SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Product name: Haifa-MKP
Trade names: Monopotassium phosphate; Haifa-MKP; Hi-M 235;
Synonyms: Phosphoric acid, monopotassium salt; MKP; Potassium dihydrogenorthophosphate; Potassium Phosphate, Monobasic; Potassium Dihydrogen Phosphate
Chemical formula: KH_2PO_4
Fertilizer formula: 0-52-34
Product type: Solid
CAS number: 7778-77-0
EC number: 231-913-4
REACH registration no(s): 01-2119490224-41

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

Common/important uses of the substance/preparation:
Agriculture – fertilizer, component of mixed fertilizers, nutrient supplement.
Pharmacopoeia- buffering agent, component of fermentation media.
Food processing- buffer agent, mineral nutrient.
Industries- metal, textile, paper.

1.3 Details of the supplier of the safety data sheet

Company/undertaking identification
USA importer:
Haifa North America
307 Cranes Roost Blvd
Suite 2030,Altamonte Springs, Florida 32701
Tel: +1-800- 649- 4944
Fax: +1-(407) 862 6400
E-mail:NorthAmerica@haifa-group.com

European Importer:
Haifa Chemicals Northern Europe
Generaal de Wittelaan 17, bus 16
B-2800 Mechelen, Belgium
Tel: +32-15-270811
Fax: +32-15 270815
E-mail: NorthWestEurope@haifa-group.com

Other Countries Importer
Supplier/Manufacturer:
Haifa Chemicals Ltd.
P.O.Box 15011, Matam-
Haifa, 31905, Israel
Tel: 972-74-7373737
Fax: 972-74-7373733
E-mail: Regulatory@haifa-group.com

E-mail address of person responsible for this SDS: Regulatory@haifa-group.com

1.4 Emergency telephone number

Emergency telephone number (with hours of operation): +972-74-7373737
CHEMTREC (U.S.): 1-800-424-9300

SECTION 2. Hazards identification

2.1 Classification of the substance or mixture

Classification in accordance to Regulation(EC) No. 1272/2008 (CLP):
Not classified

Classification according to Directive 67/548/EEC (DSD) or 1999/45/EC(DPD):
Not classified

Classification according to 29 CFR 1910.1200 (OSHA HCS):
Not classified

2.2 Label elements

Labeling in accordance with Regulation 1272/2008 (CLP)

Hazard pictograms: Not required

Signal word: Not required

Hazard statement(s): Not required

Precautionary Statement(s): Not required

Labelling in accordance with 67/548/EEC as amended

Hazard symbol(s): Not required

Risk phrase(s): Not required

Safety phrase(s): Not required

Labeling in accordance with Regulation 29 CFR 1910.1200 (OSHA HCS)

Hazard pictograms: Not required

Signal word: Not required

Hazard statement(s): Not required

Precautionary Statements: Not required

2.3 Other hazard

Substance meets the criteria for BBT according to Regulation (EC) No. 1907/2006, Annex XIII:
Not applicable
Substance meets the criteria for vPvB according to Regulation (EC) No. 1907/2006, Annex XIII:
Not applicable
Other hazard which do not result in classification: Not applicable

SECTION 3. Composition/information on ingredients

3.1 Substances

Substance name	Identifiers	%	EU Class.	CLP Class.	OSHA HCS
Monopotassium phosphate	CAS number: 7778-77-0 EC number: 231-913-4 REACH number: 01-2119490224-41	100	Not classified	Not classified	Not classified

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in section 8.

SECTION 4. First aid measures

4.1 Description of first aid measures

Eyes contact: In case of contact with eyes, rinse immediately with plenty of water for at least 15 minutes. Get medical attention if irritation occurs.

Skin contact: Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Get medical attention if irritation occurs.

Inhalation: Remove the victim from site of exposure to fresh air. If breathing is difficult, give oxygen. If not breathing give artificial respiration. Get medical attention.

