AGROPOLYCHIM

Extended SAFETY DATA SHEET
In accordance with Regulation (EC) 1907/2006 (REACH), Annex II, and amended with Regulation (EC) 2020/878

LIQUID COMPLEX FERTILIZER FAST PK 16-16

Rev.2/ April 2022

1. IDENTIFICATION OF THE SUBSTANCE AND COMPANY

1.1 Product identifier

Trade name:	FAST PK 16-16
Other names:	Liquid complex fertilizer
Chemical name:	Not applicable- solution
INDEX number as listed in Annex VI of CLP:	Not applicable/Not listed in tables under Appendix VI / CLP.
ID number of the C&L inventory:	Not applicable/Not listed in tables under Appendix VI / CLP.
CAS number:	Not applicable- reaction mixture
EC No	Not applicable- reaction mixture
REACH registration No(s): Ammonium dihydrogen orthophosphate Diammonium hydrogen orthophosphate Monopotassium hydrogen orthophosphate Dipotassium hydrogen orthophosphate	 01-2119488166-29-0020 01-2119490974-22-0016 17-2120098652-47-0000 01-2119493919-15-0019

1.2 Relevant identified uses of the substance or mixture and uses advised against

Uses:	<u>Uses by workers in industrial conditions:</u> 1: Production of the substance, including loading and unloading, packaging, storage and laboratory agent. 2: Formulation and synthesis (including transfer from vessel to vessel, formulation of goods and mixtures). 3: Formulation of fertilizers, including mixing, packaging, dilution, loading and unloading and addition of micronutrients. 4: For the production of solid / liquid fertilizers <u>Uses by professionals:</u> 5: Formulation of fertilizers, including mixing, packaging, dilution, loading / unloading and addition of micronutrients and / or additives. 6: Formulation and synthesis of all kinds 7: Use as a dietary supplement - for professional workers <u>Consumer use:</u> 8: Consumer end use - dilution of liquid fertilizers - surface spreading in garden areas 9: Consumer end use - as a fertilizer in greenhouses (including for pH control of solutions of fertilizers in acids).
Uses advised against:	No information available.

1.3 Details of the supplier of the safety data sheet	
Manufacturer/Importer/Supplier:	AGROPOLYCHIM AD BULGARIA Industrial zone 9160, DEVNYA Tel: +359 / 519 97 419 URL website: www.agropolychim.bg
Person responsible for the Safety Data Sheet (with e-mail address)	Eng. Miroslava Tsvetkova AGROPOLYCHIM AD BULGARIA Industrial zone 9160, DEVNYA Tel.: +359 / 519 97 419, mob: +359 885 897 661 Email: m.tsvetkova@agropolychim.bg
1.4 Emergency telephone number	
Emergency phone number in the company: Emergency phone number in Bulgaria – Toxicology Clinique “Pirogov” Medical Institute: International emergency phone number	Tel: + 359 / 519 97 530 (24 hours / day) on the production site +359 2 9154 233; +359 2 9154 409 (24 hours / day) Toxicology Clinique, Pirogov National Institute, Sofia 112

2. HAZARDS IDENTIFICATION

2.1 Classification of the mixture ***Reaction mixture***		
Classification in accordance with Regulation 1272/2008 (CLP)		
Hazard statement(s):	Not classified	---
2.2 Label elements		
Labelling in accordance with Regulation 1272/2008 (CLP)		
Hazard pictogram(s):		NA
Signal word		NA
Hazard statement(s):	Not classified	---
Precautionary statement(s):	Not classified	---
2.3 Other hazards		
PBT/vPvB criteria:		According to Annex XIII of Regulation (EC) № 1907/2006, it was not evaluated for PBT substances and vPvB was of inorganic origin.
Endocrine disrupting properties:		No information available. No endocrine disrupting properties are known.
Nanoforms:		This product does not contain nanoforms or

	nanoform-containing substances.
Other hazards:	Not identified.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Mixture

Type: Solution, liquid mineral fertilizer, containing main nutrition elements Phosphorous and Potassium. Produced via reaction between Phosphoric acid and Ammonia aqua solution with the addition of potassium carbonate.

