Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 14.01.2016 **2-800-26-014-EU version 6** **Revision: 14.01.2016**

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

· **1.1 Product identifier**

· **Trade name: PeKacid**
· **Synonyms**
Potassium pentahydrogen bis(phosphate)
Phosphoric acid, potassium salt (2:1)

· **Article number:** *9745352219, 9745352119*
· **CAS Number:**
14887-42-4
· **EC number:**
238-961-5
· **Registration number** *01-2119510125-56-0001*
· **1.2 Relevant identified uses of the substance or mixture and uses advised against**
Relevant identified uses:
Fertiliser
No uses advised against.

· **1.3 Details of the supplier of the safety data sheet**
· **Manufacturer/Supplier:**
Rotem Amfert Negev Ltd.
Mishor Rotem, Mobile Post Arava 86800
ICL Specialty Fertilizers
ISRAEL
Phone: +972-52-3353176, +972-8-6566645
Fax: +972-8-6598987
E-mail: Nir.BarDavid@icl-group.com

Only Represantive/ Supplier:
ICL Italy S.r.l. Milano
Via Monteverdi 11, 20131, Milano,
Italy
Phone: +39-02-20487221
Fax: +39-02-2049449
E-mail: info@pec.pmchemicals.it
· **1.4 Emergency telephone number:**
In Europe call: +31-205-815100 (24 hours a day, 365 days a year)
In Israel call: +972-8-6504777 (24 hours a day, 365 days a year)
+972-8-6504915

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SECTION 2: Hazards identification

· **2.1 Classification of the substance or mixture**
· **Classification according to Regulation (EC) No 1272/2008**



GHS07

Eye Irrit. 2 H319 Causes serious eye irritation.

· **2.2 Label elements**
· **Labelling according to Regulation (EC) No 1272/2008**
The substance is classified and labelled according to the CLP regulation.

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Trade name: PeKacid

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· **Hazard pictograms**



GHS07

· **Signal word** Warning
· **Hazard statements**
H319 Causes serious eye irritation.
· **Precautionary statements**
P280 Wear protective gloves / eye protection.
P264 Wash thoroughly after handling.
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.
· **2.3 Other hazards**
· **Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.

SECTION 3: Composition/information on ingredients

· **3.1 Substances**
· **CAS No. Description**
14887-42-4 Potassium pentahydrogen bis(phosphate)
· **EC number:** 238-961-5
· **SVHC** None

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SECTION 4: First aid measures

· **4.1 Description of first aid measures**
· **General information:**
Do not leave affected persons unattended.
Immediately remove any clothing soiled by the product.
· **After inhalation:**
Take affected persons into fresh air and keep quiet.
Supply fresh air.
Seek medical treatment in case of complaints.
· **After skin contact:**
Immediately wash with water and soap and rinse thoroughly.
If skin irritation continues, consult a doctor.
· **After eye contact:** Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
· **After swallowing:**
Rinse out mouth and then drink plenty of water.
NOTE: Never give an unconscious person anything to drink.
Do not induce vomiting.
If symptoms persist consult doctor.
· **4.2 Most important symptoms and effects, both acute and delayed** Irritating to eyes.

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· **4.3 Indication of any immediate medical attention and special treatment needed** No further relevant information available.

SECTION 5: Firefighting measures

· **5.1 Extinguishing media**
· **Suitable extinguishing agents:**
The product is not flammable.
Use fire extinguishing methods suitable to surrounding conditions.
CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
· **For safety reasons unsuitable extinguishing agents:** Water with full jet
· **5.2 Special hazards arising from the substance or mixture**
In case of fire, the following can be released:
Phosphorus oxides (e.g. P2O5)
· **5.3 Advice for firefighters**
· **Protective equipment:**
Wear fully protective suit.
Mount respiratory protective device.
· **Additional information** Collect contaminated fire fighting water separately. It must not enter the sewage system.

SECTION 6: Accidental release measures

· **6.1 Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
Use respiratory protective device against the effects of fumes/dust/aerosol.
Avoid formation of dust.
· **6.2 Environmental precautions:**
Dilute with plenty of water.
Do not allow product to reach sewage system or any water course.
· **6.3 Methods and material for containment and cleaning up:**
Pick up mechanically.
Use neutralising agent.
Ensure adequate ventilation.
· **6.4 Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

SECTION 7: Handling and storage

· **7.1 Precautions for safe handling**
Keep receptacles tightly sealed.
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of dust.
· **Information about fire - and explosion protection:**
The product is not flammable.
No special measures required.