Ingestion: **Do not induce vomiting.** If victim is conscious, wash mouth thoroughly with plenty of water. Never give anything by mouth to an unconscious person. Get medical attention.

4.2 Most important symptoms and effects, both acute and delayed

Dusts may cause coughing and sneezing. Ingestion of large quantities may cause gastrointestinal irritation, vomiting and diarrhea.

4.3 Indication of any immediate medical attention and special treatment needed

Not available

SECTION 5: Fire-fighting measures

5.1 Extinguishing media

Suitable: Use an extinguishing agent suitable for the surrounding fire.
Not suitable: Not available

5.2 Special hazards arising from the substance or mixture

Non-combustible.
Hazardous thermal decomposition products: Under fire - oxides of phosphorous, oxides of potassium.

5.3 Advice for firefighters

Move containers from fire area if possible to do so without risk.
Fire-fighters should wear appropriate protective equipment and self contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Ventilate area of spill.

6.2 Environmental precautions
Prevent entry into waterways, sewers, basements or confined areas.

6.3 Methods and materials for containment and cleaning up
Pick up and place in a suitable container for reclamation or disposal, using a method that does not generate dust.

Large spill: As for small spill

6.4 Reference to other sections
See Section 1 for emergency contact information.
See Section 13 for additional waste treatment information.

SECTION 7: Handling and storage

7.1 Precautions for safe handling
Minimize dust generation and accumulation. Do not breathe dust. Avoid contact with skin and eyes. Wash thoroughly after handling.

Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also section 8 for additional information measures.

7.2 Conditions for safe storage, including any incompatibilities
Store and use away from heat, sparks, open flame or any other ignition source. Avoid contact with combustible materials. Prevent moisture pick-up in handling and storage.

Packaging materials recommended: Use original container.

7.3 Specific use(s): Not available

SECTION 8: Exposure control/personal protection

8.1 Control parameters: N/A

Derived effects levels:
Recommended occupational and consumer exposure limit values (following from the preformed CSA):

Exposure pattern	Derived No Effect Level (DNEL)	
	Workers	**General population**
Oral	N/A	N/A
Dermal	N/A	N/A
Inhalation	4.07 mg/m³	3.04 mg/m³

8.2 Exposure controls

Engineering Measures

Use process enclosures, local exhaust ventilation, or others engineering controls to keep airborne levels below recommend exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Person Protective measures

Respiratory protection: Disposable particulate mask. Be sure to use an approved/certified equipment or equivalent equipment. Wear appropriate respirator when ventilation is inadequate.

Hand protection: Wear protective gloves to prevent skin exposure.

Eye protection: Wear protective safety glasses.

Skin protection: Wear appropriate long-sleeved clothing to minimize skin contact.

Environmental exposure controls: Not available.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance: Solid (crystalline or granular powder), White or colourless
Odour: Odorless
Odour threshold: Odorless
pH: 4.2 to 4.9 (Conc.(%w/w): 1%) [Acidic]
Initial boiling point/boiling range: > 723°K
Flash point: Not applicable
Evaporation rate: Not volatile (butyl acetate=1)
Flammability: Not flammable
Upper/lower flammability or explosive limits:
Vapor pressure: 4.5X10-15 Pa at 25°C- Not Volatile
Vapor density: Not volatile
Relative Density: 2.33 at 25.1±0.5°C (water=1)
Solubility(ies): Water solubility- 208 g/L at 20°C±0.5°C- very soluble
Partition coefficient Octanol/Water: The product is more soluble in water; log(octanol/water)<1
Auto-ignition temperature: Not applicable
Decomposition temperature: > 175°C (347°F) - release of water of constitution, becomes polyphosphates
Viscosity: Not viscous
Explosive properties: Not explosive
Oxidizing properties: Not oxidizer

9.2 Other information

Melting point/Freezing point: > 252.6°C
Molecular weight: 136.09
VOC: Not an organic compounds
Apparent (Bulk) Density: 0.8 – 1.2 g/cm^3
Miscibility: Not applicable
Fat solubility: Not applicable
Conductivity: Not applicable
Gas group: Not applicable

SECTION 10: Stability and reactivity

10.1 Reactivity
No specific test data related to reactivity available for this product or its ingredients.

10.2 Chemical stability
The product is stable under normal handling and storage conditions described in Section 7. Reacts with acids and alkalis.