Chemical name	**CAS no.**	**EC no.**	**Classification acc. 1272/2008/EC**	**% Content**
Diammonium hydrogenorthophosphate	7783-28-0	231-987-8	Not classified	~2,5 %
Ammonium dihydrogen orthophosphate	7722-76-1	231 -764 -5	Not classified	~2,2 %
Monopotassium hydrogen orthophosphate (KH_2PO_4)	7778-77-0	231-931-4	Not classified	~5,0 %
Dipotassium hydrogen orthophosphate (K_2HP_4)	7758-11-4	231-834-5	Not classified	~27%

Occupational exposure limits are given in Section 8.

4. FIRST-AID MEASURES

4.1 Description of first aid measures

Eye contact:	Flush/irrigate eyes with copious amounts of water for at least 15 minutes. Obtain medical attention if eye irritation persists.
Skin contact:	Wash the affected area thoroughly with soap and water. If necessary, remove clothing and wash the affected area thoroughly. If irritation persists, seek medical attention.
Ingestion:	If swallowed in large quantities, seek medical advice immediately. If possible, do not leave the victim unattended.
Inhalation:	Avoid inhalation of vapours. Obtain medical attention if ill effects occur.

4.2 Most important symptoms and effects

Acute effects	Not known
Delayed effects	Not known

4.3 Indication of any immediate medical attention and special treatment needed

Note to physician: Inhalation of gases resulting from fire or decomposition containing ammonia may cause respiratory irritation. Delayed lung effects are also possible.

5. FIRE-FIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media:	Use suitable extinguishing media. Avoid using too much water to prevent it from leaking into the sewer. Small fires: Water jet, foam, dry chemical or CO2. Large fires: Water jet, fog or foam.
Unsuitable extinguishing media:	Not known

5.2 Special hazards arising from the substance or mixture

The mixture is a solution and does not pose a fire hazard! The release of corrosive and flammable phosphorus oxides as a result of thermal decomposition is possible.
Heating above the decomposition point results in the formation of oxides of Nitrogen, Ammonia (NH3) and Phosphorus oxides.

5.3 Advice for firefighters

Use a self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Avoid walking on spilled product and exposure to fumes. Avoid contact with eyes. Wear suitable protective clothing, including respiratory protection. Keep away from heat.

6.2 Environmental precautions

First, identify the gap and break it. Ensure spill containment by fencing. Do not allow material to enter ground water or sanitary sewage system or drains. Do not dispose of directly in a water source. In case of accidental spillage or flushing into drains or watercourses, contact local authorities.

6.3 Methods and material for containment and cleaning up

- small spillages

Vacuum or sweep up spillage and collect in suitable labelled containers for recovery or disposal from subcontractor authorized for this type of activities. Do not collect spilled material in sawdust or other combustible material. Collected material could be used again on a purpose. After cleaning, flush away traces with water.

- big spillages

Vacuum or sweep up spillage and collect in suitable labelled containers for recovery or disposal from subcontractor authorized for this type of activities. Do not collect spilled material in sawdust or other combustible material. Collected material could be used again on a purpose. After cleaning, flush away traces with water.
If vessels are damaged – they should be cooled down and emptied.

6.4 Reference to other sections

See section 8 for personal protective equipment and section 13 for waste disposal.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Technical measures/ Precautions:	Avoid excessive dust generation. Avoid unnecessary exposure to the atmosphere to prevent the absorption of moisture. Avoid contamination with combustible (eg diesel) and lubricants) and / or other incompatible materials. When carrying out loading

