SAFETY DATA SHEET

CALCIUM HYDROXIDE

SECTION 1: PRODUCT IDENTIFICATION

PRODUCT

Name	Calcium Hydroxide.
Other means of identificaction	Hydrated Lime, High Calcium, Food grade lime.
Brand	BIOCALIDRA
Formula	$Ca(OH)_2$
Uses of product	BIOCALIDRA is a product used in the industry of food, beverages, medicines, and high specialty chemistry due to your proprieties of high purity, lows impurities and low content of heavy metals in addition to highest standard of preparation and care during production.

MANUFACTURER

General Office´s

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APAXCO PLANT
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PROGRESO PLANT
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BERNAL PLANT
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IRAPUATO PLANT
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MICHIUCA PLANT
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WESTER-BAJIO REGION
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ZAPOTILTIC PLANT
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SECTION 2. HAZARD(S) IDENTIFICATION

Signal Word Danger

Hazard Symbols

Hazard

H 315: Causes skin irritation 2.
H 318: Causes serious eye damage 1.
H 334: May cause allergy or asthma symptoms or breathing difficulties if inhaled 3.

Caution tips

CAUTION
P102: Keep out of the reach of children.

P103: Read the label before use.
P201: Obtain special instructions before use.
P202: Do not tamper until you have read and understood the safety precautions.
P280: Wear protective gloves / protective clothing / eye protection / face protection.
P261: Do not breathe dust.
P264: Wash your hands thoroughly after handling.

RESPONSE TO EMERGENCIES
P314: Get medical attention if you do not feel well.
P304 + P340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P302 + P352: IF ON SKIN: Wash with plenty of water and soap.
P332 + P313: In case of skin irritation: consult a doctor.
P305 + P351: IF IN EYES: Rinse cautiously with water for several minutes.
P301 + P330 + P331: IN CASE OF INGESTION: Rinse mouth. Do not induce vomiting.

STORAGE:
P402: Store (dry product) in dry place

DISPOSAL:
P501: Dispose of contents and container in accordance with local, regional, national and international regulations.

WHMIS/ GHS/	Eye damage / Eye irritation - Category 2B
NOM 018 STPS	Severe eye injury/eye irritation. 1, 2A. Specific target organ toxicity (single exposure) 3.
Others hazards	No

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

Ingredient name	Concentration %	CAS number
Calcium Hydroxide $Ca(OH)_2$	98-99.8%	01305-62-0

SECTION 4: FIRST AID MEASURES

Inhalation	Remove from the source of dust or take the victim to fresh air. Get medical attention immediately, if the victim does not breathe, give artificial respiration.
Ingestion	Do not induce vomiting. Contact a doctor immediately.
Skin Contact	Wash gently and carefully with water. Consult your doctor if the exposed area is large or if irritation persists

Eye Contact	Do not rub your eyes. Contact with dust can cause irritation by rubbing. Wash eyes immediately with water. Consult your doctor if necessary.

SECTION 5: FIRE-FIGHTING MEASURES

Fire	Not considered to be a fire hazard
Explosion	Not considered to be an Explosion Hazard
Fire Extinguishing Media	Appropriate extinction measures The product is not combustible. Use extinction measures that are appropriate to local circumstances and the surrounding environment.
Special Information	Recommendations for firefighting personnel Avoid the generation of dust. Use respirators

SECTION 6: MEASURES IN CASE OF ACCIDENTAL RELEASE

Steps to be taken in case material is spilled

- Ventilate the area of the leak or spill.
- Keep dust levels to a minimum.
- Keep unnecessary and unprotected people away from the spill area.
- Wear the appropriate personal protective equipment Section 8.
- Avoid inhaling dust, ensure sufficient ventilation or use suitable breathing equipment (see section 8).
- Spills: Pick up and place in a suitable container for recovery or disposal, using a method that does not generate dust.
- Do not rinse or pour waste into the sewer.
- Spill residues can be diluted with water, neutralized with diluted acid such as acetic, hydrochloric or sulfuric.
- Absorb the neutralized caustic residue on clay or other inert substance and pack it in a suitable container for disposal in accordance with local, state, federal, national and international disposal and recycling regulations.

SECTION 7: HANDLING AND STORAGE

Precautions for safe handling

- Avoid contact with skin and eyes.
- Wear protective equipment (referred to in section 8 of this safety data sheet). Do not wear contact lenses when handling this product.
- Keep dust levels to a minimum.
- Minimize the generation of dust.
- Avoid dust using ventilation or adequate filters in the places where it is handled. Whenever possible, mechanical manipulation is better.

Recommendations for storage

- Store in a well-closed and identified container, stored in a cool, dry and ventilated area.
- Protect against physical damage.

