 BIOFUNGITEK	LAREKI TOTAL	Material Safety Data Sheet	
		Version: 01	Date: 11.01.2016
		1/13	

SECTION 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

1.1. Product identification

Product name: LAREKI TOTAL

Chemical name of the substance:

Mixture of potassium carbonate and potassium phosphite.

	CAS	EC
Potassium carbonate	584-08-7	209-529-3
Potassium phosphite	13977-65-6	604-162-9

1.2. Relevant uses of the substance or mixture

Agriculture: fertilizer

1.3 Supplier/Manufacturer

BIOFUNGITEK, SL

Parque Tecnológico de Bizkaia

612 Building, 1st floor

48170 DERIO (Bizkaia), SPAIN

Tel.: +34 94 612 02 84

e-mail: info@biofungitek.com

1.4 Emergency telephone

BIOFUNGITEK SL: +34 94 612 02 84 (Office hours).

National Institute of Toxicology (Spain): +34 915 620 420

SECTION 2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture:

CLP Regulation (EC) n° 1272/2008


Classification of this product has been carried out in accordance with CLP Regulation (EC) n° 1272/2008.

Eye Irrit. 2: Eye irritation, Category 2, H319

Skin Irrit. 2: Skin irritation, Category 2, H315

STOT SE 3: Respiratory tract toxicity, single exposure, Category 3, H335

2.2 Elements of the label

 BIOFUNGITEK	LAREKI TOTAL	Material Safety Data Sheet	
		Version: 01	Date: 11.01.2016
		2/13	

CLP Regulation (EC) n° 1272/2008

Symbol:



Hazard statements:

Eye Irrit. 2: H319 - Causes serious eye irritation

Skin Irrit. 2: H315 - Causes skin irritation

STOT SE 3: H335 - May cause respiratory irritation

Precautionary statements:

P101: If medical advice is needed, have product container or label at hand

P102: Keep out of reach of children

P264: Wash thoroughly after use

P280: Wear protective gloves/protective clothing/eye protection/face protection

P302+P352: IF ON SKIN: Wash with plenty of water

P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing

P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes.

Remove contact lenses, if present and easy to do. Continue rinsing

P501: Dispose of contents and / or their container according to the separated collection system used in your municipality

Supplementary information:

EUH208: May produce an allergic reaction

EUH401: To avoid risks to human health and the environment, comply with the instructions for use


Substances that contribute to the classification

potassium carbonate

2.3. Other hazards

Information is not available.

SECTION 3. COMPOSITION / INFORMATION ON INGREDIENTS

	LAREKI TOTAL	Material Safety Data Sheet	
		Version: 01	Date: 11.01.2016
		3/13	

3.1 Identification of mix

Substance	Concentration (% p/p)	NO. CAS	NO. EINECS	DSD classification (1)	CLP classification (1)
Potassium carbonate	60,7	584-08-7	209 - 529-3	XI; R36/37/38	Irrit. Cat skin. 2; H315 Irrit. Cat eye No. 2; H319 ToX. ESP. Det. Org-unique exhibition cat. 3; H335

(1) The full text of risk phrases (R phrases) and indications of danger (H-phrases) found in section 16

SECTION 4. FIRST AID

4.1 Description of first aid

General information

In case of discomfort, consult a physician and show the container or label.

Keep the patient at rest.

Maintain body temperature.

Do not leave alone the intoxicated person in any case.

In case of inhalation

If inhaled move person outdoors.

Check breathing and, if necessary, artificial respiration.

Get medical attention if symptoms develop.

In case of contact with skin

In case of skin contact, remove contaminated clothing and wash immediately with soap

Get medical attention if symptoms develop.


In case of contact with eyes

In case of contact with eyes, separate the eyelids and wash immediately with plenty of water for 15-20 minutes; don't forget to remove the contact lenses.

Get medical attention if symptoms develop.

In case of ingestion

If swallowed, rinse mouth with water if the person is conscious.

