

Safety Data Sheet

According to Regulations for Hazardous Chemical Agents, 2021 and United Nations GHS revision 9 Issue date: 10/28/2024 Revision date: 10/28/2027 Version: 1.3

SECTION 1: Identification of the substance/mixture and of the supplier/undertaking

1.1. GHS product identifier

Product form : Substance

Trade name : LIME (HYDRATED) BROWN

EC-No. : 215-137-3 CAS-No. : 1305-62-0 UN-No. (ADR) : 1759

Product code : LIME (HYDRATED) BROWN

Product group : Trade product

1.2. Other means of identification

No additional information available

1.3. Recommended use of the chemical and restrictions on use

Recommended uses and restrictions : Water treatment

1.4. Supplier's details

ImproChem(Pty) Ltd T/A AECI Water 1 Wharhirst Road Umbogintwini – Kwa Zulu Natal South Africa

T +27(31) 949 8200

1.5. Emergency phone number

Emergency number : 0800 SPILLS or 0800 774557

SECTION 2: Hazard identification

2.1. GHS classification of the substance/mixture and any national or regional information

Classification according to the United Nations GHS

Skin corrosion/irritation, Category 1 H314
Serious eye damage/eye irritation, Category 1 H318
Specific target organ toxicity – Single exposure, Category 3, H335

Respiratory tract irritation

Full text of H-statements: see section 16

Adverse physicochemical, human health and

environmental effects

: May cause respiratory irritation, Causes severe skin burns and eye damage, Causes serious

eye damage, Causes damage to organs, Causes skin irritation.

2.2. GHS label elements, including precautionary statements

Labelling according to the United Nations GHS

Hazard pictograms (GHS ZA) :





Signal word (GHS-ZA) : Danger

Hazard statements (GHS ZA) : H314 - Causes severe skin burns and eye damage

H335 - May cause respiratory irritation

Precautionary statements (GHS ZA) : P101 - If medical advice is needed, have product container or label at hand.

P102 - Keep out of reach of children. P260 - Do not breathe dusts or mists.

P271 - Use only outdoors or in a well-ventilated area.

P280 - Wear protective gloves/protective clothing/eye protection/face protection/hearing

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protection/....

2.3. Other hazards which do not result in classification or are not covered by the GHS

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substance

: LIME (HYDRATED) BROWN Name

CAS-No. 1305-62-0 215-137-3 EC-No.

Product identifiers: See section 1.1

Name	Product identifier	%	Classification according to the United Nations GHS
CALCIUM HYDROXIDE (LIME)	CAS-No.: 1305-62-0	100	Skin Corr. 1, H314 Eye Dam. 1, H318 STOT SE 3, H335

Full text of H-statements: see section 16

3.2. Mixture

Not applicable

SECTION 4: First aid measures

4.1. Description of necessary first aid measures

First-aid measures general : Treat symptomatically. Seek medical attention immediately. Call a physician immediately. First-aid measures after inhalation

Remove person to fresh air and keep comfortable for breathing. Remove the victim into fresh air. Respiratory problems: consult a doctor/medical service. Doctor: administration of

corticoid spray. Call a poison center or a doctor if you feel unwell.

First-aid measures after skin contact : Wash immediately with lots of water. Take victim to a doctor if irritation persists. In case of burns: Wash immediately with lots of water (15 minutes)/shower. Do not apply (chemical)

neutralizing agents. Remove clothing while washing. Do not remove clothing if it sticks to the skin. Cover wounds with sterile bandage. Consult a doctor/medical service. If burned surface > 10%: take victim to hospital. Rinse skin with water/shower. Take off immediately

all contaminated clothing. Call a physician immediately.

First-aid measures after eye contact : Rinse immediately with plenty of water for 15 minutes. Do not apply neutralizing agents. Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy

to do. Continue rinsing. Call a physician immediately.

First-aid measures after ingestion : Rinse mouth with water. Immediately after ingestion: give lots of water to drink. Do NOT induce vomiting. Do not give activated charcoal. Consult a doctor/medical service if you feel unwell. Ingestion of large quantities: immediately to hospital. Do not give chemical antidote.

Rinse mouth. Do not induce vomiting. Call a physician immediately.

