SAFETY DATA SHEET

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

1.1 Product identifiers
   Product name: Potassium dihydrogen phosphate for analysis EMSURE® ISO
   Product Number: 1.04873
   Catalogue No.: 104873
   Brand: Millipore
   CAS-No.: 7778-77-0

1.2 Other means of identification
   No data available

1.3 Relevant identified uses of the substance or mixture and uses advised against
   Identified uses: Reagent for analysis

1.4 Details of the supplier of the safety data sheet
   Company: Sigma-Aldrich Pte Ltd
   (Co. Registration No. 199403788W)
   2 Science Park Drive
   #05-01/12 Ascent Building
   SINGAPORE 118222
   SINGAPORE
   Telephone: +65 6890 6633
   Fax: +65 6890 6639
   E-mail address: TechnicalService@merckgroup.com

1.5 Emergency telephone
   Emergency Phone #: 1-800-262-8200

SECTION 2: Hazards identification

2.1 GHS Classification
   Not a hazardous substance or mixture.

2.2 GHS Label elements, including precautionary statements
   Not a hazardous substance or mixture.

2.3 Other hazards - none

SECTION 3: Composition/information on ingredients

3.1 Substances
   Formula: KH2PO4
Molecular weight : 136.09 g/mol
CAS-No. : 7778-77-0
EC-No. : 231-913-4

No components need to be disclosed according to the applicable regulations.

SECTION 4: First aid measures

4.1 Description of first-aid measures

If inhaled
After inhalation: fresh air.

In case of skin contact
In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/shower.

In case of eye contact
After eye contact: rinse out with plenty of water. Remove contact lenses.

If swallowed
After swallowing: make victim drink water (two glasses at most). Consult doctor if feeling unwell.

4.2 Most important symptoms and effects, both acute and delayed
The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed
No data available

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media
For this substance/mixture no limitations of extinguishing agents are given.

5.2 Special hazards arising from the substance or mixture
Not combustible.
Ambient fire may liberate hazardous vapours.

5.3 Advice for firefighters
In the event of fire, wear self-contained breathing apparatus.

5.4 Further information
Suppress (knock down) gases/vapors/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Advice for non-emergency personnel: Avoid inhalation of dusts. Evacuate the danger area, observe emergency procedures, consult an expert.
For personal protection see section 8.

6.2 **Environmental precautions**
Do not let product enter drains.

6.3 **Methods and materials for containment and cleaning up**
Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up dry. Dispose of properly. Clean up affected area. Avoid generation of dusts.

6.4 **Reference to other sections**
For disposal see section 13.

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**SECTION 7: Handling and storage**

7.1 **Precautions for safe handling**
For precautions see section 2.2.

7.2 **Conditions for safe storage, including any incompatibilities**

- **Storage conditions**
  Tightly closed. Dry.
  Recommended storage temperature see product label.

- **Storage class**
  Storage class (TRGS 510): 11: Combustible Solids

7.3 **Specific end use(s)**
Apart from the uses mentioned in section 1.3 no other specific uses are stipulated.

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**SECTION 8: Exposure controls/personal protection**

8.1 **Control parameters**

- **Ingredients with workplace control parameters**
  Contains no substances with occupational exposure limit values.

8.2 **Exposure controls**

- **Appropriate engineering controls**
  Change contaminated clothing. Wash hands after working with substance.

- **Personal protective equipment**
  **Eye/face protection**
  Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Safety glasses

  **Skin protection**
  This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).
  Full contact
  Material: Nitrile rubber
  Minimum layer thickness: 0.11 mm
  Break through time: 480 min
  Material tested: KCL 741 Dermatril® L
This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

Splash contact
Material: Nitrile rubber
Minimum layer thickness: 0.11 mm
Break through time: 480 min
Material tested: KCL 741 Dermatril® L

**Respiratory protection**
required when dusts are generated.
Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system.

**Control of environmental exposure**
Do not let product enter drains.

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**SECTION 9: Physical and chemical properties**

9.1 **Information on basic physical and chemical properties**

a) **Appearance**
   - Form: solid
   - Color: colorless

b) **Odor**
   - odorless

c) **Odor Threshold**
   - Not applicable

d) **pH**
   - 4.2 - 4.6 at 20.0 g/l at 20.0 °C

e) **Melting point/freezing point**
   - Melting point: 252.6 °C

f) **Initial boiling point and boiling range**

g) **Flash point**
   - Not applicable

h) **Evaporation rate**
   - No data available

i) **Flammability** (solid, gas)
   - The product is not flammable.

j) **Upper/lower flammability or explosive limits**
   - No data available

k) **Vapor pressure**
   - < 0.1 hPa at 25 °C - Regulation (EC) No. 440/2008, Annex, A.4

l) **Vapor density**
   - No data available

m) **Density**
   - 2.34 g/cm³
   - **Relative density**

n) **Water solubility**
   - 208 g/l at 20 °C - Regulation (EC) No. 440/2008, Annex, A.6-
     - completely soluble
9.2 Other safety information