· **7.2 Conditions for safe storage, including any incompatibilities**
· **Requirements to be met by storerooms and receptacles:**
Use polyolefine receptacles.

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Suitable material for receptacles and pipes: Stainless steel.
Use polyolefine lining in receptacles.
Provide acid-resistant floor.
Store only in the original receptacle.
· **Information about storage in one common storage facility:** *Do not store together with alkalis (caustic solutions).*
· **Further information about storage conditions:**
Store in cool, dry conditions in well sealed receptacles.
Protect from humidity and water.
This product is hygroscopic.
· **7.3 Specific end use(s)** *No further relevant information available.*

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SECTION 8: Exposure controls/personal protection

· **8.1 Control parameters**
· **Ingredients with limit values that require monitoring at the workplace:** *Not required.*
· **DNELs**
For workers:
Long-term-systemic effects (inhalation) DNEL: 4.07 mg/m³
For general population:
Long-term-local effects (inhalation) DNEL: 3.04 mg/m³
· **PNECs**
PNEC aqua (freshwater): 0.05 mg/L
PNEC aqua (marine water): 0.005 mg/L
PNEC aqua (intermittent releases): 0.5 mg/L
PNEC STP: 50 mg/L
· **Additional information:**
Ventilation must be sufficient to maintain TLV-TWA below 3 mg/m³, respirable particles, and 10 mg/m³, inhalable particles [ACGIH recommendation for Particles (Insoluble or poorly soluble). Not Otherwise Specified (PNOS)]

· **8.2 Exposure controls**
· **General protective and hygienic measures:**
The usual precautionary measures are to be adhered to when handling chemicals.
Keep away from foodstuffs, beverages and feed.
Wash hands before breaks and at the end of work.
Avoid contact with the eyes and skin.
· **Respiratory protection:**
Use suitable respiratory protective device in case of insufficient ventilation.



Filter P2

(EN 143/ EN 149)
· **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
· **Material of gloves**
Butyl rubber, BR (0.7 mm)
Fluorocarbon rubber (Viton) (0.4 mm)

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Nitrile rubber, NBR (0.4 mm)
Natural rubber, NR (0.5 mm)
Chloroprene rubber, CR (0.5 mm)
Neoprene gloves

· **Penetration time of glove material**
The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed. (EN 374)

· **Eye protection:**



Tightly sealed goggles (EN 166)

· **Body protection:** *Protective work clothing*

· **Limitation and supervision of exposure into the environment**
Based on all data available this product is not considered to pose a risk to the environment.
The product should not get in high quantities into waste water because it may act as a plant nutrient and cause eutrophication.

· **Risk management measures**
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
Phosphates should be removed from industrial wastewater before it is released to the environment.

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SECTION 9: Physical and chemical properties

· **9.1 Information on basic physical and chemical properties**
· **General Information**
· **Appearance:**

Form:	*Crystalline powder*
Colour:	*White*
· **Odour:**	*Odourless*
· **pH-value (10 g/l) at 20 °C:**	*2,2*
· **Change in condition**	
Melting point/Melting range:	*127-135 °C (OECD 102, EPA)*
Boiling point/Boiling range:	*None* *The substance decomposes before boiling*
· **Flash point:**	*Not applicable.* *This product is inorganic substance.*
· **Flammability (solid, gaseous):**	*Product is not flammable.* *(acc. to EC A.10)*
· **Ignition temperature:**	*Not applicable*
· **Decomposition temperature:**	*>200 °C*
· **Self-igniting:**	*Product is not selfigniting.* *(acc. to EC A.16)*
· **Danger of explosion:**	*Product does not present an explosion hazard.* *(based on molecular structure)*
· **Explosion limits:**	*None*

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· **Oxidising properties** None
(acc. to EC A.17)

· **Vapour pressure at 20 °C:** 1,47x10–3 Pa (OECD 104, EC A.4)

· **Bulk density at 20 °C:** 1,4-2,0 g/cm³

· **Evaporation rate** Not applicable
This product is an inorganic solid

· **Solubility in / Miscibility with water at 20 °C:** 583 g/l (OECD 105)

· **Partition coefficient (n-octanol/water):** Not applicable
This substance is inorganic chemical.