	LAREKI TOTAL	Material Safety Data Sheet	
		Version: 01	Date: 11.01.2016
		4/13	

Get medical attention if symptoms develop.
Never give anything by mouth to an unconscious person.
Do not induce vomiting unless directed to do so by medical personnel.

4.2 Main symptoms and acute and delayed effects

Inhalation: Irritation of the respiratory tract.

Contact with skin: Irritating to skin.

Eye contact: Irritation of connective tissue.

Ingestion: Irritation in the mouth and esophagus.

SECTION 5. FIRE-FIGHTING MEASURES

5.1. Extinguishing media

Suitable extinguishing media: Dry chemical powder, carbon dioxide (CO₂), foam and water spray.

Unsuitable extinguishing media: Direct water jet.

5.2. Specific hazards arising from the substance or the mixture

In the case of combustion or thermal degradation, nitrogen oxide, carbon monoxide and carbon dioxide can be generated.

Fire residues and contaminated extinguishing water must be disposed according to local regulations.

5.3 Recommendations for firefighting personnel

You can use water spray to cool the material not damaged, always avoiding water contact with the product.

Special protective equipment: in case of fire, use self-contained breathing apparatus and protective suit.

SECTION 6. ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Isolate and delimit the affected area.

Eliminate sources of ignition.


Use respiratory protection and personal protective equipment.

Avoid contact with skin and eyes.

Evacuate personnel to a safe area.

Ensure adequate ventilation.

6.2 Environmental precautions

	LAREKI TOTAL	Material Safety Data Sheet	
		Version: 01	Date: 11.01.2016
		5/13	

Prevent product from reaching the sewer network.

Avoid contamination of soil

6.3 Methods and materials for containment and cleaning

Pick up sweeping, without raising dust in a clean container for reuse, if it is possible. Wipe up remainder with water discharge and absorb with inert absorbent material (e.g., Earth, sand, diatomaceous earth, or some non-combustible absorbent).

Store the material collected to into a convenient waste disposal container. Label these containers and manage in accordance with local regulations.

Do not mix with other waste materials.

If there are spills or uncontrolled discharges on water courses (or water for public use), immediately inform the local authorities.

6.4 References to other sections

See sections 8 and 13.

SECTION 7. HANDLING AND STORAGE

7.1 Precautions for safe handling

See also section 8.

Use personal protective equipment; avoid contact with skin, eyes and clothing.

Ensure adequate ventilation.

Avoid dust formation. Do not breathe dust.

Do not operate the product near a source of sparks or near a flame.

Do not smoke, drink or eat during the handling of the product.

Wash thoroughly hands using neutral soap after handling and before eating, drinking, smoking or using the toilet.

Remove immediately clothes if the product reaches inside. Wash skin thoroughly with a non-abrasive soap and put on clothes clean.

7.2 Conditions for safe storage, including possible incompatibilities

Do not store near any incompatible materials listed in section 10.

Do not store near food, beverages, animal feed and water supplies.

Do not store near open flame, sources of heat or near strong oxidizing agents.


Keep in original container.

Keep containers tightly closed in a dry, cool and well ventilated place, protected from the Sun.

Keep out of reach of unauthorized persons, children and animals.

7.3 Specific end-uses

Those indicated on the label.

 BIOFUNGITEK	LAREKI TOTAL	Material Safety Data Sheet	
		Version: 01	Date: 11.01.2016
		6/13	

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters

National exposure limits

Potassium carbonate:

VLA-ED-PNCOF (insoluble particles not classified otherwise)

Inhalable fraction 10 mg/m³

Breathable fraction 3 mg/m³ (INSTH)

TLV-TWA-PNCOF (insoluble particles not classified otherwise)

Inhalable fraction 10 mg/m³

Breathable fraction 3 mg/m³ (ACGIH)

(DNEL) exposure scenarios

Potassium carbonate:

DNEL for workers: Chronic local effects: Dermal: 16 mg/m³. Inhalation: 10 mg/m³

DNEL for the general population: Chronic local effects: Dermal: 8 mg/m³. Inhalation: 10 mg/m³

8.2 Exposure controls

8.2.1. Appropriate technical controls

Also see section 7.

