

MATERIAL SAFETY DATA SHEET (MSDS)

According to Regulation (EC) No. 1907/2006

Revision Date	01	
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Version Number	001	
Form No.	001.01 EN	

OrganoPlantis KalsiBalance

SOIL AMENDMENT - ORGANIC + MINERAL BASED LIQUID SOIL AMENDMENT (pH REDUCER - LIME REMOVER)

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

1.1. PRODUCT IDENTIFIER

Product trade	OrganoPlantis KalsiBalance
name	
Product form	Soil Amendment - Organic + Mineral Based Liquid Soil Amendment (pH Reducer - Lime Remover)
Product Use	Highly acidic (pH <2) organic + mineral based liquid soil amendment, developed to neutralize alkalinity in calcareous and alkaline soils. Reduces excessive lime (CaCO ₃) content, lowers soil pH towards neutral levels, and improves nutrient availability for plants.

1.2.RELEVANT IDENTIFIED USES OF THE SUBSTANCE OR MIXTURE AND USES ADVISED AGAINST

Field	Content
Identified Uses	Soil conditioner and pH correction agent for professional agricultural use. Applied to alkaline and calcareous soils to decrease pH, remove lime-induced stress, and enhance nutrient uptake.
Uses Advised Against	Not intended for human or animal consumption. Not suitable for foliar application. Do not mix with calcium-containing compounds or strongly alkaline materials.

1.3. DETAILS OF THE SUPPLIER OF THE SAFETY DATA SHEET

Field	Content
Company Name	Ecobigen Gübre Tarım Sanayi Tic.Ltd.Şti
Address	Alparslan Mah. Samsun 1. Sok. No:13, Bafra, Samsun, Türkiye
Phone	+90 362 544 21 02
Web Site	https://agrobigen.com.tr/
E-Mail	info@ agrobigen.com.tr

1.4. EMERGENCY PHONE NUMBER

Field	Content		
Country	TURKIYE		
Organisation/	Ulusal Zehir Merkezi (UZEM) Refik Saydam Hıfzıssıhha		
Company	Merkezi Başkanlığı		
Address	Cemal Gürsel Cd. No: 18 Sıhhiye Çankaya 06590 Ankara		
Emergency Call	Call Center 114		
Comment	Information is provided to the public and medical		
	personnel on poisoning incidents via 114.		

SECTION 2. HAZARDS IDENTIFICATION

2.1. CLASSIFICATION OF THE SUBSTANCE OR MIXTURE

According to Regulation (EC) No 1272/2008 [CLP]:

- Skin Irritation, Category 2 H315: Causes skin irritation
- Eye Irritation, Category 2 H319: Causes serious eye irritation
- Corrosive to Metals, Category 1 H290: May be corrosive to meta

2.2 LABEL ELEMENTS



HAZARD STATEMENTS (H)

- H315 Causes skin irritation
- H319 Causes serious eye irritation
- H290 May be corrosive to metals

PRECAUTIONARY STATEMENTS (P)

- P264 Wash hands thoroughly after handling
- P280 Wear protective gloves/protective clothing/eye protection/face protection
- P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
- P337+P313 If eye irritation persists: Get medical advice/attention
- P302+P352 IF ON SKIN: Wash with plenty of water
- P501 Dispose of contents/container in accordance with local/regional/national regulations

2.3 OTHER HAZARDS

This product does not contain any substances classified as PBT (Persistent, Bioaccumulative, and Toxic) or vPvB (very Persistent and very Bioaccumulative).

The product may release irritating acidic vapors or nitrogen oxides if heated or exposed to fire.

Corrosive to certain metals (e.g., aluminum, zinc). Use compatible storage containers (e.g., HDPE, acid-resistant plastic).

SECTION 3. COMPOSITION/ INFORMATION ON INGREDIENTS

3.1 SUBSTANCES

Not applicable - this product is a mixture.