10.3 Possibility of hazardous reactions
Hazardous reactions are not expected, under normal conditions of storage and use.

10.4 Conditions to avoid
Extreme humidity. Excess heat.

10.5 Incompatible materials
Strong oxidizing agents and strong bases.

10.6 Hazardous decomposition products
Other decomposition products: Not available
In event of fire: see section 5.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity:

Substance name	Test	Species	Dose
Monopotassium phosphate	LD50, Oral LD50, Dermal	Rat Rabbit	> 2000 mg/kg > 2000 mg/kg

Skin corrosion/irritation: Not irritating.

Serious eye damage/irritation: Not irritating.

Respiratory or skin sensitization: Not sensitizing

Germ cell mutagenicity: Negative

Carcinogenicity: This product does not contain any substances that are considered by IARC, NTP, OSHA, EU or ACGIH to be “probable” or “suspected” human carcinogens.

Reproductive toxicity: An additional two generation reproduction study in the rat is unlikely to result in providing further evidence of reproductive toxicity as the existing studies have demonstrated or lack of effect at a dose levels well in excess of expected human exposure.

Specific target organ toxicity (single exposure): Not available.

Specific target organ toxicity (repeated exposure): Not available.

Aspiration hazard: Not available.

Other effects:
Inhalation: Dusts may cause coughing and sneezing.
Ingestion: Ingestion of large quantities may cause gastrointestinal irritation, vomiting and diarrhea.

Toxicokinetics (absorption, metabolism, distribution and elimination):
A particle size distribution study has shown approximately > 50% of theparticle is less than 100 µm (inhalable). As the substance is not lipophilic it would not have the potential to be absorbed directly across the respiratory tract epithelium. However the very high water solubility of the substances and the low molecular weights does indicate that it has the potential to be absorbed through aqueous pores or be retained in the mucus. Particles deposited on the mucociliary blanket will be swallowed in the mouth (ingestion). Therefore absorption from the gastrointestinal tract will contribute to the total systemic burden of the substance that is inhaled.
Orthophosphates contain ionisable groups which may aid gastrointestinal tract absorption.
The group 1i substances arevery highly water soluble (>10000 mg/l) therefore should readily dissolve into the gastrointestinal fluid. Also smallmolecular weights (120-214), may aid the substance to pass through aqueous pores or to be carried through the epithelium barrier by the bulk passage of water.
The very high water solubility suggests that the substance is too hydrophilic to cross the lipid rich environment of the striatum corneum. Also the molecular weight of >100 and the extremely hydrophilic nature of the substance leads to the conclusion that dermal uptake of the substance will be minimal.
The results of the acute oral toxicity study in the rat showed no evidence of significant systemic toxicity; even at relatively high dose levels. This suggests that the test material is either of low toxicity or there is little absorption of the material following oral ingestion.

SECTION 12: Ecological information

12.1 Toxicity

Substance name	Toxicity to fish	Toxicity to crustaceans	Toxicity to algae
Monopotassium phosphate	LC50/96h (Rainbow trout) > 100 mg/L	EC50/48h (Daphnia magna) > 100 mg/L	EC50/75h (algae) > 100 mg/L EC50 (48 h): 300 mg/L

Predicted effect concentrations:

Substance name	Type	Compartment Detail	Value	Method Detail
Monopotassium phosphate	PNEC	Fresh water	0.05 mg/L	Assessment Factors
	PNEC	Marine	0.005 mg/L	Assessment Factors

12.2 Persistence and Degradability
Not applicable, since inorganic substance.

12.3 Bioaccumulative potential

Substance name	LogPow	BCF	Potential
Monopotassium phosphate	N/A	N/A	The potential for bioaccumulation consider to be minimal.

