OrganoPlantis	**MATERIAL SAFETY DATA SHEET (MSDS)** According to Regulation (EC) No. 1907/2006	Revision Date	01
		Date of Issue	30.09.2025
		Version Number	001
		Form No.	001.01 EN

OrganoPlantis KaliForce

LIQUID NPK ORGANOMINERAL FERTILIZER

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

1.1. PRODUCT IDENTIFIER

Product trade name	OrganoPlantıs KaliForce
Product form	Organic + mineral based liquid organomineral fertilizer containing NPK (5-5-15), SO_3, MgO, micronutrients (Fe, Zn, Cu, Mn, B), free amino acids, and argillic acid.
Product Use	Specially formulated to improve fruit size, color, taste, and shelf life through high potassium nutrition. Enhances stress tolerance (salinity, drought, temperature fluctuations), supports balanced crop growth, and improves yield quality. Suitable for both soil and foliar applications.

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

Field	Content
Identified Uses	Professional agricultural use as a liquid organomineral fertilizer with emphasis on potassium nutrition to enhance fruit quality, plant resilience, and productivity.
Uses Advised Against	Not intended for human or animal consumption. Not for use in food or feed manufacturing. Avoid non-agricultural applications.

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 / Company	Ulusal Zehir Merkezi (UZEM) Refik Saydam Hıfzıssıhha Merkezi Başkanlığı
Address	Cemal Gürsel Cd. No: 18 Sıhhiye Çankaya 06590 Ankara
Emergency 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]:

- Oxidizing Solid, Category 2 – H272: May intensify fire; oxidizer
- Skin Irritation, Category 2 – H315: Causes skin irritation
- Eye Irritation, Category 2 – H319: Causes serious eye irritation

2.2 LABEL ELEMENTS

HAZARD STATEMENTS (H)

- H315 – Causes skin irritation
- H319 – Causes serious eye irritation

PRECAUTIONARY STATEMENTS (P)

- P210 – Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- P220 – Keep/store away from combustible materials.
- 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.
- 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 or vPvB.

May release nitrogen oxides (NO_x) and other irritating gases if exposed to high heat or fire.

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 fertilizer 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

Monoammonium Phosphate (MAP)	7722-76-1	231-764-5	>8%	Eye Irrit. 2 (H319)
Potassium Nitrate (KNO_3)	7757-79-1	231-818-8	>30%	Ox. Sol. 2 (H272), Eye Irrit. 2 (H319)
Magnesium Sulphate ($MgSO_4.H_2O$)	7487-88-9	231-298-2	>5%	Not classified
Aminoacids (soy-derived)	65072-01-7	265-724-3	>2%	Not classified
Seaweed Extract (kelp-based)	84775-78-0	283-907-6	<1%	Not classified
Iron (II) Sulphate ($FeSO_4.H_2O$)	17375-41-6	231-753-5	<2%	Eye Irrit. 2 (H319), Skin Irrit. 2 (H315)
Copper (II) Sulphate ($CuSO_4.H_2O$)	7758-98-7	231-847-6	<1%	Acute Tox. 4 (H302), Eye Irrit. 2 (H319), Aquatic Acute 1 (H400)
Zinc Sulphate ($ZnSO_4.H_2O$)	7446-19-7	231-793-3	<1%	Eye Irrit. 2 (H319), Aquatic Chronic 2 (H411)
Manganese (II) Sulphate ($MnSO_4.H_2O$)	10034-96-5	232-089-9	<1%	Eye Irrit. 2 (H319)
Sodium Octaborate Tetrahydrate ($Na_2B_8O_{13}\cdot 4H_2O$)	12280-03-4	234-541-0	<1%	Repr. 2 (H361fd), Eye Irrit. 2 (H319)

SECTION 4. FIRST-AID MEASURES

4.1 DESCRIPTION OF FIRST AID MEASURES

General Advice	In case of any adverse effects or if symptoms persist, seek medical attention. Show this safety data sheet to the doctor in attendance.
Eye Contact	Rinse cautiously with clean water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If irritation persists, seek medical advice immediately.
Skin Contact	Wash affected area thoroughly with soap and water. Remove contaminated clothing and wash before reuse. If skin irritation develops or persists, consult a physician.
Inhalation	Remove person to fresh air and keep at rest in a position comfortable for breathing.