3.2 MIXTURES

The product is a liquid organomineral pH regulator composed of the following components:

Component	CAS Number	EC Number	Concentration (% w/v)	Classification (Reg. EC 1272/2008)
Organic Slurry / Post-Fermentation Sludge	_	-	>20%	Not classified

Nitric acid	7697-37-2	231-714-2	>5%	Ox. Liq. 3 (H272), Skin Corr. 1A (H314)
Sulphiric acid	7664-93-9	231-639-5	>2%	Skin Corr. 1A (H314)
Phosphoric acid	7664-38-2	231-633-2	>1%	Skin Corr. 1B (H314), Eye Dam. 1 (H318)
Citric acid	77-92-9	201-069-1	>2%	Eye Irrit. 2 (H319)
Lactic acid	50-21-5	200-018-0	<1%	Skin Irrit. 2 (H315), Eye Dam. 1 (H318)
Formic acid	64-18-6	200-579-1	<1%	Acute Tox. 4 (H302), Skin Corr. 1A (H314)

SECTION 4. FIRST-AID MEASURES

4.1 DESCRIPTION OF FIRST AID MEASURES

General Advice	Remove the exposed person from the contaminated area. In all cases of doubt, or when symptoms persist, seek medical attention. Show this SDS to the treating physician.
Eye Contact	Immediately rinse cautiously with clean, lukewarm water for at least 15 minutes, holding eyelids apart. Remove contact lenses if present and easy to do. Continue rinsing. Seek immediate medical attention.
Skin Contact	Immediately wash affected area thoroughly with plenty of water and mild soap. Remove contaminated clothing. Seek medical advice if skin irritation or chemical burns occur.
Inhalation	Move person to fresh air. Ensure they are breathing comfortably. If symptoms such as coughing, throat irritation, or breathing difficulty occur, get immediate medical attention.
Ingestion	Do not induce vomiting. Rinse mouth with water. Give small sips of water if the person is conscious. Seek medical advice immediately. Do not give anything by mouth to an unconscious person.

4.2 MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED

- Eye contact: Risk of severe irritation, redness, pain, and blurred vision. Prolonged contact may cause eye damage.
- Skin contact: May cause skin burns, redness, and pain depending on exposure time and sensitivity.
- Inhalation: Mists or vapors may irritate respiratory tract; coughing and throat discomfort possible.

• Ingestion: May cause corrosive damage to mouth, throat, and gastrointestinal tract with symptoms like burning sensation, nausea, vomiting.

4.3 INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED

- No specific antidote known.
- Treat symptomatically and supportively based on clinical findings.
- In case of eye contact or ingestion, immediate medical evaluation is recommended.
- Monitor respiratory function in case of inhalation exposure.
- For large-scale or severe exposures, monitor for electrolyte imbalance and tissue damage.

SECTION 5. FIREFIGHTING MEASURES

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Suitable Extinguishing Media	Use water spray, alcohol-resistant foam, dry chemical powder, or carbon dioxide (CO_2) . Choose extinguishing media appropriate to the surrounding fire environment.
Unsuitable Extinguishing Media	High-pressure water jets are not recommended, as they may cause splashing or spread the corrosive material. Avoid using water in large volumes if runoff might enter waterways or drains.
Special Hazards Arising from the Substance or Mixture	This product contains oxidizing and corrosive acids, which may intensify fire in the presence of combustible materials.
	Heating or fire exposure may lead to rupture of containers due to internal pressure build-up. Hazardous decomposition products may include: Nitrogen oxides (NO $_{\rm x}$), Sulfur oxides (SO $_{\rm x}$), Phosphorus oxides (P $_{\rm 2}O_{\rm 5}$), Ammonia (NH $_{\rm 3}$) in trace amounts. Carbon monoxide (CO) and carbon dioxide (CO $_{\rm 2}$)
Advice for Firefighters	Wear full protective clothing and self-contained breathing apparatus (SCBA) operating in positive pressure mode. Avoid inhalation of decomposition products - they may be toxic and corrosive. Prevent fire-fighting runoff from entering drains, soil, or surface water. Maintain safe distance and apply cooling spray to closed containers exposed to fire.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures Ensure adequate ventilation in the spill area. Avoid direct contact with skin, eyes, and clothing.

Evacuate personnel from the area if large spill or vapor concentration is present.

Use appropriate PPE:

- Chemical-resistant gloves (e.g., nitrile, neoprene)
- Safety goggles or face shield
- Long-sleeved protective clothing
- Respiratory protection (e.g., acid vapor cartridge mask) if airborne concentration exceeds safe levels

Eliminate all sources of ignition in case of significant spills, even though the product is not flammable, due to oxidizing components.

Environmental Precautions

Prevent release into drains, surface waters, or soil.

Contain spills to avoid contamination of groundwater or irrigation systems.

Notify authorities immediately if the product enters natural water bodies in significant amounts.

Spilled acid in soil may cause pH imbalance and local degradation of biological activity.

Methods and Material for Containment and Cleaning Up

Stop the source of the leak only if safe to do so.

For small spills: Absorb with inert material (e.g., dry sand, vermiculite, or diatomaceous earth).

