

SECTION 1: Identification

1.1. Identification

Product form : Mixture
 Product name : PHT P-K Express
 Product code : M77700

1.2. Recommended use and restrictions on use

Use of the substance/mixture : fertilizer

1.3. Supplier

JR Simplot Company
 P.O. Box 70013
 Boise, ID 83707
 T 1-208-336-2110

1.4. Emergency telephone number

Emergency number : CHEMTREC 1-800-424-9300

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS-US classification

Skin corrosion/irritation, Category 2 H315 Causes skin irritation.
 Serious eye damage/eye irritation, Category 2B H320 Causes eye irritation

Full text of H statements : see section 16

2.2. GHS Label elements, including precautionary statements

GHS US labelling

Hazard pictograms (GHS US) :



Signal word (GHS US) : Warning

Hazard statements (GHS US) : H315 - Causes skin irritation.
 H320 - Causes eye irritation

Precautionary statements (GHS US) : P264 - Wash hands, forearms and face thoroughly after handling.
 P280 - Wear protective gloves/protective clothing/eye protection/face protection.
 P302+P352 - If on skin: Wash with plenty of water/...
 P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P321 - Specific treatment (see supplemental first aid instruction on this label)
 P332+P313 - If skin irritation occurs: Get medical attention
 P337+P313 - If eye irritation persists: Get medical attention
 P362 - Take off contaminated clothing.

2.3. Other hazards which do not result in classification

No additional information available

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	GHS-US classification
Monopotassium phosphate	(CAS-No.) 7778-77-0		Not classified

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Name	Product identifier	%	GHS-US classification
urea	(CAS-No.) 57-13-6		Skin Irrit. 2, H315 Eye Irrit. 2B, H320 STOT SE 3, H335
potassium sulfate	(CAS-No.) 7778-80-5		Not classified
Kelp	(CAS-No.) 84775-78-0		Not classified
magnesium sulfate	(CAS-No.) 7487-88-9		Not classified
ammonium molybdate(VI)	(CAS-No.) 13106-76-8		Not classified
EDTA Manganese Sodium	(CAS-No.) 15375-84-5		Eye Irrit. 2B, H320
Copper EDTA	(CAS-No.) 14025-15-1		Not classified
edta iron(iii) sodium salt	(CAS-No.) 15708-41-5		Skin Irrit. 2, H315 Eye Irrit. 2B, H320 STOT SE 3, H335
Zinc EDTA	(CAS-No.) 14025-21-9		Not classified
Sodium Borate	(CAS-No.) 12008-41-2		Acute Tox. 4 (Oral), H302

Full text of hazard classes and H-statements : see section 16

SECTION 4: First-aid measures

4.1. Description of first aid measures

- First-aid measures general : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).
- First-aid measures after inhalation : Allow affected person to breathe fresh air. Allow the victim to rest.
- First-aid measures after skin contact : Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse.
- First-aid measures after eye contact : Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persists.
- First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.

4.2. Most important symptoms and effects (acute and delayed)

- Potential adverse human health effects and symptoms : Based on available data, the classification criteria are not met.
- Symptoms/effects : Not expected to present a significant hazard under anticipated conditions of normal use.

4.3. Immediate medical attention and special treatment, if necessary

No additional information available

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

- Suitable extinguishing media : Foam. Dry powder. Carbon dioxide. Water spray. Sand.
- Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Specific hazards arising from the chemical

5.3. Special protective equipment and precautions for fire-fighters

- Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire fighting water from entering the environment.
- Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

- Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

- Protective equipment : Equip cleanup crew with proper protection.
- Emergency procedures : Ventilate area.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

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6.3. Methods and material for containment and cleaning up

Methods for cleaning up : On land, sweep or shovel into suitable containers. Minimise generation of dust. Store away from other materials.