	and unloading activities for a longer period of time, use protective equipment such as gloves and respiratory protection. Carefully clean the equipment and facilities before handing them in for repair and / or inspection.
General occupation hygiene:	Do not eat, drink or smoke in work areas. Wash hands after use. Remove contaminated clothing and protective equipment when leaving contaminated areas.
7.2 Conditions for safe storage, including any incompatibilities	
Technical measures/ Storage conditions: Packaging materials:	Store in accordance with national and local regulations. Keep away from heat and flame. Keep away from combustible materials and substances listed in section 10. Make sure the product is not stored near hay, grain, straw, diesel fuel, etc. When stored loose, take the necessary measures to avoid mixing it with other fertilizers. Ensure high standards of storage in warehouses. Do not allow smoking and the use of open lights in storage areas. It is advisable to limit the size of the piles and to keep at least 1 m distance around the piles and packaged products. Any building used for storage must be dry and well ventilated. Plastic synthetic materials, steel and aluminum are suitable. Avoid use of copper.
RECOMMENDATIONS FOR THE USERS	Minimum time for a person to stay in the warehouses!
Incompatible products:	Bases, strong acids, copper and its alloys.
8. EXPOSURE CONTROLS / PERSONAL PROTECTION	
8.1 Control parameters	
Regulated occupational exposure limit values:	Not known
Recommended exposure limits for the general public and consumers (as a result of the chemical safety assessment).	There are no identified (measured) exposure limits for the reaction mixture. Based on the measured exposure limits and DNELs obtained on the population and consumers obtained from chemical safety assessments of the individual substances involved, no risk of acute toxicity leading to product classification and labeling has been identified.
8.2 Exposure controls	
Appropriate engineering controls:	There are no special requirements regarding the type of ventilation. Effective general ventilation should be sufficient to control worker exposure. In addition to good manufacturing practice, there are places to wash eyes and showers in buildings where these materials are stored or used.
Environmental exposure controls:	Discharge of wash water should be carried out in accordance with local and national regulations.

Individual protection measures, such as personal protective equipment	
Respiratory protection:	Use appropriate respiratory protective equipment that meets the requirements of approved standards, if the risk assessment requires it.
Hands protection:	Wear suitable gloves (e.g. plastic, rubber or leather) when handling the product over long periods
Eye protection:	Safety glasses with side shields (EN 166).
Dermal protection:	Protective work clothes
Hygiene measures:	When handling the product do not eat, drink or smoke. Wash hands after handling and before eating, smoking and using the lavatory and at the end of the working period.
RECOMMENDATIONS FOR THE USERS	Machine fertilization with closed doors and windows of the machine cabin is recommended.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties	
Appearance:	Liquid/ yellowish, transperant
Odour:	Odourless
Melting / Freezing temperature:	Not applicable
Boiling temperature:	Not applicable
Flash point:	Not applicable.
Flammability:	Not applicable.
Explosive properties:	Non explosive
Oxidizing properties:	No known oxidizing properties
Vapour pressure at 20°C	Not applicable
pH	7,0 ± 0,01
Density at 20°C:	1,370 ± 0,01
Solubility in water:	100% Completely soluble in water
Partition coefficient n-octanol/water:	Not relevant as the substance is inorganic, considered to be low (based on high water solubility)
Viscosity:	Not determined
Specific conductivity:	No data
Auto flammability / self-ignition temperature:	Does not ignite spontaneously.
Solvent content:	~ 63,8% Water
Surface tension:	Not applicable (based on structure).

9.2 Other information

No available data.

10. STABILITY AND REACTIVITY

10.1 Reactivity:

Stable under recommended storage and handling conditions (see section 7 - Handling and storage). Stable at normal temperature and pressure. No specific data are available on the reactivity of this product and its ingredients.

10.2 Chemical stability

The product is stable under normal conditions of storage, handling and use (see section 7)

10.3 Possibility of hazardous reactions

Under normal conditions, dangerous reactions are not possible

10.4 Conditions to avoid

Avoid storage at extreme temperatures. Keep away from incompatible materials.

10.5 Incompatible materials

Bases, strong acids, copper and its alloys.

10.6 Hazardous decomposition products

Ammonia and oxides of nitrogen and phosphorus are released when reacting with strong bases or when heated to high temperatures (see sections 2 and 9).

