In accordance with Annex II of the REACH Regulation EC 1907/2006, Regulation (EC) 1272/2008 and Regulation (EC) 453/2010

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# 1. IDENTIFICATION OF THE SUBSTANCE /MIXTURE AND OF THE COMPANY /UNDERTAKING

#### 1.1 Product Identifier

Substance name: Lime (Chemical), hydraulic Synonyms: Hydraulic lime, Natural hydraulic lime

Chemical name and formula: Not applicable, multi

constituent substance (origin: inorganic)

Trade name: Martingança Hydraulic Lime (NHL 5)

CAS: 85117 - 09 - 5 EINECS: 285-561-1

REACH registration number: 01-2119475523-36-0005

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

Please check the identified uses in table 1 of the Appendix of this SDS.

Uses advised against: There are no uses advised against.

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

Name: Secil Martingança, S.A.

Address: Apartado 2, 2406-909 Maceira Lra Portugal

Phone N°: +351 244 770 220
Fax N°: +351 244 777 997
E-mail of competent person

responsible for SDS in the MS

or in the EU: raquel.nascimento@secil.pt

#### 1.4 Emergency telephone number

European Emergency N°: 112

National centre for Prevention ant Treatment of Intoxications N°:

808 250 143

Emergency telephone at the company N°: +351 244 770 220

Available outside office hours: X Yes □ No

#### 2. HAZARD IDENTIFICATION

#### 2.1 Classification of the substance

2.1.1 Classification according to Regulation (EC) 1272/2008

STOT Single Exp. 3, Route of exposure: Inhalation Skin Irritation 2

Eye Damage 1

### 2.1.2 Classification according to Directive 67/548/EEC Xi - irritant

#### 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

<u>H318:</u> Causes serious eye damage <u>H335:</u> May cause respiratory irritation

#### Precautionary statements:

H102: Keep out reach of children

<u>P280:</u> Wear protective gloves/protective clothing/eye protection/ face protection

<u>P305+P351+P310:</u> 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

<u>P304+P340:</u> IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing

<u>H501:</u> Dispose of contents/container in accordance with local/regional/national/internacional regulation

#### 2.2.2 Labelling according to Regulation (EC) 1272/2008

Indication of danger:

nt



Xi - irritant

#### Risk phrases:

R37: Irritating to respiratory system

R38: Irritating to skin

R41: Risk of serious damage to eyes





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#### 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 glovesS39: Wear eye/face protection

# 3. COMPOSITION / INFORMATION ON INGREDIENTS

#### 3.1 Substances

Main constituents:

Name: Calcium dihydroxide Name: Di-calcium silicate

CAS: 1305-62-0 CAS: 10034-77-2 EINECS: 215-137-3 EINECS: 233-107-8 Concentration: 15-65 % Concentration: 10-45 %

Name: Limestone CAS: 1317-65-3 EINECS: 215-279-6 Concentration: 10-40 %

Impurities:

No impurities relevant for classification and labelling.

#### 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 plently of water and seek medical service.

#### After 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**

Natural hydraulic lime 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

#### 5. FIRE FIGHTING MEASURES

#### 5.1 Extinguishing media

#### 5.1.1 Suitable extinguishing media

Suitable extinguising media: The product is not combustible. Use a dry powder, foam or CO<sub>2</sub> 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

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

None

#### 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.

#### **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 person 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 prectetive equipment is used, wear suitable protective equipment (see section 8).





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Ensure adequate ventilation.

Keep dust levels to a minimum.

Keep unprotected person 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 prectetive equipment is used, wear suitable protective equipment (see section 8).

#### **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 aleted 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.

#### 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. Minimize 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 measure 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 contamined clothing at home.

# 7.2 Conditions for safe storage, incluing and 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.

# 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/m<sup>3</sup> respirable dus of calcium dihydroxide

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

This value ir read-across to natural hydraulic lime in view of the anticipated equivalent local effect (pH is comparable to that of CaO and Ca(OH)<sub>2</sub>).

#### 8.2 Exposure controls

To control potential exposure, 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 appopriate.

Please check the relevant exposure scenario, given the Appendix/available via your supplier.

#### 8.2.1 Appopriate 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.



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### 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. It is also advisable to have individual pocket eyewash.

#### 8.2.2.2 Skin protection

Since Natural hydraulic lime 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 estabilished threshold values is recommended. a suitable particle filter mask is recommended, depending on the expected exposure levels - please ckeck 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 envirnment.

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 envirnment to the substance please check the relevant exposure scenario, available via your supplier.

For futher detailed information, please check the Appendix of this SDS.