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapour.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep only in the original container in a cool, well ventilated place away from : Keep container closed when not in use.
Incompatible products : Strong bases. Strong acids.
Incompatible materials : Sources of ignition. Direct sunlight.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

PHT P-K Express	
No additional information available	
Monopotassium phosphate (7778-77-0)	
No additional information available	
urea (57-13-6)	
No additional information available	
potassium sulfate (7778-80-5)	
No additional information available	
magnesium sulfate (7487-88-9)	
No additional information available	
EDTA Manganese Sodium (15375-84-5)	
No additional information available	
ammonium molybdate(VI) (13106-76-8)	
USA - ACGIH - Occupational Exposure Limits	
ACGIH TWA (mg/m ³)	3 mg/m ³
Zinc EDTA (14025-21-9)	
No additional information available	
Copper EDTA (14025-15-1)	
No additional information available	
edta iron(iii) sodium salt (15708-41-5)	
USA - ACGIH - Occupational Exposure Limits	
ACGIH TWA (mg/m ³)	1 mg/m ³
Kelp (84775-78-0)	
No additional information available	
Sodium Borate (12008-41-2)	
No additional information available	

8.2. Appropriate engineering controls

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8.3. Individual protection measures/Personal protective equipment

Personal protective equipment:

Avoid all unnecessary exposure.

Hand protection:

Wear protective gloves.

Eye protection:

Chemical goggles or safety glasses

Respiratory protection:

Wear appropriate mask

Other information:

Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Solid
Appearance	: Solid blue crystalline granules.
Colour	: Blue
Odour	: Slight to moderate
Odour threshold	: No data available
pH	: 4 – 7
Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available
Flash point	: Non-flammable
Relative evaporation rate (butylacetate=1)	: No data available
Flammability (solid, gas)	: Non flammable.
Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: No data available
Solubility	: Soluble.
Partition coefficient n-octanol/water (Log Pow)	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive limits	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Stable.

10.2. Chemical stability

Stable. Not established.

10.3. Possibility of hazardous reactions

Not established.

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10.4. Conditions to avoid

Extremely high temperatures. Wet/humid conditions. Direct sunlight. Extremely high or low temperatures.

10.5. Incompatible materials

Oxidizing agent. reducing agents. sodium hypochlorite. Alkalis. Strong acids. Strong bases.

10.6. Hazardous decomposition products

Extremely high temperatures. The product may reach melting point and decompose to release NH₃, SO_x, PO_x, or CN. fume. Carbon monoxide. Carbon dioxide.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral) : Not classified
Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Not classified

Monopotassium phosphate (7778-77-0)

LD50 oral rat	7100 mg/kg (Rat)
LD50 dermal rabbit	> 4640 mg/kg (Rabbit)

urea (57-13-6)

LD50 oral rat	8471 mg/kg (Rat; OECD 401: Acute Oral Toxicity; Literature study; 14300 mg/kg bodyweight; Rat; Experimental value)
LD50 dermal rat	> 3200 mg/kg (Rat; Literature study)
LD50 dermal rabbit	> 21000 mg/kg (Rabbit; Literature study)

potassium sulfate (7778-80-5)

LD50 oral rat	6600 mg/kg (Rat)
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magnesium sulfate (7487-88-9)

LD50 oral rat	> 4000 mg/kg (Rat)
LD50 dermal rat	> 2000 mg/kg (Rat)

ammonium molybdate(VI) (13106-76-8)

LD50 oral rat	3883 mg/kg (Rat)
LD50 dermal rabbit	> 2000 mg/kg (Rabbit)

edta iron(iii) sodium salt (15708-41-5)

LD50 oral rat	5000 mg/kg (Rat)
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Sodium Borate (12008-41-2)

LD50 oral rat	2 g/kg
LD50 dermal rabbit	> 2000 mg/kg

Skin corrosion/irritation : Causes skin irritation.
pH: 4 – 7

Serious eye damage/irritation : Causes eye irritation.
pH: 4 – 7

Respiratory or skin sensitisation : Not classified

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

Reproductive toxicity : Not classified

STOT-single exposure : Not classified

urea (57-13-6)

STOT-single exposure	May cause respiratory irritation.
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edta iron(iii) sodium salt (15708-41-5)	
STOT-single exposure	May cause respiratory irritation.