4.2. Most important symptoms/effect, acute and delayed

Symptoms/effects after inhalation : AFTER INHALATION OF DUST: Dry/sore throat. Coughing. Irritation of the respiratory tract. Irritation of the nasal mucous membranes. ON CONTINUOUS EXPOSURE/CONTACT:

FOLLOWING SYMPTOMS MAY APPEAR LATER: Possible inflammation of the respiratory tract. Possible oedema of the upper respiratory tract. Affection of the nasal septum. Respiratory difficulties. Risk of lung oedema. Risk of pneumonia. May cause respiratory

Symptoms/effects after skin contact Tingling/irritation of the skin. ON CONTINUOUS EXPOSURE/CONTACT: Caustic

burns/corrosion of the skin. Burns. Irritation.

: Corrosion of the eye tissue. ON CONTINUOUS EXPOSURE/CONTACT: Permanent eye Symptoms/effects after eye contact

damage. Serious damage to eyes.

Symptoms/effects after ingestion : Dry/sore throat. Difficulty in swallowing. Abdominal pain. Burns to the gastric/intestinal

mucosa. Possible esophageal perforation. Shock. Blood in vomit. Burns.

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Chronic symptoms : ON CONTINUOUS/REPEATED EXPOSURE/CONTACT: Skin rash/inflammation.

4.3. Indication of immediate medical attention and special treatment needed, if necessary

Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Adapt extinguishing media to the environment. Water spray. Dry powder. Foam.

Unsuitable extinguishing media : No unsuitable extinguishing media known.

5.2. Specific hazards arising from the chemical

Fire hazard : DIRECT FIRE HAZARD. Non combustible. INDIRECT FIRE HAZARD. Reactions involving

a fire hazard: see "Reactivity Hazard".

Explosion hazard : DIRECT EXPLOSION HAZARD. No data available on direct explosion hazard. INDIRECT

EXPLOSION HAZARD. No data available on indirect explosion hazard.

Hazardous decomposition products in case of fire : Toxic fumes may be released.

5.3. Special protective actions for fire-fighters

Firefighting instructions : No specific fire-fighting instructions required.

Protection during firefighting : Heat/fire exposure: compressed air/oxygen apparatus. Do not attempt to take action without

suitable protective equipment. Self-contained breathing apparatus. Complete protective

clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Protective equipment : Gloves. Face-shield. Corrosion-proof suit. Dust cloud production: compressed air/oxygen

apparatus. See "Material-Handling" to select protective clothing.

Emergency procedures : Ventilate spillage area. Mark the danger area. Prevent dust cloud formation. Keep

containers closed. Avoid ingress of water in the containers. Wash contaminated clothes. In

case of hazardous reactions: keep upwind. In case of reactivity hazard: consider

evacuation. Avoid contact with skin and eyes. Do not breathe

dust/fume/gas/mist/vapours/spray.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information

refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Avoid release to the environment. Prevent soil and water pollution. Prevent spreading in sewers.

6.3. Methods and materials for containment and cleaning up

For containment : Contain released substance, pump into suitable containers. Consult "Material-handling" to select material of containers. Plug the leak, cut off the supply. Dam up the solid spill. Knock down/dilute dust cloud with water spray. Hazardous reaction: measure explosive gas-air

mixture. Reaction: dilute combustible gas/vapour with water curtain.

Methods for cleaning up : Mechanically recover the product. Solid spill: cover with dry sand/earth. Collect the spill only

if it is in a dry state in closing drums. See "Material-handling" for suitable container materials. Carefully collect the spill/leftovers. Leftovers: neutralize with acid solution. Wash away neutralized product with plentiful water. Clean contaminated surfaces with an excess of water. Take collected spill to manufacturer/competent authority. Wash clothing and

equipment after handling.

Other information : Dispose of materials or solid residues at an authorized site.

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SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Use only outdoors or in a well-ventilated area. Avoid contact with skin and eyes. Do not

breathe dust/fume/gas/mist/vapours/spray. Wear personal protective equipment.

Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this Hygiene measures

product. Always wash hands after handling the product.

Additional hazards when processed Avoid dust formation.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Avoid dust formation. Ensure adequate ventilation, especially in confined areas. Facilities:

shower, eye shower. Store in a well-ventilated place. Keep container tightly closed.

: Store locked up. Store in a well-ventilated place. Keep container tightly closed. Keep cool. Storage conditions Storage area

Store in a dry area. Keep only in the original container. Store only in a limited quantity. May

be stored under nitrogen. Meet the legal requirements.