· **Viscosity:** Not applicable
This product is solid. Viscosity is only relevant to liquids.

· **9.2 Other information** This product is not considered to present an inhalation risk.
D10<254.4 µm (OECD 110)

SECTION 10: Stability and reactivity

· **10.1 Reactivity**
Reacts with alkali (lyes).
Water solutions of this product may be corrosive to metals.
· **10.2 Chemical stability**
No decomposition if used according to specifications.
Thermal decomposition on losing water.
· **10.3 Possibility of hazardous reactions** Reacts with metals in the presence of moisture to form hydrogen.
· **10.4 Conditions to avoid** To avoid thermal decomposition do not overheat.
· **10.5 Incompatible materials:**
Water
Metals
Alkalis
· **10.6 Hazardous decomposition products:** Phosphorus oxides (e.g. P2O5)
· **Additional information:** This product is hygroscopic.

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SECTION 11: Toxicological information

· **11.1 Information on toxicological effects**
· **Acute toxicity**
· **LD/LC50 values relevant for classification:**
no classification is necessary

Oral	LD50	>2000 mg/kg (rat) (OECD 425)
Dermal	LD50	>2000 mg/kg (rat) (OECD 402)

· **Primary irritant effect:**

· Effect	Species	Method
Irritation of skin	OECD 404	not irritating (rabbit)
Irritation of eyes	OECD 405	irritating, cat 2 (rabbit)

7558-80-7 sodium dihydrogenorthophosphate		
Sensitisation	OECD 429, EC B.42	no sensitizing effects (mouse)

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· **Skin corrosion/irritation:** Based on available data, the classification criteria are not met.
· **Serious eye damage/irritation:**
Causes serious eye irritation.
· **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
· **Toxicokinetics, metabolism and distribution**
This product dissociates into potassium and phosphate ions, which are normal body and nutritional components.
This substance is not considered to have bioaccumulative potential as it is highly soluble in water and phosphate levels in the body are regulated via homeostasis.
· **Repeated dose toxicity**
No reliable study with this product is present.
This study is conducted on an analogous substance. (read-across)

7785-88-8 Sodium aluminum phosphate		
Oral	NOAEL	>323 mg/kg bw/day (dog) (90 days, subchronic)

· **CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)**
· **Germ cell mutagenicity**
None
Sodium and potassium phosphates are routinely used in the nutrient broths that support bacterial colonies in the laboratory and as such bacteria are constantly exposed to these inorganic phosphates. The constant exposure of bacteria to these materials suggests that they pose no inherent risk of genotoxicity.
· **Carcinogenicity:**
no data available
(no carcinogenicity study needs to be performed as this substance is not genotoxic)
· **Toxicity for reproduction:**
no classification is necessary
7758-11-4 dipotassium hydrogenorthophosphate :
developmental toxicity: NOAEL> 1000 mg/kg bw/day; rat, oral (OECD 422)

7778-77-0 potassium dihydrogenorthophosphate :
developmental / maternal toxicity: NOAEL> 282 mg/kg bw/day; rat, oral
developmental / maternal toxicity: NOAEL> 320 mg/kg bw/day; mouse, oral
· **STOT-single exposure** Based on available data, the classification criteria are not met.
· **STOT-repeated exposure** Based on available data, the classification criteria are not met.
· **Aspiration hazard** Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

· **12.1 Toxicity**
· **Aquatic toxicity:**
No reliable study with this product is present.
This study is conducted on an analogous substance. (read-across)
Inorganic phosphates are not considered to be toxic to aquatic species.

66922-99-4 Tripotassium trihydrogen diphosphate dihydrate	
EC50/48 h (static)	>100 mg/L (Daphnia magna) (OECD 202, freshwater)
EC50/72 h (static)	>100 mg/L (algae) (OECD 201, freshwater) NOEL: 100 mg/L
LC50/96 h (static)	>100 mg/L (fish Oncorhynchus mykiss) (OECD 203, freshwater)

· **12.2 Persistence and degradability**
The substance is inorganic; therefore no biodegradation tests are applicable.
This product dissociates into potassium and phosphate ions, which cannot be further degraded.