Ensure adequate ventilation.

Use only in area provided with appropriate ventilation and extraction.

Equip storage areas units to combat fires and protection equipment against electrostatic discharge.

Provide eyewash and safety showers in enclosed work areas.


8.2.2 Measures of individual protection, such as personal protective equipment

Eye protection / face: Glasses for chemicals or safety glasses with side shields (EN166) or facial protection mask.

Skin protection: Overalls or other protective clothing, gloves and plastic or rubber boots.

Respiratory protection: Mask with suitable glass protection filter

Hygiene measures: Handle the product in accordance with good industrial hygiene and safety practice. Dispose of wash bottle with distilled water. Remove and wash contaminated clothing before reuse. Wash hands before breaks and immediately after handling the product.

	LAREKI TOTAL	Material Safety Data Sheet	
		Version: 01	Date: 11.01.2016
		7/13	

8.2.3. Environmental exposure controls

Avoid the spill. Maintain the product under appropriate storage conditions. Keep containers closed.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Aspect	Crystalline solid
Color	Brown
Olfactory threshold	Not available
Odor	Not available
pH (1%)	9.1
Freezing point/melting point	Not available
Initial point of boiling and boiling range	It does not apply
Inflammation point	Non-flammable
Evaporation rate	Not available
Flammability	Not available
Upper/lower flammability or explosive limits	Not available
Vapor pressure	Not available
Vapor density	Not available
Relative density	0,95 g/cc
Solubility (is)	100 g/l
N-octanol/water partition coefficient	Not available
Ignition temperature	Not available
Decomposition temperature	Not available
Viscosity	It does not apply
Explosive properties	Non-explosive
Oxidising properties	Not available

9.2. Additional information

Information is not available.

SECTION 10. STABILITY AND REACTIVITY

10.1 Reactivity

The product is not reactive under normal conditions.

10.2. Chemical stability

The product is stable in normal environmental conditions and foreseeable conditions of temperature and pressure during storage and handling.

	LAREKI TOTAL	Material Safety Data Sheet	
		Version: 01	Date: 11.01.2016
		8/13	

10.3. Possibility of hazardous reactions

Information is not available.

10.4. Conditions to be avoided

Extreme temperatures.

Conditions of moisture (hygroscopic product).

10.5. Incompatible materials

Strong acids, aluminum, zinc and their alloys

10.6. Hazardous decomposition products

It decomposes easily with acid releasing carbon dioxide

SECTION 11. TOXICOLOGICAL INFORMATION

11.1 Toxicological effects information

11.1.1 Substances

Potassium carbonate

Acute toxicity:

Oral toxicity LD₅₀ > 2000 mg/kg (rat pc; Equivalent to OECD 401 method)

Dermal toxicity LD₅₀ > 2000 mg/kg pc (rabbit; US EPA Pesticide Assessment Guidelines)

Toxicity by inhalation LC₅₀ > 4.96 mg/l air (4.5 h; rat; US EPA Pesticide Assessment Guidelines)

Conclusion: In view of the available data, the classification criteria are not met

Skin corrosion or irritation:

Irritant (accidental exposure in humans)

Conclusion: Xi; R38

Serious eye injury or eye irritation:

Irritant (rabbit)

Conclusion: Xi; R36

Respiratory or skin sensitization:

Respiratory: No data available

Skin: Non sensitizing (Guinea pig) (Buehler method)

Conclusion: In view of the available data, the classification criteria are not met

Mutagenicity in germ cells:

(In vitro negative; Methods equivalent to OECD 471, 476 OECD and OECD 473)

Conclusion: In view of the available data, the classification criteria are not met

Carcinogenicity:

	LAREKI TOTAL	Material Safety Data Sheet	
		Version: 01	Date: 11.01.2016
		9/13	

NOAEL: 2667 mg/kg bw/day (actual received dose; male)

NOAEL: 3331 mg/kg bw/day (actual received dose; female)

Conclusion: In view of the available data, the classification criteria are not met

Reproductive toxicity:

NOEL: 180 mg/kg bw/day (dose maximum, no observable effects) Equivalent to OECD 414 method)

Conclusion: In view of the available data, the classification criteria are not met

Specific toxicity in specific organs (STÖT) - single exposure:

It irritates the respiratory tract

Conclusion: Xi; R37

Specific toxicity in specific organs (STÖT) – repeated exposure:

Oral: NOAEL: 2667 mg/kg bw/day (actual doses received; male)

NOAEL: 3331 mg/kg bw/day (actual doses received; female)

Inhalation: (Local) NOAEC: 0.062 mg/l air

Conclusion: In view of the available data, the classification criteria are not met

11.1.2 Mixture

LAREKI GREEN

Acute toxicity:

Oral toxicity LD₅₀ information not available

Dermal toxicity LD₅₀ information not available

Information not available LC₅₀ inhalation toxicity

Irritation:

Information not available

Corrosivity:

Information not available

Awareness-raising:

Information not available

Repeated dose toxicity:

Information not available

Carcinogenicity:

Information not available

Mutagenicity:

Information not available

Reproductive toxicity:

Information not available

SECTION 12. ECOLOGICAL INFORMATION

12.1 Toxicity:

	LAREKI TOTAL	Material Safety Data Sheet	
		Version: 01	Date: 11.01.2016
		10/13	

Potassium carbonate

Acute (short-term):

Fish: LC₅₀: 68 mg/l (96 h; *Oncorhynchus mykiss*)

Aquatic invertebrates: EC₅₀: 200 mg/l (48 h; *Daphnia pulex*)

Algae:

Mixture

Acute (short-term):

Fish: Information not available

Aquatic invertebrates: information not available

Algae: Information not available

Other organisms: information not available

Chronic (long-term) toxicity:

Fish: Information not available

Aquatic invertebrates: information not available

Algae: Information not available

Other organisms: information not available

Toxicity in sediment: information not available

Terrestrial toxicity: Information not available

12.2. Persistence and degradability

Information is not available.

12.3 Bioaccumulation potential

Potassium carbonate: Due to its high water solubility, potassium carbonate does not accumulate in the fatty tissue of organisms.

12.4. Mobility in soil

Potassium carbonate: Deliquescent and hygroscopic.

12.5 Results of PBT assessment and mPmB

Information is not available.


12.6 Other adverse effects

Information is not available.

SECTION 13. DISPOSAL CONSIDERATIONS

13.1 Methods for the treatment of waste

Waste must be disposed of in accordance with state and local environmental control regulations. Avoid personal exposure.

 BIOFUNGITEK	LAREKI TOTAL	Material Safety Data Sheet	
		Version: 01	Date: 11.01.2016
		11/13	

SECTION 14. TRANSPORT INFORMATION

14.1 Number UN

It does not apply. Not classified as hazardous for transport within the transport regulations.

14.2 Official designation of transport of the United Nations

It does not apply. Not classified as hazardous for transport within the transport regulations.

14.3 Hazard for transport class

It does not apply. Not classified as hazardous for transport within the transport regulations.

14.4 Packing group

It does not apply. Not classified as hazardous for transport within the transport regulations.

14.5 Dangers for the environment

It does not apply. Not classified as hazardous for transport within the transport regulations.

14.6. Special precautions for users

Stable product at ambient temperature, during transport. Transport in containers adequately sealed and labeled.


14.7 Transport in bulk according to annex II of the Marpol 73/78 Convention of the IBC Code

It does not apply.

SECTION 15. REGULATORY INFORMATION

15.1 Regulation and legislation on safety, health and environment specific to the substance or the mixture

- Directive 67/548/EEC of the Council, of 27 June 1967 on the approximation of the laws, regulations and administrative provisions on classification, packaging and labeling of dangerous substances.
- Directive 1999/45/EC above the approximation of the laws, regulations and administrative provisions of the Member States relating to the classification, packaging and labeling of preparations hazardous.
- Directive 91/689/EEC on hazardous waste.