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects - about two thirds of the ingested phosphates are absorbed from the gastrointestinal tract in adults. Absorbed phosphates are almost completely excreted in the urine.

ACUTE TOXICITY	
Acute oral toxicity:	Based on data from the substances involved in the reaction mixture, the product is considered non-toxic or slightly toxic
Diammonium hydrogen orthophosphate	LD50 rats:> 2000 mg / kg bw (OECD Guideline 425)
Ammonium dihydrogen orthophosphate	LD50 rats:> 2000 mg / kg bw (OECD Guideline 425)
Dipotassium hydrogen orthophosphate	LD50 rats:> 2000 mg / kg bw (OECD Guideline 425)
Acute dermal toxicity:	Based on data from the substances involved in the reaction mixture, the product is considered non-toxic or slightly toxic
Diammonium hydrogen orthophosphate	LD50 rats:> 5000 mg / kg bw (OECD Guideline 402)
Ammonium dihydrogen orthophosphate	LD50 rats:> 5000 mg / kg bw (OECD Guideline 402)
Dipotassium hydrogen orthophosphate	LD50 rats:> 2000 mg / kg bw (OECD Guideline 402)
Acute inhalation toxicity:	Based on data from the substances involved in the reaction mixture, the product is considered non-toxic or slightly toxic
Diammonium hydrogen orthophosphate	LC50 rats:> 5000 mg / m3 (OECD 403, EC B.2 and EPA guidelines)
Ammonium dihydrogen orthophosphate	LC50 rats:> 5000 mg / m3 (OECD 403, EC B.2 and EPA guidelines)
Dipotassium hydrogen orthophosphate	LC50 rats (4 h) 830 mg / m³ air (OECD 403 and EPA OPP 81-3 of the manual)

CORROSION / SKIN IRRITATION	
Skin irritation:	Based on data from the substances involved in the product, there are no indications of irritant effects.
Serious eye damage / Eye irritation:	Based on data from the substances involved in the product, there are no indications of irritant effects.
Respiratory irritation:	Based on data from the substances involved in the product, there are no indications of irritant effects.
RESPIRATORY AND SKIN SENSITIZATION	
Skin sensitization:	Based on studies and scientific data on the substances involved in the reaction mixture, there are no indications of adverse effects. No negative effects were observed. Not considered sensitizing.
Respiratory sensitization:	No available data
REPRODUCTIVE TOXICITY	
Diammonium hydrogen orthophosphate Ammonium dihydrogen orthophosphate Effect on fertility:	NOAEL in rats (P and F) ≥ 1,500 mg / kg bw / day, reproductive toxicity; Human - oral exposure: no adverse effects were observed; dermal and inhalation exposure - no information available.
Effect on development:	NOAEL in rats (P and F) ≥ 1,500 mg / kg bw / day, reproductive toxicity; Human - oral exposure: no adverse effects were observed; dermal and inhalation exposure - no information available.
Dipotassium hydrogen orthophosphate Effect on fertility and development:	NOAEL in rats (P and F) ≥ 1000 mg / kg bw / day, reproductive toxicity; Human - oral exposure: no adverse effects were observed; dermal and inhalation exposure - no information available.
TOXICITY - REPEATED DOSE	
System effects: Diammonium hydrogen orthophosphate Ammonium dihydrogen orthophosphate Dipotassium hydrogen orthophosphate	Dermal exposure: NOAEL: 255.6 mg / kg bw / day (rats) Inhalation exposure: NOAEC: 451.2 mg / kg bw / day (rats) Oral exposure: NOAEL 322.88 mg / kg g / day (dog)
Local effects:	Dermal exposure: no studies available. Inhalation exposure: no studies available. Dermal exposure: no studies available. Inhalation exposure: no studies available.
OTHER ADVERSE EFFECTS	
Mutagenicity:	Based on studies and scientific data on the substances involved in the reaction mixture, there are no indications of adverse