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· **Other information:**
The product should not get in high quantities into waste water because it may act as a plant nutrient and cause eutrophication.
· **12.3 Bioaccumulative potential**
Does not accumulate in organisms
This product dissociates into potassium and phosphate ions, which are ubiquitous in the environment.
· **12.4 Mobility in soil**
This substance is highly water soluble and dissociating.
Low potential for adsorption (based on substance properties).
· **Behaviour in sewage processing plants:**

· Type of test	Effective concentration Method	Assessment
7758-11-4 dipotassium hydrogenorthophosphate		
EC50/3 h	>1000 mg/L (activated sludge) (OECD 209, EPA) NOEC (3 h): 1000 mg/L	

· **Remark:**
No reliable study with this product is present.
This study is conducted on an analogous substance. (read-across)
Inorganic phosphates are not considered to be toxic to sewage treatment plant microorganisms.
· **General notes:**
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
· **12.5 Results of PBT and vPvB assessment**
· **PBT:** No assessment is required for inorganic substances.
· **vPvB:** No assessment is required for inorganic substances.
· **12.6 Other adverse effects** No further relevant information available.

SECTION 13: Disposal considerations

· **13.1 Waste treatment methods**
· **Recommendation**
This product is used as fertiliser. However, large spills can kill vegetation. Prevent large quantities from entering waterways. If uncontaminated, sweep up or collect, and reuse as product. If contaminated with other materials, collect in suitable containers.
Dilute concentrate with water and neutralise afterwards with suitable alkali material (sodium hydroxide solution, lime). The formed neutral salts are relatively environment-friendly.
Disposal must be made in accordance with Local Authority requirements.

· European waste catalogue	
02 01 08*	agrochemical waste containing dangerous substances

· **Uncleaned packaging:**
· **Recommendation:**
Packaging may be reused or recycled after cleaning.
Packagings that may not be cleansed are to be disposed of in the same manner as the product.
Disposal must be made according to official regulations.
· **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

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SECTION 14: Transport information

· **14.1 UN-Number** None
· **14.2 UN proper shipping name** None

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· **14.3 Transport hazard class(es)**

· **DOT, ADR, IMDG, IATA**	None
· **Class**	Not applicable
· **14.4 Packing group**	Not applicable
· **14.5 Environmental hazards:**	None
· **Marine pollutant:**	No
· **14.6 Special precautions for user**	Not applicable.
· **14.7 Transport in bulk according to Annex II of Marpol and the IBC Code**	Not applicable.

· **Transport/Additional information:**

· **DOT**	None
· **UN "Model Regulation":**	None

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SECTION 15: Regulatory information

· **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
Directive 2000/60 EC (phosphates)
· **Labelling according to Regulation (EC) No 1272/2008**
The substance is classified and labelled according to the CLP regulation.
· **Hazard pictograms**



GHS07

· **Signal word** Warning
· **Hazard statements**
H319 Causes serious eye irritation.
· **Precautionary statements**

P280	Wear protective gloves / eye protection.
P264	Wash thoroughly after handling.
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.

· **National regulations:**

· **Other regulations, limitations and prohibitive regulations**
· **Substances of very high concern (SVHC) according to REACH, Article 57** None
· **Registration status (Chemical Inventories listing) :**
Australia (AICS) : listed
Japan (ENCS) : listed
Korea (KECI) : listed
United States (TSCA) : listed
Canada (DSL) : listed
NTP (National Toxicology Program) : Substance is not listed
IARC (International Agency for Research on Cancer) : Substance is not listed
· **15.2 Chemical safety assessment:** A Chemical Safety Assessment has been carried out.

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SECTION 16: Other information

· **Department issuing MSDS:** Regulatory Affairs of ICL Fertilizers Products

· **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
DNEL: Derived No-Effect Level (REACH)
PNEC: Predicted No-Effect Concentration (REACH)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
SVHC: Substances of Very High Concern
vPvB: very Persistent and very Bioaccumulative
Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2
NOAEL: No Observable Adverse Effect Level
NOEC: No-Observed Effect Concentration
OECD: Organisation for Economic Co-operation and Development
RCR: Risk Characterisation Ratio
PRE: Personal Respiratory Equipment
LEV: Local Exhaust Ventilation

· **Sources**

REACH dossier, 2011
REACH CSR, 2011

· *** Data compared to the previous version altered.**

Reason for revision: company logo change
The sections where alterations took place are marked with an asterisk in the left border

· **Disclaimer**

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Annex: Exposure scenario 1

· **Short title of the exposure scenario** Formulation of fertilisers

· **Sector of Use**

SU3 Industrial uses: Uses of substances as such or in preparations at industrial sites
SU10 Formulation [mixing] of preparations and/or re-packaging (excluding alloys)
SU22 Professional uses: Public domain (administration, education, entertainment, services, craftsmen)