: KEEP SUBSTANCE AWAY FROM: combustible materials. oxidizing agents. (strong) acids.

alcohols. metals. halogens. water/moisture.

SPECIAL REQUIREMENTS: hermetical. watertight. clean. dry. correctly labelled. meet the Special rules on packaging

legal requirements. Secure fragile packagings in solid containers.

Packaging materials : SUITABLE MATERIAL: stainless steel. lead. nickel. MATERIAL TO AVOID: aluminium.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Information on mixed storage

No additional information available

8.2. Appropriate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station.

Environmental exposure controls : Avoid release to the environment.

8.3. Individual protection measures, such as personal protective equipment

: Excellent resistance: Natural rubber. Neoprene. Nitrile rubber. Good resistance: Butyl Materials for protective clothing

rubber. Polyvinylchloride (PVC). Less resistance: No data available. Poor resistance: No

data available

Hand protection : Protective gloves

Eye protection : Face shield. Protective goggles. Safety glasses

Skin and body protection : Wear suitable protective clothing

Respiratory protection : In case of insufficient ventilation, wear suitable respiratory equipment

Personal protective equipment symbol(s)

















8.4. Exposure limit values for the other components

No additional information available

SECTION 9: Physical and chemical properties

9.1. Basic physical and chemical properties

Physical state : Solid

Appearance Crystalline solid. Crystalline powder. Lumps. Granular powder.

Molecular mass 56.08 g/mol

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Colour : Pure substance: colourless to white-grey. Unpurified: yellow to brown. Commercial

substance: yellow to brown.

Pure substance: colourless to white-grey Unpurified: yellow to brown Commercial

substance: yellow to brown

Odour : Odourless.

Odourless

Odour threshold : No data available pH : 12.5 (0.2 %)

pH solution : 0.2 %

Relative evaporation rate (butylacetate=1) : No data available Relative evaporation rate (ether=1) : No data available

2572 °C Melting point Freezing point : Not applicable Boiling point 2850 °C Flash point : Not applicable Auto-ignition temperature : Not applicable Decomposition temperature : No data available Flammability : Non flammable. Vapour pressure < 0.1 hPa (20 °C) Vapour pressure at 50°C : No data available Relative vapour density at 20°C : No data available : Not applicable Relative density Relative density of saturated gas/air mixture : No data available

Density : 3210 kg/m³ (20 °C) Relative gas density : No data available

Solubility : Reacts with water. Soluble in glycerol. Soluble in acids.

Water: 0.13 g/100ml (20 °C)

Partition coefficient n-octanol/water (Log Pow) : No data available : No data available Partition coefficient n-octanol/water (Log Kow) Viscosity, kinematic : Not applicable Viscosity, dynamic : No data available Explosive properties No data available Oxidising properties No data available **Explosive limits** Not applicable Lower explosion limit No data available Upper explosion limit No data available

Physical state : Solid

Appearance : Crystalline solid. Crystalline powder. Lumps. Granular powder.

9.2. Data relevant with regard to physical hazard classes (supplemental)

VOC content : Not applicable (inorganic)

Other properties : Hygroscopic. Substance has basic reaction.

SECTION 10: Stability and Reactivity

10.1. Reactivity

Violent exothermic reaction with water (moisture): release of corrosive products. Reacts on exposure to water (moisture) with combustible materials: heat release resulting in increased fire or explosion risk. Reacts on exposure to water (moisture) with (some) metals. Absorbs the atmospheric CO2. Reacts violently with (some) acids. Reacts violently with (some) halogens. In finely divided state: reacts with alcohols: risk of spontaneous ignition. Reacts on exposure to water (moisture) with (some) metals: release of highly flammable gases/vapours (hydrogen).

10.2. Chemical Stability

Unstable on exposure to moisture. Unstable on exposure to air.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

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10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Inf	formation on	toxico	logica	l effects

: Not classified Acute toxicity (oral) Acute toxicity (dermal) Not classified Acute toxicity (inhalation) Not classified

LIME (HYDRATED) BROWN (1305-62-0)	
LD50 oral rat	> 2000 mg/kg bodyweight (Rat; OECD 425: Acute Oral Toxicity: Up-and-Down Procedure; Experimental value)
LD50 dermal rabbit	> 2500 mg/kg bodyweight (Rabbit; Experimental value; OECD 402: Acute Dermal Toxicity)
CALCIUM HYDROXIDE (LIME) (1305-62-0)	
LD50 oral rat	> 2000 mg/kg bodyweight (Rat; OECD 425: Acute Oral Toxicity: Up-and-Down Procedure; Experimental value)
LD50 dermal rabbit	> 2500 mg/kg bodyweight (Rabbit; Experimental value; OECD 402: Acute Dermal Toxicity)
Skin corrosion/irritation	: Causes severe skin burns.