• Isolate incompatible substances. Containers of this material can be dangerous when they are empty, since they retain product residues (dust, solids); Observe all warnings and precautions listed for the product. See section 10 of Incompatible Substances.

• Keep the product away from sources of moisture, heat and ignition.

• Store in the area corresponding to corrosives.

• Avoid bulk storage.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

Ingredient name	Exposure limits
Calcium Hydroxide	*OSHA PEL (United States, 2/2013).* TWA: 5mg/m^3 / 8h / Respirable fraction. TWA: 15mg/m^3 / 8h/ Total Dust. *ACGIH TLV (United States, 4/2014).* TWA: 5mg/m^3 / 8h *NIOSH REL (United States, 10/2013).* TWA: 5mg/m^3 / 10h *MSHA PEL* / TWA: 8/40 HORAS: 5mg/m^3. NOM-010-STPS-2014 / 5mg/m^3 / 8h

Engineering Control Measures

- Ventilation: Ensure adequate ventilation in workplace and apply appropriate PPE as necessary.
- Dust Control: Use exhaust ventilation or other engineering controls at handling points to keep airborne levels below recommended exposure limits and /or wear personal protective equipment
- Eye Wash: Keep emergency eye wash supplies at the workplace.

Personal Protective Equipment:

- Eye protection: Use goggle or safety lens to protect against chemicals and / or full face shield where possible dust or splash solutions. Keep the eye wash fountain and quick drain facilities in the work area.
- Hand protection: Wear dry protective gloves. Avoid gloves with open fabrics.
- Skin protection: Wear suitable protective clothing to avoid contact with skin with long sleeves and not torn or broken.
- Footwear: Wear closed footwear.
- Respiratory protection: It is recommended to use a mask or respirator for powders with protection equal to or greater than N95.

Hygiene	Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using lavatory and the end of the working period. Wear clean, dry personal protective equipment.
Environmental:	Ventilation systems should be filtered before discharge to atmosphere

SECTION 9: PHYSICAL AND CHEMICAL PROPIETIES

Common Name	Calcium Hydroxide, Hydrated Lime, Lime Off
Chemical Formula	$Ca(OH)_2$
Molecular Weight	74.10 g/M
State Physical	Solid Powder
Color	White
Odor	Odorless
Stability	Reactive
Flammability:	Not-flammable
Explosivity:	Not-flammable
Flas Pt: **Melting point**	Non-Combustible 580°C (1076 °F) Se deshidrata a esta temperatura.
Boiling point	Not applicable
Vapor Density:	Not applicable
Solubility in Water	1.650 g / l water at 20 ° C. 100% Solubility in Ammonium Tetrachloride NH2Cl4.
pH	12.45 in a 1% solution in water at 25 ° C
% Volatile	0
Density	0.3-0.5 kg/l.
Vapor Press	Not applicable
Freezing Ponit	Not applicable
Self ingnition	Not applicable
Viscosidad	Not available
Partition Coefficient:	Not available
Evaporation	Not applicable
Decompotition temperature:	540°C (1004°F)
Additives:	Not aplicable

SECTION 10: STABILITY AND REACTIVITY

Reactivity	The material will not react in a dangerous manner. Calcium hydroxide absorbs carbon dioxide from the air, and forms calcium carbonate. Reacts slowly with water forming hydrated compounds, releasing heat and producing a strong alkaline solution. Reacts chemically with acids and other compounds and chemical elements to form calcium-based compounds. Explosive when mixed with organic Nitrogen compounds.
Chemical Stability	Under normal conditions of use and storage (dry conditions), Calcium Hydroxide is stable. Absorbs carbon dioxide from the air gradually forming calcium carbonate.
Possibility of Hazardous Reactions	The material does not develop dangerous polymerization. Calcium Hydroxide reacts exothermically with acids forming calcium salts.
Conditions to avoid	Humid environments.
Incompatible materials	Strong oxidizing agents The wet material is alkaline and reacts with acids, ammonium salts, aluminum and other reactive metals. For example: Tri-Boron Floride, Tri-Floride Chlorine, Ethanol, Fluorine, Hydrogen Fluoride, Phosphorus Pentoxide, Strong Acids.
Hazardous Decomposition Products	It undergoes thermal decomposition at 540 ° C producing Calcium Oxide and water.