· **Product category** PC12 Fertilisers

· **Process category**

PROC2 Use in closed, continuous process with occasional controlled exposure
PROC3 Use in closed batch process (synthesis or formulation)
PROC5 Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact)

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PROC8b Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities
PROC9 Transfer of substance or preparation into small containers (dedicated filling line, including weighing)
· **Environmental release category**
ERC2 Formulation of preparations
ERC9a Wide dispersive indoor use of substances in closed systems
· **Conditions of use**
· **Worker** *Permanent use with exposure up to 8 hrs every work day of the week.*
· **Physical parameters**
· **Physical state**
Solution (10%)
Powder
Granulate
· **Concentration of the substance in the mixture** *Raw material.*
· **Other operational conditions** *Observe the general safety regulations when handling chemicals.*
· **Other operational conditions affecting worker exposure**
Indoor application.
Normally no personal respiratory protection required.
· **Risk management measures**
· **Worker protection**
· **Organisational protective measures** *Keep good industrial hygiene.*
· **Technical protective measures**
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of dust.
· **Personal protective measures**
Avoid contact with the eyes and skin.
Do not inhale dust / smoke / mist.
Wash hands before breaks and at end of work.
Wear suitable protective gloves (EN 374) and protective goggles /face protection (EN 166) during work.
Material of gloves: Chloroprene, Neoprene or PVC gloves.
Protective work clothing
· **Environmental protection measures**
· **Water**
The product should not get in high quantities into waste water because it may act as a plant nutrient and cause eutrophication.
· **Disposal measures** *Disposal must be made according to official regulations.*
· **Disposal procedures** *Phosphates should be removed from industrial wastewater before it is released to the environment.*
· **Waste type** *02 01 08*: agrochemical waste containing dangerous substances*
· **Exposure estimation**
· **Worker (oral)** *No significant oral exposure*
· **Worker (dermal)** *No significant dermal exposure*
· **Worker (inhalation)**
The exposure estimation was carried out in accordance with ECETOC TRA.
The calculated value is smaller than the DNEL.

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Risk adequately controlled.

Process Category (PROC)	Form	Dustiness	LEV, % efficiency	Inhalation exposure mg/m³	RCR
Industrial uses					
PROC 2	powder	high	-	0.1	0.02
	granular	medium	-	0.05	0.01
PROC 3	powder	high	-	0.1	0.02
	granular	medium	-	0.1	0.02
PROC 5	liquid	-	-	0.88	0.216
	powder	high	-	2.5	0.61
			90%	0.25	0.06
	granular	medium	-	0.5	0.12
			90%	0.05	0.01
PROC 8b	powder	high	95%	1.25	0.31
	granular	medium	95%	0.25	0.06
PROC 9	powder	high	-	2	0.49
			90%	0.2	0.05
	granular	medium	-	0.5	0.12
			90%	0.05	0.01

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· **Professional uses**

Process Category (PROC)	Form	Dustiness	LEV, % efficiency	Inhalation exposure mg/m³	RCR
PROC 2	powder	high	-	0.5	0.12
	granular	medium	-	0.1	0.02
PROC 3	powder	high	-	0.5	0.12
	granular	medium	-	0.1	0.02
PROC 5	liquid	-	-	0.88	0.216
	powder	high	80%	1	0.25
	granular	medium	-	0.5	0.12
			80%	0.1	0.02
PROC 8b	powder	high	80%	1	0.246
	granular	medium	80%	1	0.25
PROC 9	powder	high	-	2	0.49
			80%	0.4	0.10
	granular	medium	-	0.5	0.12
			80%	0.1	0.02

· **Environment**
An environmental assessment has not been performed as the substance/mixture does not meet the criteria for being classified as dangerous for the environment.
· **Consumer** *Not applicable*
· **Guidance for downstream users**
No further relevant information available.
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Annex: Exposure scenario 2

· **Short title of the exposure scenario** *Use as fertiliser*
· **Sector of Use**
SU1 Agriculture, forestry, fishery
SU21 Consumer uses: Private households / general public / consumers
SU22 Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
· **Product category** *PC12 Fertilisers*
· **Process category**
PROC2 Use in closed, continuous process with occasional controlled exposure
PROC5 Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact)
PROC8a Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities
PROC8b Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities
PROC9 Transfer of substance or preparation into small containers (dedicated filling line, including weighing)
PROC11 Non industrial spraying
PROC13 Treatment of articles by dipping and pouring
PROC19 Hand-mixing with intimate contact and only PPE available