	If symptoms (e.g., coughing, shortness of breath) occur or persist, get medical attention.
Ingestion	Rinse mouth with water. Do NOT induce vomiting unless advised by a doctor or Poison Center. If feeling unwell, seek medical attention.

4.2 MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED

- Eye contact: May cause redness, pain, and temporary vision disturbance.
- Skin contact: May cause redness or irritation in sensitive individuals.
- Inhalation: High concentrations of vapors or aerosols may cause mild respiratory irritation.
- Ingestion: May cause gastrointestinal discomfort such as nausea or vomiting.

4.3 INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED

- No specific antidote known. Treat symptomatically based on clinical judgment.
- Ensure airway and vital signs are stable in serious exposures.

SECTION 5. FIREFIGHTING MEASURES

Suitable Extinguishing Media	Use water spray, alcohol-resistant foam, carbon dioxide (CO_2), or dry chemical powder as appropriate for surrounding fire conditions.
Unsuitable Extinguishing Media	None known under normal conditions of use. Avoid high-pressure water jets, as they may spread the material.
Special Hazards Arising from the Substance or Mixture	This product contains oxidizing substances (e.g., potassium nitrate) and may intensify fire. During combustion, hazardous decomposition products may be released, including: Nitrogen oxides (NO_x),Potassium oxides (K_2O),Ammonia (NH_3). Containers may rupture under fire conditions due to pressure build-up.
Advice for Firefighters	Wear full protective firefighting gear, including self-contained breathing apparatus (SCBA) with positive pressure mode. Do not allow run-off from fire-fighting to enter drains or watercourses.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures	Ensure adequate ventilation. Avoid contact with skin and eyes. Wear appropriate personal protective equipment (PPE): gloves, safety goggles, protective clothing, and respiratory protection if necessary. Remove all sources of ignition in case of large spill.

Environmental Precautions	Prevent product from entering sewers, surface water, or soil. Inform relevant authorities if large quantities enter water bodies or drainage systems. Contain spill to prevent spread into the environment.
Methods and Material for Containment and Cleaning Up	Stop the leak if it is safe to do so. Absorb spilled product with inert material (e.g., dry earth, sand, vermiculite). Collect into suitable, properly labelled containers for disposal according to local regulations. Wash the spill area with water, but avoid high-pressure hosing to prevent product spread.
Reference to Other Sections	For personal protective equipment, see Section 8. For waste disposal considerations, see Section 13.

SECTION 7. HANDLING AND STORAGE

Precautions for Safe Handling	Avoid contact with skin, eyes, and clothing. Do not breathe vapors, mists, or aerosols. Ensure adequate ventilation during handling and use. Wear appropriate personal protective equipment (PPE) (see Section 8). Do not eat, drink, or smoke while using this product. Wash hands thoroughly after handling. Keep away from heat, sparks, open flames, or other ignition sources. Use only in well-ventilated areas.
Conditions for Safe Storage, Including Any Incompatibilities	Store in a cool, dry, and well-ventilated area. Keep containers tightly closed when not in use. Store away from incompatible materials, such as strong oxidizers or acids. Protect from direct sunlight, frost, and excessive heat. Avoid storage near combustible or flammable substances. Do not store in unlabeled or damaged containers.
Specific End Use(s)	This product is intended for use as a liquid organomineral fertilizer only. Any other use is not advised unless evaluated and approved by the supplier.

SECTION 8. EXPOSURE CONTROLS/ PERSONAL PROTECTION

8.1. CONTROL PARAMETERS

Occupational Exposure Limits	No exposure limits have been established for the mixture as a whole. For individual ingredients, consult national regulations if available.

8.2. EXPOSURE CONTROLS

Appropriate Engineering Controls	Ensure adequate general ventilation during handling and application. Local exhaust ventilation is not normally required for liquid formulations under standard use. Avoid formation of aerosols or mist during spraying or mixing operations.