# 9. PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic physical and chemical properties

Appearance: Solid, grey 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 aplicable (solid with a melting point >450°C) Flash point: not aplicable (solid with a melting point >450°C)

Evaporate rate: not aplicable (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 applicabe (solid with a melting point >450°C)

Vapour density: not applicable

Relative density: 2.70 (study result, EUA.3 method

Solubility in water: Moderately soluble (study result, modified EUA.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 aplicable (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 sructural groups known to be correlated with a tendency to react exothermally with combustible material)

#### 9.2 Other information

Not available

#### **10. STABILITY AND REACTIVITY**

#### 10.1 Reactivity

In aqueous media Ca (OH)<sub>2</sub> dissociates resulting in the formation of calcium cations and hydroxyl anions (when below the limit of water solubility).

#### 10.2 Chemical stability

Under normal conditions of use and storage, the substance is stable.

#### 10.3 Possibility of hazardous reactions

Normal hydraulic lime reacts exothermically with acids. When heated above 580 °C, calcium dihydroxide decomposes to produce calcium oxide (CaO) and water (H<sub>2</sub>O): Ca(OH)<sub>2</sub>  $\rightarrow$  CaO + H<sub>2</sub>O. Calcium oxide reacts with water and generates heat. This may cause risk to flammable material.

#### 10.4 Conditions to avoid

Minimise exposure to air moisture to avoid degradation.

#### 10.5 Incompatible materials

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

 $Ca(OH)_2 + 2AI + 6H_2O \rightarrow Ca[AI(OH)_4]_2 + 3H_2$ 



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#### 10.6 Hazardous decomposition products

None

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

#### 11. TOXICOLOGICAL INFORMATION

#### 11.1 Information on toxicological effects

Natural hydraulic lime is classified as irritating to skin and the respiratory tract and it entails a risk of serious damage to the eye. The occupational exposure limit for the prevention of local sensory irritation and decrease of lung function parameters as critical effects is  $OEL(8h) = 1 \text{ mg/m}^3$  respirable dust (read-across from oxide and calcium dihydroxide).

#### **TOXICITY ENDPOINTS**

#### **OUTCOME OF THE EFFECTS ASSESSMENT**

ABSORPTION

 The primary heath effect of natural hydraulic lime is local irritation due to a pH shift. Therefore, absorption is not a relevant parameter for the effects assessment

ACUTE TOXICITY

- Natural hydraulic lime is not acutely toxic. An acute dermal or inhalation toxicity study with natural hydraulic lime is considered to be scientifically unjustified.
- Oral LD<sub>50</sub> > 2000 mg/kg bw (OECD 425, test substance Ca (OH)<sub>2</sub>, rat); The result are also applicable to lime (chemical) hydraulic by read-across.
- Dermal no data available
- Inhalation no data available
- · Classification for acute toxicity is not warranted
- For irritating effects to the respiratory tract see below

IRRITATION/CORROSION

- <u>Eye irritation:</u> Calcium dihydroxide entails a risk of serious damage to the eye (eye irritation studies, *in vivo*, rabbit). By read across these results are also applicable to natural hydraulic lime
- <u>Skin irritation:</u> Calcium dihydroxide is irritating to skin. By read across these results are also applicable to natutal hydraulic lime.
- Respiratory irritation: From human data on calcium oxide and hydroxide it is concluded by readacross (worst case approach) that natural hydraulic lime is irritating to the respiratory tract.
- Based on experimental results on a similar substance utilised by read-across, natural hydraulic lime requires classification as irritating to skin [R38, irritating to skin; Skin Irrit 2 (H315 - Causes skin irritation)] and as severely irritating to the eye [R41, Risk of serious damage to eye; Eye Damage 1 (H318 - Causes serious eye damage)].
- Based on human data as summarised and evaluated in the SCOEL recommendation (Anonymous, 2008), and by read-across from the similar substances CaO and Ca (OH)<sub>2</sub> natural hydraulic lime is classified as irritating to the respiratory system [R37, Irritating to respiratory system; STOT SE 3 (H335 - May cause respiratory irritation)].

**SENSITISATION** 

- No data available. Natural hydraulic lime is considered not be a skin sensitiser, based on the nature of the effect (pH shift) and the essential requirement of calcium for human nutrition.
- Furthermore, none of the compounds making up the other main constituents or impurities, i.e. calcium carbonate, calcium silicate, and calcined clay minerals, are known to entail any sensitisation potencial.
- Classification for sensitisation is not warranted.

REPEAT DOSE TOXICITY

- 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/d (70 kg person) for calcium.
- Toxicity of natural hydraulic lime 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).

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REPEAT DOSE TOXICITY

- Toxicity of natural hydraulic lime via inhlation (local effect, irritation of mucous membranes) is addresses by an 8-h TWA determined for CaO and Ca (OH)<sub>2</sub> by the Scientific Committee on Occupational Exposure Limits (SCOEL) of 1 mg/m³ respirable dust (read-across from CaO and Ca (OH)<sub>2</sub>; see section 8.1).
- Therefore, classification of natural hydraulic lime for toxicity upon prolonged exposure is not required.