STOT-repeated exposure : Not classified

Aspiration hazard : Not classified
 Viscosity, kinematic : No data available

Potential adverse human health effects and symptoms : Based on available data, the classification criteria are not met.

Symptoms/effects : Not expected to present a significant hazard under anticipated conditions of normal use.

SECTION 12: Ecological information

12.1. Toxicity

Monopotassium phosphate (7778-77-0)	
LC50 fish 1	> 900 mg/l (48 h; Leuciscus idus)
EC50 other aquatic organisms 1	2 ppm (672 h; Potamogeton sp.; O2 evolution)
Threshold limit other aquatic organisms 1	1 ppm (672 h; Potamogeton sp.; O2 evolution)
Threshold limit algae 1	1 ppm (672 h; Elodea sp.; O2 evolution)
Threshold limit algae 2	> 5 ppm (672 h; Elodea sp.; O2 evolution)

urea (57-13-6)	
LC50 fish 1	> 6810 mg/l (96 h; Leuciscus idus; Nominal concentration)
EC50 Daphnia 1	> 10000 mg/l (48 h; Daphnia magna; Nominal concentration)
LC50 fish 2	17500 mg/l (96 h; Poecilia reticulata)
EC50 Daphnia 2	> 10000 mg/l (24 h; Daphnia magna)
TLM fish 1	17500 ppm (96 h; Poecilia reticulata)
Threshold limit other aquatic organisms 1	120000 mg/l (16 h; Bacteria; Toxicity test)
Threshold limit other aquatic organisms 2	> 10000 mg/l (Pseudomonas putida)
Threshold limit algae 1	> 10000 mg/l (168 h; Scenedesmus quadricauda; Growth rate)
Threshold limit algae 2	47 mg/l (192 h; Microcystis aeruginosa; Growth rate)

potassium sulfate (7778-80-5)	
LC50 fish 1	1692.4 mg/l (96 h; Alburnus alburnus)
LC50 other aquatic organisms 1	> 1000 mg/l (96 h)
EC50 Daphnia 1	890 mg/l (48 h; Daphnia magna; Static system)
LC50 fish 2	653 – 796 mg/l (96 h; Lepomis macrochirus)
EC50 Daphnia 2	1180 mg/l (96 h; Crustacea)
TLM fish 1	3550 ppm (96 h; Lepomis sp.)
Threshold limit other aquatic organisms 1	> 1000 mg/l (96 h)
Threshold limit algae 1	2900 mg/l (72 h; Scenedesmus subspicatus)

magnesium sulfate (7487-88-9)	
LC50 fish 1	14000 mg/l (48 h; Leuciscus idus)
EC50 Daphnia 1	1700 mg/l (24 h; Daphnia magna)
LC50 fish 2	15500 mg/l (96 h; Gambusia affinis)
Threshold limit other aquatic organisms 1	27.4 g/l (0.5 h; Photobacterium phosphoreum)
Threshold limit algae 2	220 mg/l (72 h; Scenedesmus subspicatus; Biomass)

edta iron(iii) sodium salt (15708-41-5)	
LC50 fish 1	2592 mg/l (96 h; Pisces)

12.2. Persistence and degradability

PHT P-K Express	
Persistence and degradability	Not established.

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Monopotassium phosphate (7778-77-0)	
Persistence and degradability	Biodegradability: not applicable.
Biochemical oxygen demand (BOD)	Not applicable
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
BOD (% of ThOD)	Not applicable
urea (57-13-6)	
Persistence and degradability	Inherently biodegradable. Hydrolysis in water. Not established.
ThOD	0.27 g O ₂ /g substance
potassium sulfate (7778-80-5)	
Persistence and degradability	Biodegradability: not applicable. Not established.
Biochemical oxygen demand (BOD)	Not applicable
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
BOD (% of ThOD)	Not applicable
magnesium sulfate (7487-88-9)	
Persistence and degradability	Biodegradability: not applicable. Not established.
Biochemical oxygen demand (BOD)	Not applicable
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
BOD (% of ThOD)	Not applicable
EDTA Manganese Sodium (15375-84-5)	
Persistence and degradability	Not established.
ammonium molybdate(VI) (13106-76-8)	
Persistence and degradability	Biodegradability in water: no data available. Not established.
Zinc EDTA (14025-21-9)	
Persistence and degradability	Non degradable in the soil. Adsorbs into the soil. Not established.
Copper EDTA (14025-15-1)	
Persistence and degradability	Not established.
edta iron(iii) sodium salt (15708-41-5)	
Persistence and degradability	Biodegradable in water. Not established.
Kelp (84775-78-0)	
Persistence and degradability	Not established.
Sodium Borate (12008-41-2)	
Persistence and degradability	Not established.