8.3. PERSONAL PROTECTİVE EQUİPMENT (PPE)

Eye Protection	Safety goggles or face shield complying with EN 166.
Skin Protection	Protective gloves (e.g., nitrile rubber), long-sleeved work clothing.
Respiratory Protection	Not required under normal use. If aerosol or mist is generated in confined areas, use a mask with a P2/P3 particle filter.
Hygiene Measures	Wash hands after handling. Do not eat, drink, or smoke during use. Keep work clothes separate.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Brownish liquid
Odor	Mild organic odor
pH (20°C)	4.0–6.0
Density	~1.20 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 Potassium Nitrate (KNO_3) content

9.2 OTHER INFORMATION (NUTRIENT COMPOSITION)

Organic matter	10%
Organic carbon	4%
Free Aminoacids	1%
Total Nitrogen (N)	5%
- Ammonia Nitrogen (NH_4-N)	1%
- Nitrate Nitrogen (NO_3-N)	3%
- Organic Nitrogen	1%
Total Phosphorus pentaoxide (P_2O_5)	5%
- Water Soluble Phosphorus Pentaoxide (P_2O_5)	5%
Water Soluble Potassium Oxide (K_2O)	15%
Water Soluble Sulphur trioxide (SO_3)	5%
Water Soluble Magnesium Oxide (MgO)	2%
Water-Soluble Iron (Fe)	0,50%
Water-Soluble Copper (Cu)	0,05%
Water-Soluble Zinc (Zn)	0,25%
Water-Soluble Manganese (Mn)	0,20%
Water-Soluble Boron (B)	0,10%
Argillic Acid	0.01%
Maximum Chloride (Cl)	<1%

SECTION 10. STABILITY AND REACTIVITY

Reactivity	The product contains oxidizing agents (e.g., Potassium Nitrate) and may intensify fire in the presence of combustible materials.
Chemical Stability	Stable under normal handling and recommended storage conditions (see Section 7). No decomposition occurs if used and stored as intended.
Possibility of Hazardous Reactions	No hazardous polymerization is expected under normal conditions. May react with strong reducing agents, leading to exothermic reactions or release of gases.
Conditions to Avoid	Excessive heat, direct sunlight. Contact with flammable or combustible substances. Contamination by strong acids or bases.
Incompatible Materials	Strong reducing agents (e.g., metal powders, hydrides). Organic combustible materials (e.g., sawdust, paper). Strong acids and alkalis.

Hazardous Decomposition Products	Nitrogen oxides (NO_x) Potassium oxides (K_2O) Sulphur oxides (SO_x) Phosphorus oxides (P_2O_5 fumes under 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 according to CLP.
Skin Corrosion/Irritation	May cause mild to moderate irritation with prolonged or repeated contact. Contains phosphates and potassium nitrate which can irritate sensitive skin.
Serious Eye Damage/Irritation	Causes eye irritation (Category 2, H319). Contact may lead to redness, tearing, or temporary visual discomfort.
Respiratory or Skin Sensitisation	Not expected to be a sensitiser under normal handling conditions. No known sensitising components.
Germ Cell Mutagenicity	Not classified. No data available to suggest mutagenic effects.
Carcinogenicity	Not classified. No component listed as carcinogenic by IARC, NTP or OSHA.
Reproductive Toxicity	Not classified. No ingredients known to impair fertility or cause developmental toxicity.
STOT – Single Exposure	Not expected to cause organ toxicity after a single exposure.
STOT – Repeated Exposure	Not classified. Prolonged exposure unlikely under normal agricultural use.
Aspiration Hazard	Not applicable (product is aqueous and non-volatile).

SECTION 12. ECOLOGICAL INFORMATION

Toxicity	Monoammonium Phosphate (MAP): • LC_{50} (96h, fish) ≈ 155 mg/L • EC_{50} (72h, algae) ≈ 23 mg/L Potassium Nitrate (KNO_3): • LC_{50} (96h, fish) > 1378 mg/L Overall, the product is not expected to pose acute aquatic toxicity under recommended usage.
Persistence and Degradability	Organic matter fraction is readily biodegradable.