**MUTAGENICITY** 

- Bacterial reverse mutation assay (Ca(OH)2 and CaO, Ames tests, OECD 471): Negative
- Mammalian chromosome aberration test (Ca(OH)<sub>2</sub>): negative.
- These results are applicable to natural hydraulic lime by read across. Natural hydraulic lime does not contain any main constituents or major impurities that are known to be genotoxic.
- The pH effect of natural hydraulic lime does not give rise to a mutagenic risk.
- Human epidemiological data support lack of any mutagenic of natural of natural hydraulic lime.
- Classification for genotoxicity is not warranted

CARCINOGENICITY

- Calcium (when administered as Ca-lactate) is not carcinogenic (experimental result, rat). The
  pH effect does not give rise to a carcinogenic risk. Human epidemiological data support lack of
  any carcinogenic potential pf natural hydraulic lime.
- · Classification for carninogenicity is not warranted

TOXICITY FOR REPRODUCTION

- 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 natural hydraulic lime.
- Both in animal studies and human clinical studies on various calcium salts no reproductive or development effects were detected, also see the Scientific Committee on Food (Section 16.6).
- Thus, natural hydraulic lime is not toxic for reproduction and/or development.
- Classification for reproductive toxicity according to regulation (EC) 1272/2008 is not required.

#### 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 dihydroxide)

LC 50 (96h) for marine water fish: 457 mg/l (calcium dihydroxide)

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

EC 50 (48h) for freshwater invertebrates: 49.1 mg/l (calcium dihydroxide)

LC 50 (96h) for marine water invertebrates: 158 mg/l (calcium dihydroxide)

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

EC 50 (72h) for freshwater algae: 184.57 mg/l (calcium dihydroxide)

NOEC (72h) for freshwater algae: 48 mg/l (calcium dihydroxide)

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

At high concentration, through the rise of temperature and pH, calcium 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 dihydroxide)

#### 12.1.6 Toxicity to soil dwelling organisms

EC  $_{10}$  / LC 10 or NOEC for soil macroorganisms: 2000 mg/kg soil dw (calcium dihydroxide)

EC 10 / LC 10 or NOEC for soil macroorganisms: 12000 mg/kg soil dw (calcium dihydroxide)





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#### 12.1.7 Toxicity to terrestrial plants

NOEC (21 d) for terrestrial plants: 1080 mg/kg (calcium dihydroxide)

#### 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.

#### 12.2 Persistence and degradability

Not relevant for inorganic substances

#### 12.3 Bioaccumulative potential

Not relevant for inorganic substances

#### 12.4 Mobility in soil

Natural hydraulic lime 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 PTB and vPvB assessment

Not relevant for inorganic substances

#### 12.6 Other adverse effects

Not relevant for inorganic substances

#### 13. DISPOSAL CONSIDERATIONS

#### 13.1 Waste treatment methods

Disposal of natural hydraulic lime 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 inused contens in accordance with applicable member state and local requirements.

The used packaging is only meant for packaging this product; it should not be reused for other purposes. After usage, empty the packaging completely.

#### **14.** TRANSPORT INFORMATION

Natural Hydraulic lime is not classified as hazardous for transport (ADR(Road), RID (Rail), IMDG/GGVSea (Sea).

#### 14.1 UN - Number

Not regulated

#### 14.2 UN - proper shipping name

Not regulated

#### 14.3 Transport hazard class(es)

Not regulated

#### 14.4 Packaging group

Not regulated

#### 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

#### **15. REGULATORY INFORMATION**

## 15.1 Safety, health and environmental regulations / legeslation specific for the substance

Authorisations: Not required Restrictions on use: None

Other EU regulations: Natural hydraulic lime is not a SEVESO substance, not an ozone depleting substance and not a persistant organic pollutant

Natural regulations: Water endagering class 1 (Germany) (Calcium dihydroxide)

#### 15.2 Chemical safety assessment

A chemical safety assessment has been carried out for this substance

#### **16. OTHER INFORMATION**

Data are based on our latest knownledge 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 causes 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 local/regional/national/international regulation





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#### 16.3 Risk Phrases

R37: Irritating to respiratory system

R38: Irritating to skin

R41: Risk 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

EC 50: Median effective concentration

LC 50: Median lethal concentration

LD 50: Median lethal dose

NOEC: No observable effect concentration

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 persistant, very bioaccumulative chemical

#### 16.6 Key literature references

Anonymous, 2006: Tolerable upper intake levels for vitamins and mineral Scientific Committee on Food, European Food Safety Authoruty, ISNB: 92-9199-014-0 [SCF document]

Anonymous, 2008: Recommendation from the Scientific Committee on Occupational Exposure Limits (SCOEL) for calcium oxide (CaO) and calcium dihydroxide (Ca(OH)<sub>2</sub>), European Commission, DG Employment, Social Affairs and Equal Opportunities, SCOEL/SUM/137 February 2008.

#### Disclaimer

This safety data sheet (SDS) is based on the legal provisions of the REACH Regulation (EC 1907/2006; article 31 and Annes II), as amended. Its contents are intended as a guide to the appropriate precautionary handling of the material. Itis responsability 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 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.

**End of Safety Data Sheet** 