For larger spills: Construct containment berms using earth or absorbent booms.

Collect all contaminated absorbent into acidresistant containers, label accordingly.

Rinse affected area with copious amounts of water, neutralizing with lime or soda ash if required.

Avoid high-pressure cleaning, which may aerosolize the acidic material.

Ventilate the area until air quality returns to safe levels.

Reference to Other Sections

For personal protective equipment, see Section 8. For disposal considerations, refer to Section 13.

SECTION 7. HANDLING AND STORAGE

Precautions for Safe Handling

Avoid direct contact with skin, eyes, and clothing.

Do not inhale vapors, mists, or aerosols. Avoid generating airborne droplets.

Ensure adequate ventilation in handling areas. Use only with appropriate PPE (see Section 8), including:

- Acid-resistant gloves
- Splash-proof goggles or face shield

- Protective clothing
- Respiratory protection if exposure limits are exceeded

Do not eat, drink, or smoke during handling. Wash hands and exposed areas thoroughly after use.

Keep away from:

- Heat sources, open flames
- Combustible or flammable materials due to oxidizing potential

Transfer and mix only with materials compatible with strong acids.

Conditions for Safe Storage, Including Any Incompatibilities

Store in original, tightly closed, acid-resistant containers.

Keep in a cool, dry, and well-ventilated area
away from:

- Direct sunlight
- Sources of heat or ignition
- Freezing conditions

Storage temperature: Ideally between 5°C and 25°C .

Do not store near:

- Alkalis, bases, or strong oxidizers
- Metals prone to corrosion (e.g., aluminum, zinc)

Keep away from food, beverages, and animal feed. Ensure storage area has spill containment and acid-neutralizing materials available.

Specific End Use(s)

Product is designed exclusively as a soil-applied pH regulator in agricultural settings.

Not for foliar use, human or animal consumption, or industrial chemical applications.

Any other usage must be evaluated and approved by the manufacturer.

SECTION 8. EXPOSURE CONTROLS/ PERSONAL PROTECTION

8.1. CONTROL PARAMETERS

No specific exposure limits have been established for the mixture as a whole. However, several individual components have assigned occupational exposure limits under EU and national legislation. Examples include:

Substance	CAS Number	OEL (8h-TWA)	STEL	Remarks
Nitric acid	7697-37-2	2 ppm (5.2 mg/m³)	4 ppm (10 mg/m³)	Corrosive, oxidizing agent
Sulfuric acid	7664-93-9	0.05 mg/m³ (thoracic fraction)	-	Carcinogen Cat.1A (mist)
Phosphoric acid	7664-38-2	1 mg/m³	2 mg/m³	Skin and eye irritant

Formic acid	64-18-6	5 ppm (9.5 mg/m³)	10 ppm (19 mg/m³)	Skin/eye irritant; corrosive
Citric acid	77-92-9	Not established	_	Low hazard at dilute concentrations
Lactic acid	50-21-5	Not established	_	Mild irritant at high doses

Note: Refer to national occupational exposure limit (OEL) regulations (e.g., EU SCOEL, Türkiye OEL) for additional compliance requirements.

8.2. EXPOSURE CONTROLS

Appropriate	Use in well-ventilated areas.
Engineering Controls	In confined spaces or during bulk handling, use local exhaust ventilation to reduce exposure to vapors or mist.
	Prevent aerosol generation during mixing and application.

8.3. PERSONAL PROTECTIVE EQUIPMENT (PPE)

PPE Type	Recommendation
Eye Protection	Chemical splash goggles or face shield (EN 166 compliant).
Skin Protection	Long-sleeved acid-resistant protective clothing and nitrile or PVC gloves.
Respiratory	Not required under normal conditions. If aerosol formation is likely or in poorly ventilated areas, use half-mask respirator with P2 or P3 filter.
Foot Protection	Rubber boots or chemical-resistant safety footwear.

Hygiene Measures

- Wash hands and face thoroughly after use.
- Do not eat, drink, or smoke during handling.
- Contaminated clothing must be removed immediately and washed before reuse.
- Emergency eye wash stations and safety showers should be available onsite.



SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Brownish liquid
Odor	Mild organic odor

рН (20°C)	<2.0
Density	~1.10 g/cm³
Boiling Point	>100°C (aqueous solution)
Freezing Point	~0°C
Solubility	Fully water-soluble
Viscosity	~50-200 cP
Oxidizing Properties	Classified as oxidizing (due to acid/nitrate components)

Note: The acidic nature and oxidizing components (e.g., nitric acid) require appropriate handling precautions as outlined in Sections 2 and 8.

