ULINK AGRITECH PRIVATE LIMITED
MATERIAL SAFETY DATA SHEET : NPK 0:60:20

1:IDENTIFICATION

Chemical Name	Potassium pentahydrogen bis(phosphate)		
Synonyms	Hemi Potassium Phosphate	**Trade Name**	**NPK 0:60:20**
Uses	Fertilizer	**Molecular Formula**	$KH_5(PO_4)_2$
Manufacturer/ Supplier	Ulink AgriTech Pvt. Ltd.		
	Office Nos. 001 And 002, Ground Floor Wing "A" And Nos. 003 And 004 Ground Floor Wing "B", Nyati Tech Park, Wadgaon Sheri, Pune - 411014, Maharashtra		
Emergency Contact	9503095030	**E-mail**	info@agrostar.in

2:COMPOSITION/INFORMATION OF INGREDIENTS

Chemical Name	CAS #
Potassium pentahydrogen bis(phosphate)	14887-42-4

3: HAZARD IDENTIFICATION

The substance is classified and labelled according to the Globally Harmonized System (GHS)

Eye Irritant, Category 2B (H 320)

Human Health Hazard:

Eye: Causes serious eye irritation

Skin: Solid product not expected to cause skin irritation. Water solutions of this product may cause irritation

Inhalation: Solid product not expected to cause respiratory tract irritation. Water solutions of this product may cause irritation

Environment Hazard: Not Harmful

4:FIRST AID MEASURES

General: Have the product container, label or safety data sheet while seeking medical attention, a poison control center or physician, or going for treatment.

Inhalation: Move person to fresh air and keep warm and at rest in a position comfortable for breathing. Immediately seek medical attention if symptoms are severe or persist.

Ingestion: Rinse mouth with water thoroughly and give water to drink. Do not induce vomiting unless told to do so by doctor. Never give anything by mouth to an unconscious person. Seek medical attention immediately and show this container or label.

Skin Contact: In case of contact with product, wash immediately skin area with plenty of water and soap. Remove and isolate contaminated clothing and shoes. Seek medical attention.

Eye Contact: Rinse immediately with plenty of water for several minutes. After 5 minutes remove contact lenses if present and continue rinsing with plenty of water. Continue to rinse with eyelid wide open for at least 15-20 minutes. Seek medical attention if irritation develops.

Note to physician: No specific Antidote. Treat symptomatically.

5:FIRE FIGHTING MEASURES

Extinguishing Media: Water fog, alcohol-resistant foam, dry chemical powder or carbon dioxide; Use fire fighting measures that suit the environment

Unsuitable Extinguishing Media: Water jet

Specific Hazard: The product is not flammable. No special measures required against explosion and fire. In case of fire, Phosphorus oxides (e.g. P2O5) can be released.

Special Procedures: Do not discharge extinguishing water into the drain or water bodies. If risk of water pollution occurs, notify appropriate authorities. Move containers away from area if it can be done without risk. If possible without risk, remove containers from fire zone, cool with water spray. Approach fire from upwind to avoid hazardous vapours and toxic decomposition products. streams. Dike area to prevent water runoff.

Protection of Fire Fighters: Do not breathe a fumes. Approach fire from up wind. Wear a self contained breathing apparatus and complete protective clothes.

6:ACCIDENTAL RELEASE MEASURES

Personal Precautions: Ensure adequate ventilation. Use personal protective equipment including suitable protective clothing, gloves and eye or face protection.

Environmental Precaution: Keep spills and cleaning runoff out of municipal sewers and open bodies of water.

Methods for Cleaning-up: Pick up the material mechanically and place in a container for proper disposal in accordance with local, state and federal regulations.Use neutralizing agent.

7:HANDLING & STORAGE

Handling: Ensure good ventilation/exhaustion at the workplace. Prevent formation of dust. Do not smoke, drink, or eat during handling. Wash hands and other exposed areas with soap and water before and after handling the product. Good personal hygiene procedures must be practiced.

Storage: Store in dry, cool and well-ventilated area at ambient temperatures. Protect from humidity and water as product is hygroscopic. Keep in original container and tightly closed when not in use. Do not store together with alkalis (caustic solutions). Keep out of reach of children. Do not contaminate water, food or feed by storage or disposal. Use normal safety procedure and good personal hygiene.

8:EXPOSURE CONTROL/PERSONAL PROTECTION

Engineering Measures: Ensure adequate ventilation to maintain TLV-TWA below 3 mg/m³, respirable particles, and 10 mg/m³, inhalable particles. Handle in accordance with good industrial hygiene and safety practice.