	Inorganic nutrient components (e.g., nitrates, phosphates) are environmentally mobile and may contribute to eutrophication in surface waters.
Bioaccumulative Potential	The product contains components with low potential for bioaccumulation (e.g., urea, amino acids, MAP, KNO_3). Trace metals (Fe, Cu, Zn, Mn, B) present in chelated or ionic form are not expected to bioaccumulate significantly under agronomic application rates.
Mobility in Soil	Product is fully water-soluble and may migrate with soil water. Caution should be taken to prevent runoff into surface waters, especially near aquatic ecosystems.
Results of PBT and vPvB Assessment	This product does not contain substances that are classified as Persistent, Bioaccumulative, and Toxic (PBT) or very Persistent and very Bioaccumulative (vPvB) according to current EU criteria.
Other Adverse Effects	None known under normal use. Avoid direct discharge into natural water bodies due to risk of nutrient loading (eutrophication).

SECTION 13. DISPOSAL CONSIDERATIONS

13.1. WASTE TREATMENT METHODS

Product Waste Disposal	Dispose of product in accordance with local, regional, and national regulations. Do not allow unused product to enter watercourses, drainage systems, or soil. If disposal via sewage is considered, consult with local authorities. 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 should be triple rinsed with water before disposal. Rinse water may be reused in the application tank. After thorough 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 containers.

- Avoid uncontrolled dumping.
- Product residues and packaging must be handled by licensed waste contractors when possible.

SECTION 14. TRANSPORT INFORMATION

Parameter	Details
UN Number	3082
Proper Shipping Name	Environmentally hazardous substance, liquid, n.o.s. (contains Potassium Nitrate, MAP)
Transport Hazard Class	9 – Miscellaneous Dangerous Substances and Articles
Packing Group	III – Low Danger
Label(s)	Class 9 (Miscellaneous); Environmentally Hazardous Substance symbol as required
Marine Pollutant (IMDG)	Yes (due to nitrate and phosphate content; harmful to aquatic life)
Environmentally Hazardous	Yes, per ADR/IMDG/IATA regulations
Transport in Bulk (MARPOL/IBC)	Not applicable – not intended for bulk transport via ship
Special Precautions	Avoid heat, flame, direct sunlight; keep away from incompatible substances
Remarks	Apply ADR/IMDG/IATA rules for liquid fertilizers containing nitrates. Label accordingly.

SECTION 15. REGULATORY INFORMATION

15.1. EU AND INTERNATIONAL REGULATIONS

CLP Regulation (EC) No 1272/2008	This product is classified and labelled in accordance with the CLP Regulation. Hazard and precautionary statements, as well as signal words, are applied appropriately based on component hazards.
REACH Regulation (EC) No 1907/2006	The ingredients in this mixture are either: • Pre-registered or fully registered under REACH, or • Exempt from registration due to their nature (e.g., naturally occurring substances like organic slurry, seaweed extract).
Transport Regulation	Subject to UN 3077 classification under ADR/IMDG/IATA (see Section 14).

15.2 LOCAL AND NATIONAL REGULATIONS

TR Türkiye	• Complies with "Organik ve Organomineral Gübreler Yönetmeliği" under the Turkish Ministry of Agriculture and Forestry.

	• Product must be registered and approved as a commercial fertilizer before market distribution. • Must follow Kimyasalların Envanteri ve Kontrolü Hakkında Yönetmelik for any hazardous components.
AZ Azerbaijan	• Complies with the fertilizer registration, labeling, and safety regulations of the Republic of Azerbaijan. • Subject to national control under Azərbaycan Respublikasının Gübrələrin Qeydiyyatı və Təhlükəsiz İstifadəsi Qaydaları (Rules on Registration and Safe Use of Fertilizers). • Importation and use must be aligned with State Phytosanitary Control Service regulations.

SECTION 16. OTHER INFORMATION

Prepared by	AGROBİGEN R&D Department
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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
- LC_{50}: 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.