9.2 OTHER INFORMATION (NUTRIENT COMPOSITION)

Organic matter 10%	
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SECTION 10. STABILITY AND REACTIVITY

Property	Description
Reactivity	Contains oxidizing agents (e.g., nitric acid) and may intensify fire in the presence of combustible materials.
Chemical Stability	Stable under recommended handling and storage conditions (see Section 7). No decomposition occurs if used as directed.
Possibility of Hazardous Reactions	No hazardous polymerization expected under normal conditions. May react with strong reducing agents, releasing heat or hazardous gases.
Conditions to Avoid	Excessive heat or open flames • Direct sunlight • Contact with flammable/combustible substances • Contamination with strong acids/bases
Incompatible Materials	Strong reducing agents (e.g., metal powders, hydrides) • Combustible organic materials (e.g., sawdust, textiles) • Strong acids or alkalis
Hazardous Decomposition Products	Nitrogen oxides (NO $_{\rm x}$) • Potassium oxides (K $_{\rm 2}$ O) • Sulphur oxides (SO $_{\rm x}$) • Phosphorus oxides (P $_{\rm 2}$ O $_{\rm 5}$ fumes in fire conditions)

SECTION 11. TOXICOLOGICAL INFORMATION INFORMATION ON TOXICOLOGICAL EFFECTS

Endpoint	Assessment
Acute Toxicity (Oral)	Estimated LD $_{50}$ (rat) > 2000 mg/kg body weight. Not classified as acutely toxic under CLP Regulation (EC) No 1272/2008.

Skin Corrosion/Irritation	May cause mild to moderate irritation upon prolonged or repeated contact. Product contains acidic components (e.g., nitric, citric, and sulphuric acids).
Serious Eye Damage/Irritation	Causes eye irritation (Category 2, H319). Contact may result in redness, tearing, or temporary visual impairment.
Respiratory or Skin Sensitisation	Not expected to be a sensitiser under normal handling. No known sensitising agents are present in the formulation.
Germ Cell Mutagenicity	Not classified. No evidence available suggesting mutagenic potential.
Carcinogenicity	Not classified. No ingredients are listed as carcinogens by IARC, NTP, OSHA or EU regulations.
Reproductive Toxicity	Not classified. No known components associated with reproductive or developmental toxicity.
STOT - Single Exposure	Not expected to cause specific target organ toxicity following single exposure.
STOT - Repeated Exposure	Not classified. Repeated use under standard agricultural conditions is not expected to pose organ-specific toxicity risks.
Aspiration Hazard	Not applicable. Product is aqueous, non-volatile, and does not contain hydrocarbon solvents.

SECTION 12. ECOLOGICAL INFORMATION

Toxicity	The product contains organic and inorganic acids commonly used in soil pH regulation. Although not classified as acutely toxic, the following components may contribute to environmental effects at high concentrations: Nitric acid:
	 LC₅₀ (96h, fish): ~72 mg/L May lower pH of aquatic environments, causing harm to sensitive organisms.
	Sulfuric acid:
	 LC₅₀ (96h, fish): ~42 mg/L Corrosive to aquatic life at elevated concentrations.
	Under normal agricultural application rates, the product is not expected to cause acute toxicity in aquatic environments, but runoff into water bodies must be avoided due to acidifying potential.
Persistence and Degradability	The organic matter component is readily biodegradable.
	Inorganic acids (e.g., nitric, sulfuric, phosphoric) are fully water-soluble and may

	persist in the environment through acid-base reactions or ionic forms.
Bioaccumulative Potential	None of the major ingredients are expected to bioaccumulate.
	Components are either readily metabolized (e.g., lactic acid) or present in dissociated ionic forms (e.g., NO_3^- , $SO_4^{2}^-$, $PO_4^{3}^-$).
Mobility in Soil	The product is highly water-soluble and will migrate with soil water. Risk of leaching should be considered in sandy or permeable soils.
Results of PBT and vPvB Assessment	This product does not contain any substances classified as PBT (Persistent, Bioaccumulative and Toxic) or vPvB (very Persistent and very Bioaccumulative) according to EU criteria.
Other Adverse Effects	Overuse may contribute to soil acidification or leaching of nutrients.
	Avoid uncontrolled release into natural surface waters due to acidifying and eutrophication risks.