pH: 12.5 (0.2 %)

Serious eye damage/irritation : Causes serious eye damage.

pH: 12.5 (0.2 %)

Respiratory or skin sensitisation Not classified Germ cell mutagenicity Not classified : Not classified Carcinogenicity Reproductive toxicity : Not classified

STOT-single exposure May cause respiratory irritation.

STOT-single exposure May cause respiratory irritation.

STOT-repeated exposure : Not classified Aspiration hazard Not classified

LIME (HYDRATED) BROWN (1305-62-0)

Viscosity, kinematic Not applicable

SECTION 12: Ecological information

12.1. Toxicity

: Not classified as dangerous for the environment according to the criteria of Regulation (EC) Ecology - general

No 1272/2008. Before neutralisation, the product may represent a danger to aquatic

: Not classified as dangerous for the ozone layer (Regulation (EC) No 1005/2009). Not Ecology - air

included in the list of fluorinated greenhouse gases (Regulation (EC) No 842/2006). TA-Luft

Ecology - water : Harmful to fishes. Harmful to invertebrates (Daphnia). Slightly harmful to invertebrates

(EC50: 100 - 1000 mg/l). Slightly harmful to algae (EC50 (72h): 100 - 1000 mg/l). Harmful to

plankton. pH shift. Inhibition of activated sludge.

Hazardous to the aquatic environment, short-term

(acute)

: Not classified

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Hazardous to the aquatic environment, long-term

: Not classified

(chronic)

LIME (HYDRATED) BROWN (1305-62-0)	
	49.1 mg/l (EC50; OECD 202: Daphnia sp. Acute Immobilisation Test; 48 h; Daphnia magna; Static system; Fresh water; Read-across)
Threshold limit - Algae [1]	184.57 mg/l (EC50; OECD 201: Alga, Growth Inhibition Test; 72 h; Pseudokirchneriella subcapitata; Static system; Fresh water; Read-across)

12.2. Persistence and degradability

LIME (HYDRATED) BROWN (1305-62-0)		
Persistence and degradability	Biodegradability: not applicable. No (test)data on mobility of the substance available.	
Biochemical oxygen demand (BOD)	Not applicable	
Chemical oxygen demand (COD)	Not applicable	
ThOD	Not applicable	
CALCIUM HYDROXIDE (LIME) (1305-62-0)		
Persistence and degradability	Biodegradability: not applicable. No (test)data on mobility of the substance available.	
Biochemical oxygen demand (BOD)	Not applicable	
Chemical oxygen demand (COD)	Not applicable	
ThOD	Not applicable	

12.3. Bioaccumulative potential

LIME (HYDRATED) BROWN (1305-62-0)	
Bioaccumulative potential	Not bioaccumulative.
CALCIUM HYDROXIDE (LIME) (1305-62-0)	
Bioaccumulative potential	Not bioaccumulative.

12.4. Mobility in soil

LIME (HYDRATED) BROWN (1305-62-0)	
Mobility in soil	No additional information available

12.5. Other adverse effects

Ozone : Not classified

Other adverse effects : No additional information available

SECTION 13: Disposal Considerations

13.1. Disposal methods

Waste treatment methods

Sewage disposal recommendations

Product/Packaging disposal recommendations

- : Dispose of contents/container in accordance with licensed collector's sorting instructions.
- : Disposal must be done according to official regulations.
- Remove waste in accordance with local and/or national regulations. Hazardous waste shall not be mixed together with other waste. Different types of hazardous waste shall not be mixed together if this may entail a risk of pollution or create problems for the further management of the waste. Hazardous waste shall be managed responsibly. All entities that store, transport or handle hazardous waste shall take the necessary measures to prevent risks of pollution or damage to people or animals. Recycle/reuse. Remove to an authorized dump (Class I). Treat using the best available techniques before discharge into drains or the aquatic environment. Obtain the consent of pollution control authorities before discharging to wastewater treatment plants.

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Additional information

: LWCA (the Netherlands): KGA category 05. Hazardous waste according to Directive 2008/98/EC.