12.3. Bioaccumulative potential

PHT P-K Express	
Bioaccumulative potential	Not established.
Monopotassium phosphate (7778-77-0)	
Bioaccumulative potential	No bioaccumulation data available.
urea (57-13-6)	
BCF fish 1	1 (72 h; Brachydanio rerio; Fresh water)
BCF other aquatic organisms 1	11700 (Chlorella sp.)
Partition coefficient n-octanol/water (Log Pow)	< -1.73 (Experimental value; EU Method A.8: Partition Coefficient)
Bioaccumulative potential	Bioaccumulation: not applicable. Not established.
potassium sulfate (7778-80-5)	
Bioaccumulative potential	Not bioaccumulative. Not established.

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magnesium sulfate (7487-88-9)	
Bioaccumulative potential	No bioaccumulation data available. Not established.
EDTA Manganese Sodium (15375-84-5)	
Bioaccumulative potential	Not established.
ammonium molybdate(VI) (13106-76-8)	
Bioaccumulative potential	Not established.
Zinc EDTA (14025-21-9)	
Bioaccumulative potential	No bioaccumulation data available. Not established.
Copper EDTA (14025-15-1)	
Bioaccumulative potential	Not established.
edta iron(iii) sodium salt (15708-41-5)	
Partition coefficient n-octanol/water (Log Pow)	-10.6
Bioaccumulative potential	Bioaccumulation: not applicable. Not established.
Kelp (84775-78-0)	
Bioaccumulative potential	Not established.
Sodium Borate (12008-41-2)	
Bioaccumulative potential	Not established.

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

Other information : Avoid unintentional release to the environment.

SECTION 13: Disposal considerations

13.1. Disposal methods

Product/Packaging disposal recommendations : Dispose in a safe manner in accordance with local/national regulations.
Ecology - waste materials : Avoid unintentional release to the environment.

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

Other information : No supplementary information available.

Transportation of Dangerous Goods

Transport by sea

Air transport

SECTION 15: Regulatory information

15.1. US Federal regulations

PHT P-K Express

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory except for:

Kelp	CAS-No. 84775-78-0	%
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15.2. International regulations

CANADA

Monopotassium phosphate (7778-77-0)
Listed on the Canadian DSL (Domestic Substances List)
urea (57-13-6)
Listed on the Canadian DSL (Domestic Substances List)
potassium sulfate (7778-80-5)
Listed on the Canadian DSL (Domestic Substances List)
EDTA Manganese Sodium (15375-84-5)
Listed on the Canadian DSL (Domestic Substances List)
Zinc EDTA (14025-21-9)
Listed on the Canadian DSL (Domestic Substances List)
Copper EDTA (14025-15-1)
Listed on the Canadian DSL (Domestic Substances List)
edta iron(iii) sodium salt (15708-41-5)
Listed on the Canadian DSL (Domestic Substances List)
Kelp (84775-78-0)
Listed on the Canadian DSL (Domestic Substances List)

EU-Regulations

No additional information available

National regulations

No additional information available

15.3. US State regulations

Component	State or local regulations
ammonium molybdate(VI)(13106-76-8)	U.S. - New Jersey - Right to Know Hazardous Substance List

SECTION 16: Other information

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Data sources : REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.

Other information : None.

Full text of H-statements:

H302	Harmful if swallowed.
H315	Causes skin irritation.
H320	Causes eye irritation
H335	May cause respiratory irritation.

SDS US (GHS HazCom 2012)

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