- **Partition coefficient:** n-octanol/water - Not applicable for inorganic substances
- **Autoignition temperature:** No data available
- **Decomposition temperature:** No data available
- **Viscosity:**
  - Viscosity, kinematic: No data available
  - Viscosity, dynamic: No data available
- **Explosive properties:** No data available
- **Oxidizing properties:** none

**SECTION 10: Stability and reactivity**

10.1 Reactivity
No data available

10.2 Chemical stability
The product is chemically stable under standard ambient conditions (room temperature).

10.3 Possibility of hazardous reactions
Violent reactions possible with:
- Strong oxidizing agents
- Bases
- Acids

10.4 Conditions to avoid
Strong heating (decomposition).
no information available

10.5 Incompatible materials
No data available

10.6 Hazardous decomposition products
In the event of fire: see section 5

**SECTION 11: Toxicological information**

11.1 Information on toxicological effects

**Acute toxicity**
LD50 Oral - Rat - female - > 2,000 mg/kg
(OECD Test Guideline 420)
Remarks: The value is given in analogy to the following substances: dipotassium hydrogen phosphate
LC50 Inhalation - Rat - male and female - 4 h - > 0.83 mg/l - dust/mist
(OECD Test Guideline 403)
Remarks: (in analogy to similar products)
The value is given in analogy to the following substances: sodium dihydrogen phosphate
LD50 Dermal - Rabbit - male and female - > 2,000 mg/kg
(OECD Test Guideline 402)

**Skin corrosion/irritation**
Skin - Rabbit
Result: No skin irritation - 4 h
(Draize Test)
Remarks: (ECHA)

**Serious eye damage/eye irritation**
Eyes - Rabbit
Result: No eye irritation - 30 s
(Draize Test)
Remarks: (ECHA)

**Respiratory or skin sensitization**
No data available

**Germ cell mutagenicity**
Test Type: Micronucleus test
Test system: Human lymphocytes
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 487
Result: negative
Test Type: In vitro mammalian cell gene mutation test
Test system: mouse lymphoma cells
Metabolic activation: with and without metabolic activation
Result: negative
Remarks: (ECHA)

**Carcinogenicity**
No data available

**Reproductive toxicity**
No data available

**Specific target organ toxicity - single exposure**
No data available

**Specific target organ toxicity - repeated exposure**
No data available

**Aspiration hazard**
No data available

### 11.2 Additional Information

irritant effects, Discomfort, Nausea, Diarrhea, Vomiting, gastric pain
To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Hazardous properties cannot be excluded but are unlikely when the product is handled appropriately.

Inhalation of the dusts should be avoided as even inert dusts may impair respiratory organ functions.

Handle in accordance with good industrial hygiene and safety practice.
SECTION 12: Ecological information

12.1 Toxicity
Toxicity to fish
semi-static test LC50 - Oncorhynchus mykiss (rainbow trout) - > 100 mg/l - 96 h
(OECD Test Guideline 203)

Toxicity to daphnia and other aquatic invertebrates
static test EC50 - Daphnia magna (Water flea) - > 100 mg/l - 48 h
(OECD Test Guideline 202)

Toxicity to algae
static test ErC50 - Desmodesmus subspicatus (green algae) - > 100 mg/l - 72 h
(OECD Test Guideline 201)

Toxicity to bacteria
static test EC50 - activated sludge - > 1,000 mg/l - 3 h
(OECD Test Guideline 209)
static test NOEC - activated sludge - > 1,000 mg/l - 3 h
(OECD Test Guideline 209)

12.2 Persistence and degradability
The methods for determining the biological degradability are not applicable to inorganic substances.

12.3 Bioaccumulative potential
Does not bioaccumulate.

12.4 Mobility in soil
No data available

12.5 Results of PBT and vPvB assessment
PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

12.6 Endocrine disrupting properties
No data available

12.7 Other adverse effects
No data available

SECTION 13: Disposal considerations

13.1 Waste treatment methods
Product
Waste material must be disposed of in accordance with the national and local regulations. Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself. See www.retrologistik.com for processes regarding the return of chemicals and containers, or contact us there if you have further questions.

SECTION 14: Transport information

14.1 UN number
ADR/RID: -  IMDG: -  IATA-DGR: -

14.2 UN proper shipping name
ADR/RID: Not dangerous goods
14.3 Transport hazard class(es)
ADR/RID: -  IMDG: -  IATA-DGR: -

14.4 Packaging group
ADR/RID: -  IMDG: -  IATA-DGR: -

14.5 Environmental hazards
ADR/RID: no  IMDG Marine pollutant: no  IATA-DGR: no

14.6 Special precautions for user

14.7 Incompatible materials

Further information
Not classified as dangerous in the meaning of transport regulations.

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

Notification status
DSL: All components of this product are on the Canadian DSL
ENCs: On the inventory, or in compliance with the inventory
ISHL: On the inventory, or in compliance with the inventory
KECI: On the inventory, or in compliance with the inventory
NZIoC: On the inventory, or in compliance with the inventory
PICCS: On the inventory, or in compliance with the inventory

SECTION 16: Other information

Further information
The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Corporation and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See www.sigma-aldrich.com and/or the reverse side of invoice or packing slip for additional terms and conditions of sale.

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