SECTION 14: Transport information

In accordance with SANS / IMDG / IATA

SANS	IMDG	IATA
14.1. UN number		
1759	1759	1759
4.2. UN Proper Shipping Name		
CORROSIVE SOLID, N.O.S. ((CALCIUM HYDROXIDE))	CORROSIVE SOLID, N.O.S.	Corrosive solid, n.o.s.
4.3. Transport hazard class(es)		
8	8	8
8	B	B
4.4. Packing group, if applicable		
I	I	I
4.5. Environmental hazards		
Dangerous for the environment : No	Dangerous for the environment : No Marine pollutant : No	Dangerous for the environment : No
No supplementary information available		1

14.6. Special precautions for user

Transport regulations (UN) : Subject Special provisions (SANS) : 274 Limited quantities (SANS) 0 Limited quantities (SANS) 0

Packagings, large packagings and IBCs Packing

instructions (SANS)

: P002, IBC07

Packagings, large packagings and IBCs Special

: B1

Portable tank and bulk containers instructions

packing instructions (SANS)

(SANS)

: T6

Portable tank and bulk container special provisions

(SANS)

IMDG

Transport regulations (IMDG) : Not subject Special provisions (IMDG) 274 Limited quantities (IMDG) 0 Excepted quantities (IMDG) E0 Packing instructions (IMDG) P002 IBC packing instructions (IMDG) : IBC07 IBC special provisions (IMDG) B1 Tank instructions (IMDG) T6 Tank special provisions (IMDG) TP33

EmS-No. (Fire) F-A - FIRE SCHEDULE Alfa - GENERAL FIRE SCHEDULE EmS-No. (Spillage) : S-B - SPILLAGE SCHEDULE Bravo - CORROSIVE SUBSTANCES

: B Stowage category (IMDG)

Causes burns to skin, eyes and mucous membranes. Properties and observations (IMDG)

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MFAG-No : 7

IATA

Transport regulations (IATA) : Subject to the provisions

PCA Excepted quantities (IATA) : E0 PCA Limited quantities (IATA) : Forbidden PCA limited quantity max net quantity (IATA) : Forbidden PCA packing instructions (IATA) : 858 PCA max net quantity (IATA) : 1kg CAO packing instructions (IATA) : 862 CAO max net quantity (IATA) : 25kg Special provisions (IATA) : A3, A803 ERG code (IATA) : 8L

14.7. Transport in bulk according to IMO instructions

Not applicable

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations specific for the product in question

No additional information available

SECTION 16: Other information

Issue date : 28/10/2024
Revision date : 28/10/2027

Abbreviations and acronyms : ADN - European Agreement concerning the International Carriage of Dangerous Goods by

Inland Waterways

ADR - European Agreement concerning the International Carriage of Dangerous Goods by

Road

ATE - Acute Toxicity Estimate BCF - Bioconcentration factor BLV - Biological limit value

BOD - Biochemical oxygen demand (BOD) COD - Chemical oxygen demand (COD) DMEL - Derived Minimal Effect level DNEL - Derived-No Effect Level EC-No. - European Community number EC50 - Median effective concentration

EN - European Standard

IARC - International Agency for Research on Cancer IATA - International Air Transport Association IMDG - International Maritime Dangerous Goods

LC50 - Median lethal concentration

LD50 - Median lethal dose

LOAEL - Lowest Observed Adverse Effect Level NOAEC - No-Observed Adverse Effect Concentration

NOAEL - No-Observed Adverse Effect Level NOEC - No-Observed Effect Concentration

OECD - Organisation for Economic Co-operation and Development

OEL - Occupational Exposure Limit
PBT - Persistent Bioaccumulative Toxic
PNEC - Predicted No-Effect Concentration

RID - Regulations concerning the International Carriage of Dangerous Goods by Rail

SDS - Safety Data Sheet STP - Sewage treatment plant

ThOD - Theoretical oxygen demand (ThOD)

TLM - Median Tolerance Limit VOC - Volatile Organic Compounds

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CAS-No. - Chemical Abstract Service number N.O.S. - Not Otherwise Specified vPvB - Very Persistent and Very Bioaccumulative ED - Endocrine disrupting properties

Full text of H-statements:	
H314	Causes severe skin burns and eye damage
H318	Causes serious eye damage
H335	May cause respiratory irritation

Safety Data Sheet (SDS), South Africa (HCA)

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