12.4 Mobility in soil
Soil/water partition coefficient (Koc): N/A
Mobility: Soluble in water.

12.5 Results of PBT and vPvB assessment
Not applicable

12.6 Other adverse effects
Substances which have an unfavorable influence on the oxygen balance and can be measured using parameters such as BOD, COD, etc.: Absent

Substances, which contribute to eutrophication: Phosphates, 52% as P_2O_5

SECTION 13: Disposal considerations

13.1 Waste treatment methods
Provisions relating to waste: Directive 2008/98/EC on waste, of 19 November, 2008: Depending on branch of industry and production process, also other EURAL codes may be applicable
06 03 14: solid salts and solutions other than those mentioned in 06 03 11 and 06 03 13

Product:
Waste must be disposed of in accordance with federal, state and local environmental control regulations.

Packing:
Empty containers should be taken for local recycling, recovery or waste disposal.

SECTION 14: Transport information

14.1 Un number
ADR/RID: - IMDG: - IATA: - DOT (US): -

14.2 UN proper shipping name
ADR/RID: Not regulated

IMDG: Not regulated

IATA: Not regulated

DOT (US): Not regulated

14.3 Transport hazard class(es)
ADR/RID: - IMDG: - IATA: - DOT (US): -

14.4 Packing group
ADR/RID: - IMDG: - IATA: - DOT (US): -

14.5 Environmental hazard
ADR/RID: - IMDG: - IATA: - DOT (US): -

14.6 Special precautions for user
Not available

14.7 Transport to bulk according to Annex II of MARPOL 73/78 and the IBC Code
Not available

SECTION 15: Regulatory information

This SDS complies with the following requirements of:
EU Directives 67/548/EEC (DSD) and 1999/45/EC (DPD), including amendments.
EU Regulation (EC) No.1907/2006 (REACH) including amendments.
Regulation (EC) No.1272/2008 (CLP).
29 CFR 1910.1200 (OSHA HCS).

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
California Prop. 65 Components
This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

TSCA inventory
Listed

15.2 Chemical safety assessment
In accordance with REACH article 14, a Chemical Safety Assessment has been carried out for this substance.

Section 16: OTHER INFORMATION

HMIS Rating

Health hazard: 1	Chronic Health Hazard:	Flammability: 0	Physical Hazard 0

NFPA Rating

Health hazard: 1	Fire Hazard: 0	Reactivity Hazard: 0

Training advice: Before using/handling the product one must read carefully present SDS.

Key Legend Information:
CAS- Chemical Abstract Service
ACGIH- American Conference of Governmental Industrial Hygienists
OSHA- Occupational Safety and Health Administration
NTP- National Toxicology program
IARC- International Agency for Research on Cancer
N/A- Not available
R-phrases- Risk phrases
H-statements- Hazard statements

TLV- Threshold Limit Value
TWA- Time-weighted average
STEL- Short-Term Exposure Limit
CSA- Chemical safety assessment

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תאריך	מהות השינוי (כולל תאריך הבקשה והמבקש)	מבצע השינוי
8/12/2010	הוספת הדירקטיבות הפיסקה 13- פסולת הוספת מס' רישום REACH	ליזה
14/12/2010	עדכון פורמט חדש	ליטל
19/12/2010	עדכון לוגו	ליזה
21/01/2014	עדכון פקס בלגיה עדכון כתובת,אימייל מת"מ וטלפון חירום	תמר
15/05/2014	תוספת השם K-Power ע"פ בקשתו של רן בושריין ועל פי אישורה של ליטל במייל מתאריך 12/05/2014	תמר
16/03/2015	עדכון גיליון ע"פ דרישות ה-GHS	קטי