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· **Environmental release category**
ERC8b Wide dispersive indoor use of reactive substances in open systems
ERC8e Wide dispersive outdoor use of reactive substances in open systems
ERC9b Wide dispersive outdoor use of substances in closed systems
· **Conditions of use**
· **Duration and frequency** 4-5 months/ year
· **Worker**
5 workdays/week.
Regular use with exposure up to 8 hrs. per workday.
· **Physical parameters**
· **Physical state**
Solution
Powder
Granulate
· **Concentration of the substance in the mixture** Not applicable.
· **Used amount per time or activity** 1-6 kg / ha / month
· **Other operational conditions**
· **Other operational conditions affecting worker exposure**
Indoor application.
Outdoor application.
Normally no personal respiratory protection required.
· **Risk management measures**
· **Worker protection**
The usual precautionary measures are to be adhered to when handling chemicals.
Avoid contact with the eyes.
Wear suitable protective gloves (EN 374) and protective goggles /face protection (EN 166) during work.
Material of gloves: Chloroprene, Neoprene or PVC gloves.
· **Personal protective measures** The usual precautionary measures are to be adhered to when handling chemicals.
· **Measures for consumer protection**
Keep out of reach of children.
Ensure adequate labelling.
· **Environmental protection measures** No special measures required.
· **Water**
The product should not get in high quantities into waste water because it may act as a plant nutrient and cause eutrophication.
· **Disposal measures** Disposal must be made according to official regulations.
· **Waste type** Partially emptied and uncleaned packaging
· **Exposure estimation**
· **Worker (oral)** No significant oral exposure
· **Worker (dermal)** No significant dermal exposure
· **Worker (inhalation)**
The exposure estimation was carried out in accordance with ECETOC TRA.
The calculated value is smaller than the DNEL.

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Safety data sheet

according to 1907/2006/EC, Article 31

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Trade name: PeKacid

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Risk adequately controlled.

	Boom sprayer: hydraulic nozzles	Boom sprayer: rotary atomisers	Air-assisted sprayer: 500 L/ha	Hand-held sprayer (15 L tank). Outdoor, low level target	Hand-held rotary atomiser equipment (2.5 L tank). Outdoor, low level target	Hand-held rotary atomiser equipment (2.5 L tank). Outdoor, high level target
MIXING AND LOADING						
Solid, granular fertiliser						
Long-term exposure concentration of active substance (mg/m³)	1.08	1.08	0.32	0.03	0.04	0.04
DNEL, [mg/m³]	4.07	4.07	4.07	4.07	4.07	4.07
RCR	0.265	0.265	0.079	0.007	0.010	0.010
Solid, powdery fertiliser						
Long-term exposure concentration of active substance (mg/m3)	0.63	0.63	1.89	0.61	0.92	0.92
PRE, % efficacy	90%	90%	-	-	-	-
DNEL, [mg/m³]	4.07	4.07	4.07	4.07	4.07	4.07
RCR	0.155	0.155	0.464	0.150	0.226	0.226
SPRAY APPLICATION						
Long-term exposure concentration of active substance (mg/m³)	0.06	0.03	0.30	0.12	0.06	0.06
DNEL, [mg/m³]	4.07	4.07	4.07	4.07	4.07	4.07
RCR	0.015	0.007	0.074	0.030	0.015	0.015

· ***Environment***

An environmental assessment has not been performed as the substance/mixture does not meet the criteria for being classified as dangerous for the environment.

· ***Consumer***

The exposure estimation was carried out in accordance with ECETOC TRA.
Risk adequately controlled.

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Safety data sheet

according to 1907/2006/EC, Article 31

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Private spraying of liquid fertilisers with home garden sprayer, 5 L-tank, low-level target	MIXING AND LOADING		SPRAY APPLICATION
	Solid, granular fertiliser	Solid powdery fertiliser	
Long-term exposure concentration of active substance [mg/m³]	0.00015	0.004	0.004
DNEL [mg/m³]	3.04	3.04	3.04
RCR	0.000049	0.0013	0.0013

· **Guidance for downstream users** *No further relevant information available.*