 LAREKI TOTAL	Material Safety Data Sheet	
	Version: 01	Date: 11.01.2016
	12/13	

- Directive 91/156/EEC on waste.
- Regulation EC 1907 / 2007 concerning the registration, evaluation, authorization and restriction of substances and chemicals REACH.
- Regulation (EC) 1272 / 2008 on classification, labeling and packaging of substances and mixtures.
- Royal Decree 363/1995. Regulation on classification, packaging and labeling of dangerous substances.
- Royal Decree 255/2003. Regulation on classification, packaging and labeling of preparations hazardous.
- European Agreement concerning the international carriage of dangerous goods by road (ADR).
- International Maritime Dangerous Goods Code (IMDG: International Maritime Dangerous Goods)
- Dangerous goods by international air transport regulations (IATA: International Air Transport Association)

SECTION 16. OTHER INFORMATION

Revisions of this material safety data sheet

Version: 01; Replaces:-

Changes: first version

Classification in accordance with the European regulation 1272 / 2008

Skin irritant 2; H315

Eye irritant 2; H319

STÖT - unique exposition³; H335

Tagged in accordance with the European regulation 1272 / 2008

Word of warning:

Attention

Indications of danger:

H315 causes skin irritation.

H319 causes serious eye irritation.

H335 can irritate the respiratory tract.

Safety advice:

P261 avoid breathing dust / fume / gas / mist / vapours / spray.

P264 wash hands thoroughly after handling.

P280 wear gloves/clothes/goggles/mask of protection.

P305 + 351 + 338 in case of contact with eyes: Rinse thoroughly with water for several minutes. Remove contact lenses. Continue rinsing.

P362 remove contaminated clothing and wash before reuse.

P402 + 233 store in a dry place. Keep container tightly closed.

Supplementary information:

Abbreviations and acronyms

 BIOFUNGITEK	LAREKI TOTAL	Material Safety Data Sheet	
		Version: 01	Date: 11.01.2016
		13/13	

ADR European Agreement concerning the international carriage of dangerous goods by road

AOEL-acceptable operator exposure level

EC₅₀ median effective concentration

LC₅₀ Lethal concentration

LD₅₀ Lethal dose

DNEL derived effect level

IATA dangerous goods by international air transport regulations

ICAO Technical Instructions for the Safe Transport of Dangerous Goods by Air

IMDG international maritime dangerous goods code

mPmB very persistent and very bioaccumulable

NOAEL no observed adverse effect level

NOEC No observed effect concentration

Persistent PBT, bioaccumulable and toxic

bw body weight

RID regulations concerning the international carriage of dangerous goods by rail

VLA-EC environmental limit value - short term exposure

VLA-ED environmental limit value - daily exposure

Bibliographical references and data sources

BORSISTA: European Chemical Substances Information System.

FOOTPRINT (2007). The FOOTPRINT Pesticide Properties DataBase. Database collated by the University of Hertfordshire as part of the EU-funded FOOTPRINT project (FP6-SSP-022704). <http://www.eu-footprint.org/ppdb.html>

European Agency of substances and chemical mixtures. CHECK OUT. Database of registered substances.

<http://apps.echa.europa.eu/registered/registered-sub.aspx#search>

List of phrases of risk (R-phrases) and indications of danger (phrases H) referred to in the document

Risk phrases (R-phrases):

R36/37/38 irritating to eyes, skin and respiratory tract


Indications of danger (phrases H):

H315 causes skin irritation.

H319 causes serious eye irritation.

H335 can irritate the respiratory tract.

The information provided in this document has been compiled based on the best existing sources and according to the latest available knowledge and with the existing legal requirements on classification, packaging and labeling of dangerous substances. This does not imply that the information is thorough in all cases. The user's responsibility is to assess whether the information in this material safety data sheet

 BIOFUNGITEK	LAREKI TOTAL	Material Safety Data Sheet	
		Version: 01	Date: 11.01.2016
		14/13	

meets the requirements for a specific application other than that indicated. Compliance with the instructions contained in the text does not exempt the user from compliance with few regulatory laws are applicable. The use and application of our products outside of our control and therefore, under the responsibility of the buyer.