. It neither causes nor facilitates the combustion of other

substances.

XI. TOXICOLOGICAL INFORMATION

Inhalation: Natural hydraulic lime can cause irritation in the respiratory tract and inflammation of the nasal mucosa. In extreme cases, erosions of the mucosa have been observed. Chronic exposure to concentrations of respirable dust in excess of occupational exposure limits can cause coughing, shortness of breath, and chronic obstructive pulmonary disease .

Ingestion: In case of significant ingestion, natural hydraulic lime is caustic to the digestive tract; can cause burns to the mouth, esophagus, and stomach.

Eye contact: Natural hydraulic lime can cause irritation to the eyelids (blepharitis) and cornea (conjunctivitis) and cause damage to the eyeballs.

Skin contact: Natural hydraulic lime can irritate damp skin as natural hydraulic lime pastes have a high pH. Unprotected skin contact with natural hydraulic lime pastes can cause dermis lesions such as cracking or caustic burns without prior symptoms appearing.

Chronic skin pathology: Prolonged exposure without adequate protection (gloves) can cause an irritating skin rash. In the event of prolonged contact without protection, other injuries may occur. Generally appear on the fingers: Dermitis with fissures, ulcerations, hyperkeratosis.

Carcinogenicity: No causal relationship has been established between exposure to natural hydraulic lime and the development of cancer.

XII. ECOLOGICAL INFORMATION

12.1. Ecotoxicity

The product is not considered dangerous for water (LC50 of aquatic toxicity not determined). In the event of accidental spillage of large quantities of natural hydraulic lime into the water, a slight rise in its pH may occur, which under certain circumstances could represent some toxicity to aquatic life.

12.2. Persistence and degradability

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

Natural hydraulic lime, once set, is a stable material that fixes its compounds and makes them insoluble, so it does not present any risk of toxicity.

12.3. Bioaccumulative potential

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

Natural hydraulic lime, once set, is a stable material that fixes its compounds and makes them insoluble, so it does not present any risk of toxicity.

12.4. Mobility in soil

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

Natural hydraulic lime, once set, is a stable material that fixes its compounds and makes them insoluble, so it does not present any risk of toxicity.

12.5. Results of PBT and vPvB assessment

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

Natural hydraulic lime, once set, is a stable material that fixes its compounds and makes them insoluble, so it does not present any risk of toxicity.

12.3. Other adverse effects

Not relevant.

XIII. DISPOSAL CONSIDERATIONS

After setting, the natural hydraulic lime can be eliminated just like the rest of construction waste and can be stored in suitable containers in accordance with the regulations in force in each case.

XIV. TRANSPORT INFORMATION

Natural hydraulic lime is not affected by international legislation on the transport of dangerous goods. Not dangerous goods according to the transport regulations.

It is not necessary to take any special precautions other than those mentioned in section VIII.

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. Hazards to the environment

Not relevant.

14.6. Special precautions for users

Not relevant.

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not relevant.

XV. REGULATORY INFORMATION

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

Natural hydraulic lime is exempt from registration.

15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

XVI. OTHER INFORMATION

16.1. Abbreviations and acronyms

CAS Chemical Abstracts Service, is a division of the American Chemical Safety

EINECS European Inventory of Existing Chemical Substances

EPA Efficient air filter for particles

INSHT National Institute for Safety and Hygiene at Work HEPA High efficiency

air filter for particles

LC50 Lethal concentration of a compound in air or water that kills 50% of the organisms studied under specific conditions

REACH Registration, evaluation, authorization and restriction of chemical substances and preparations (Regulation (EC) No. 1907/2006)

vPvB Very persistent and very bioacomulable

VLA-ED Environmental limit value for daily occupational exposure **16.2.**

References

(1) Portland Cement Dust - Hazard assessment document EH75 / 7, UK Health and Safety Executive, 2006.

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

above. The information set forth in this sheet cannot be considered exhaustive.

Any use of the product not specified in the instructions on the packaging, our website or other documents provided by our company is the sole responsibility of the user.

According to Regulation (EU) No. 1907/2006 (REACH) and Regulation (EU) No. 453/2010, Revision 2.0. Supersedes all previous versions. Approved by the Management of CEMENTO NATURAL TIGRE.