Diammonium hydrogen orthophosphate Ammonium dihydrogen orthophosphate	effects. in vitro: Negative (OECD Guidelines 473 and 471), in vivo: No genotoxicity tests are required, as all in vitro ones show the absence of genotoxic properties.
Aspiration hazard	No available data
Carcinogenicity:	No information available
12. ECOLOGICAL INFORMATION	
12.1 Toxicity	
Fish (acute): Phosphates:	LC50:**>** 100 mg / l (OECD Guideline 203)
Fish (long-term):	No data available.
Daphnia carinata (acute): Phosphates:	Based on reliable studies with similar phosphate substances, the 48h-EC50 is> 100 mg / l.
Daphnia carinata (long-term):	No data
Algae: Phosphates No Observed NOEC concentration level:	EC50/LC50 fresh water: >100 mg/L EC10/LC10 or NOEC fresh water: 100 mg/L
12.2 Persistence and degradability	
Biodegradation:	Easily degradable by microorganisms.
Photolysis:	Does not photodegrade.
12.3 Bioaccumulative potential	
Octanol-water partition coefficient (K_{ow}):	Not relevant as the substance is inorganic, but considered to be low (based on high water solubility)
Bioconcentration factor (BCF):	Not applicable
12.4 Mobility in soil	
Adsorption coefficient:	Low adsorption potential (based on the properties of the substance).
12.5 Results of PBT and vPvB assessment As Complex fertilizer FAST PK 16-16 is an inorganic reaction mixture, no assessment is required for PBT (resistance, bioaccumulation, and toxicity) and vPvB (high resistance and bioaccumulation) according to Annex XIII.	
12.6. Endocrine disrupting properties There is no information, that shows that FAST PK 16-16 has endocrine disrupting properties.	
13. DISPOSAL CONSIDERATIONS	

Waste from residues:	Depending on degree and nature of contamination dispose of by use as fertilizer on farm, as raw material for liquid fertilizer, or to an authorised waste facility. Do not empty into drains; dispose of this material and its container in a safe way and in accordance with all applicable local and national regulations. See chapters 06 03 and 06 10 of the list of wastes (Commission Decision 2000/532/EC)
Packing / bags:	Empty the bag by shaking to remove as much as possible of its contents. If approved by local authorities, empty bags may be disposed of as non-hazardous material or returned for recycling.
14. TRANSPORT INFORMATION	
UN Number:	ADR/RID: Non classified ADN/ADNR: Non classified IMDG: Non classified ICAO/IATA: Non classified
Proper shipping name:	Liquid Complex Fertilizer FAST PK 16-16
Transport hazard classes:	Not classified
Rev06 ☐ Maritime transport of goods in bulk (MARPOL 73/78; IMO)	Not classified
Packaging group:	Not applicable
Special precautions:	Not identified
15. REGULATORY INFORMATION	
15.1 Safety, health and environmental regulation/legislation specific for the substance or mixture:	Regulation EC 1907/2006 (REACH) European Regulation on fertilizing products
15.2 Chemical safety assessment:	The substance is not classified as dangerous according to the criteria of Regulation 1272/2008/EU on Classification, Labelling and Packaging of Substances and Mixtures (CLP Regulation) and therefore according to Clause 14 (4)) of the REACH Regulation does not require exposure and chemical safety assessment.
16. OTHER INFORMATION	
The information provided in this safety data sheet is accurate, using our best knowledge, beliefs and information as of the date of its publication. This information is provided only as a guide for the safe handling, use, processing, storage, transportation, disposal and discharge, and cannot be considered as a guarantee or quality specification. The information relates only to the specified specific material and may not be valid for such material used in combination with any other materials or derivatives, unless specified in the text.	
Classification according to Regulation 1272/2008 as described in Annex VI: *The substance is not classified as dangerous according to Regulation on Classification, Labeling and*	

LIQUID COMPLEX FERTILIZER FAST PK 16-16

Rev.2/ April 2022

Packaging of Substances and Mixtures CLP (1272/2008 / EU).	
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