SECTION 13. DISPOSAL CONSIDERATIONS

13.1. WASTE TREATMENT METHODS

Product Waste Disposal	Dispose of this product in accordance with local, regional, and national regulations.
	Do not allow unused product to enter surface water, drainage systems, or soil.
	If disposal via sewage systems is considered, consult local environmental authorities beforehand.
	Recommended Waste Code (European Waste Catalogue):
	06 10 99* - Wastes not otherwise specified from the manufacture, formulation, supply, and use (MFSU) of agricultural chemicals.
Packaging Disposal	Empty containers must be triple rinsed with clean water. Rinse water can be reused in the next application batch.
	After rinsing, containers can be:
	Recycled, if permitted by local regulations, or
	Disposed of as non-hazardous plastic waste.
	Do not reuse empty containers for any other purpose.

13.2 ADDITIONAL NOTES

- Do not incinerate sealed or pressurized containers.
- Avoid uncontrolled dumping or open disposal.
- Residual product and packaging should be handled by licensed hazardous waste contractors whenever possible.

SECTION 14. TRANSPORT INFORMATION

Parameter	Details
UN Number	3265
Proper Shipping Name	Corrosive liquid, acidic, organic, n.o.s. (contains nitric acid, phosphoric acid, citric acid)
Transport Hazard Class	8 - Corrosive Substances
Packing Group	II - Medium Danger
Label(s)	Class 8 (Corrosive)
Marine Pollutant (IMDG)	No, not classified as marine pollutant under IMDG
Environmentally Hazardous	No, not classified as environmentally hazardous under ADR/IMDG/IATA
Transport in Bulk (MARPOL/IBC)	Not applicable - not intended for bulk transport by sea
Special Precautions	Avoid exposure to high temperatures, direct sunlight, and incompatible materials (e.g., alkalis, reducing agents). Ensure proper packaging and secure stowage to avoid leaks.
Remarks	This product should be transported in tightly sealed containers, upright, and labeled according to ADR, IMDG, and IATA regulations for acidic corrosive liquids. Do not stack on top of food or animal feed products.

SECTION 15. REGULATORY INFORMATION 15.1. EU AND INTERNATIONAL REGULATIONS

This product is classified and labeled in accordance
with the CLP Regulation. Signal words, hazard statements (H), and precautionary statements (P) are applied based on the identified hazards of acidic components (e.g., nitric acid, sulfuric acid, phosphoric acid).
 The ingredients in this mixture are either: Pre-registered or fully registered under REACH, or Exempt from registration (e.g., naturally occurring substances such as organic slurry or citric acid from biological origin).
Classified as UN 3265 - Corrosive liquid, acidic, organic, n.o.s. Subject to Class 8 - Corrosive Substances regulations (See Section 14).

15.2 LOCAL AND NATIONAL REGULATIONS

Gübreler Yönetmeliği" regulated by the Republic of
Türkiye Ministry of Agriculture and Forestry.

Product must be registered and approved before marketing or agricultural use.

Hazardous components are subject to the "Kimyasalların Envanteri ve Kontrolü Hakkında Yönetmelik" under SEA / CLP adaptation in Türkiye.

AZ Azerbaijan

- Must comply with the Republic of Azerbaijan's fertilizer registration and safety use regulations, including labeling, classification, and environmental precautions.
- Governed by "Azərbaycan Respublikasının Gübrələrin Qeydiyyatı və Təhlükəsiz İstifadəsi Qaydaları".
- Subject to supervision by the State Phytosanitary Control Service for importation, storage, and application in agriculture.

SECTION 16. OTHER INFORMATION

Prepared by	AGROBİGEN R&D Department
Issue Date	2025-09-30
Version	1.0

Key to Abbreviations and Acronyms

- CAS: Chemical Abstracts Service Registry Number
- EC Number: European Community Number
- CLP: Classification, Labelling and Packaging Regulation (EC) No 1272/2008
- REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals
- SDS: Safety Data Sheet
- LD_{50} : Median lethal dose
- \bullet LC₅₀: Median lethal concentration

Relevant Hazard Statements (H-Statements)

- H272 May intensify fire; oxidizer
- H315 Causes skin irritation
- H319 Causes serious eye irritation

Disclaimer	The information contained in this Safety Data Sheet is provided to the best of our knowledge as of the issue date. It is based on current legislation, scientific evidence, and reliable data sources.
	However, ORGANOPLANTIS make no warranties, express or implied, and assume no legal responsibility for the accuracy, completeness, or use of this data.
	The user is responsible for determining the suitability of the product for any particular use and for ensuring compliance with all applicable laws and regulations in Türkiye, Azerbaijan, and other jurisdictions where the product may be marketed or applied.