General Protection: Avoid contact with eyes and skin. After use and before eating, drinking and smoking, wash hands, arms and face thoroughly with soap and water. After each day's use, wash gloves and contaminated clothing.

Personal Protection: Follow all precautions and instructions on the label. In all other cases the following recommendations would apply.

Respiratory Protection: Always use NIOSH/MSHA approved respiratory protection equipment .

Skin Protection: Wear suitable protective working clothing including long sleeved shirt, long pants, gloves, shoes and socks to avoid skin contact. Any clothing or other absorbent material which has been drenched or heavily contaminated must be discarded.

Hand Protection: Chemical-resistant gloves made of any waterproof material such as barrier laminate, butyl rubber, nitrile rubber, neoprene rubber, natural rubber, polyvinyl chloride (PVC) or Viton.

Eye Protection: In dusty condition, use safety glasses with side shields or goggles for eyes protection should be used. Safety showers and eyewash should be easily available.

Others: Wash clothing before reusing.

9:PHYSICAL/CHEMICAL PROPERTIES

Appearance: Crystalline powder	**Colour:** White	**pH:** 2.2 (10 g/l) at 20°C	**Specific Gravity (Water = 1):** 1.25 g/ml
Solubility in Water: Soluble	**Odour** : Slight odour	**Physical State:** Solid	**Decomposition Temperature [°C]:** >200
Boiling Point [°C]: None, substance decompose before boiling.		**Melting Point [°C]:** 127-135	**Bulk Density at 20°C [g/cm³]**: 1.4 - 2.0

10:STABILITY & REACTIVITY

Stability: Stable under normal circumstances. **Material to Avoid:** Water, metal, Alkalis

Hazardous Decomp. Products: May release oxides of phosphorus in a high temperature or fire situation.

Conditions to Avoid: Humidity as product is hygroscopic. Overheating to avoid thermal decomposition

Reactivity: React with alkalis. Aqueous solution of this product may be corrosive to metals.

Hazardous Reactions: Reacts with metals in the presence of moisture to form hydrogen.

11: TOXICOLOGICAL INFORMATION

Rat oral LD50 [mg/kg] : > 2000	Rat inhalation LC50 [mg/l/4h] : No data available.	Skin irritation (rabbit): Non Irritant
Dermal (rat) LD50 [mg/kg]: >2000	Skin Sensitization (Guinea Pig): Non-Sensitizer	Eye irritation (rabbit): Mild irritant, category 2B

12: ECOLOGICAL INFORMATION

No reliable study with this product is present. This study is conducted on an analogous substance

66922-99-4 Tripotassium trihydrogen diphosphate dihydrate:

Rainbow trout LC50 (96 hrs) [mg/L]: > 100	Daphnids magna EC50(48h)[mg/l]: >100	Green algaeErC50(72h)[mg/L]: > 100

Bioaccumulative Potential: Does not accumulate in organisms

Persistence and Degradability: The substance is inorganic; therefore no biodegradation tests are applicable.

Mobility in Soil: Highly water soluble and dissociating. Low potential for adsorption.

13: DISPOSAL CONSIDERATION

Waste-disposal Procedures: For uncontaminated product or small spills, the recommendation is to simply sweep up or collect and reuse it as fertilizer. However, it is critical to prevent large quantities from entering waterways, as significant spills can harm vegetation. If the product is contaminated with other materials, it should be collected in suitable containers. To treat the contaminated concentrate, first dilute it with water, then neutralize it using a suitable alkali material, such as sodium hydroxide solution or lime. This neutralization process forms relatively environment-friendly neutral salts. Final disposal for all product waste must be carried out in accordance with Local Authority requirements.

Contaminated Packaging: Packaging can be reused or recycled after it has been properly cleaned. The recommended cleansing agent is typically water, with additional cleansing agents used if necessary. If packaging cannot be cleansed, it must be disposed of in the same manner as the product itself. In all cases, the disposal of packaging must comply with official regulations.

14: TRANSPORT INFORMATION

UN No. None **Proper Shipping Name**: None

Land Transport (ADR/RID): None **Sea Transport (IMO/IMDG):** None **Air Transport (IATA/ICAO):** None

15: REGULATORY INFORMATION

GHS Label Elements: The substance is classified and labelled according to the Globally Harmonized System (GHS).

Signal Word: Warning

Hazard Statements: H320 Causes eye irritation.

16: OTHER INFORMATION

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