SECTION 11: TOXICOLOGICAL INFORMATION

Routes of entry	By ingestion and inhalation, contact with skin, eyes, mucous membranes in general
Effects or prolonged exposure:	*Skin: Irritating and dry skin, depending on exposure, humidity and contact duration.* *Eyes: Dangerous with eye contact. Possible injuries and blindness if left untreated for a prolonged period. (Rabbit 10mg / 24hr- severe damage).* *Inhalation: If inhaled in the form of dust generated irritation in the respiratory tract, coughing and sneezing.* *Ingestion: May cause gastrointestinal irritation and pain, vomiting, diarrhea, drop in blood pressure, dizziness and headache. The magnitude of the damage depends on the amount ingested. (Rat LD50: 7340 mg / kg).*
Effects by Chronic Exposure	*Dermatitis: Prolonged contact causes redness, peeling and cracking of the skin.* *Sensitization: No sensitizing effects known.*

Carcinogenicity: There are no carcinogenicity data available for this product. Calcium hydroxide is not listed as a carcinogen by ACGIH, MSHA, OSHA, NTP, DFG. RSST or IAARC.

SECTION 12: ECOLOGICAL INFORMATION

Toxicity	Severe aquatic toxicity in high concentrations of high alkalinity (pH 12.454) in concentrations of 1g / l.
Persistence and degradability:	Not applicable
Bioaccumulative potential:	This material shows no effect of bioaccumulation and toxicity of the concentration of the food chain
Mobility in soil:	Low solubility and mobility in most soil conditions.
Other adverse effects:	No relevant information available..
Additional information	Product usually not dangerous at low concentrations. Frequently used in the treatment of water and soil.

SECTION 13: DISPONSAL CONSIDERATIONS

- Recover non-contaminated products whenever possible and reuse or recycle them for other beneficial purposes. If you can not recover them, discard in accordance with federal, state or local requirements.
- The processing, use or contamination of this product may change the characteristics of the waste profile and the waste management options.
- Do not dispose of in bodies of water.

SECTION 14: TRANSPORT / SHIPPING INFORMATION

- Calcium Hydroxide is not classified as dangerous for transportation.
- See the regulations for land transportation of hazardous materials and wastes.
- Transport in closed containers that are vertical and safe. Make sure that the people who transport the product know what to do in case of accident or spill.

SECTION 15: REGULATORY INFORMATION

SARA 302/304	Emergency planning and release notification: Not listed
SARA 311	Hazard categories (40 CFR 370) - regulated under OSHA: Acute and chronic.
SARA 312	Emergency planning and release notification: No
SARA 313	Inventory of release of toxic substances (TRI) List of chemical substances: Not listed
CERCLA	Calcium hydroxide is not in the list
TSCA 8(a) CDR Ex / P	Undetermined
RCRA	Calcium hydroxide is not listed or classified

CWA 311	Calcium hydroxide has been removed from the list of hazardous substances in the Clean Water Act (CWA) (11/13/79) (44FR65400).
FDA	Calcium hydroxide has been determined as generally safe (GRAS) by FDA 21CFR 184.1205
PROP 65	Subject to the 1986 warning and labeling requirements on the Safety of Drinking Water and the Toxic Application of California Law (preposition 65) based on the presence of traces of metals and silica (at or below detection levels) known by the state of California as causing cancer. " Non-detectable concentrations are reported at 1/2 of the detection level.
TSCA	Calcium Hydroxide is listed in the inventory of the TSA that promotes the EPA of the chemicals currently marketed, its registration is 1305-62-0 Active.

SECTION 16: OTHER INFORMATION

CAS	1305-62-0
Definitions	WHMIS: Information System on Hazardous Materials Used at Work. GHS: Globally Harmonized System of Classification and Labeling of Chemical Products. ACGIH: Conference of the American Government NIOSH: National Institute for Occupational Health and Safety. MSHA: Mine, Safety and Health Administration. NTP: Technical Prevention Notes. DFG: German Foundation for Scientific Research. RSST: Internal Regulation of Safety and Health at Work. IARC: International Agency for Cancer Research. SARA: Document for the Planning of local and state emergencies around Hazardous Chemicals. CERCLA: Comprehensive Law on Response, Compensation and Environmental Responsibility. TSCA: Law of Control of Toxic Substances. RCRA: Law of Conservation and Recovery of Resources. TWA: Average Weighted in Time. PEL: Exposure limit Allowed. TLV: Threshold Limit Value. REL: Recommended exposure limit. PROP 65: Law of Safe Drinking Water and Law of Toxic Application. HMIS: Hazardous Materials Identification System. CAS: Abstract Chemicals Service (CAS Registration Number) CFR: Code of Federal Regulations. DEP: Department of Environmental Protection. DOT: Department of Transportation. FDA: Food and Drug Administration. NFPA: National Fire Protection Administration. OSHA: Occupational Health and Safety Administration. IATA: International Association of Air Transport. IBC: Intermediate bulk container. IMDG: International maritime goods. MARPOL: International Convention for the Prevention of Contamination of Ships.

	STPS: Secretary of Labor and Social Prevention. EPA: Environmental Protection Agency of the United States.
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