

**SAFETY DATA SHEET**

according to Regulation (EC) No. 1907/2006

Revision Date 14.09.2018

Version 8.5

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**SECTION 1. Identification of the substance/mixture and of the company/undertaking****1.1 Product identifier**

Catalogue No. 104873

Product name Potassium dihydrogen phosphate for analysis EMSURE® ISO

REACH Registration Number 01-2119490224-41-XXXX

CAS-No. 7778-77-0

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

Identified uses Reagent for analysis

For additional information on uses please refer to the Merck Chemicals portal ([www.merckgroup.com](http://www.merckgroup.com)).

**1.3 Details of the supplier of the safety data sheet**

Company Merck KGaA \* 64271 Darmstadt \* Germany \* Phone:+49 6151 72-0

Responsible Department LS-QHC \* e-mail: [prodsafe@merckgroup.com](mailto:prodsafe@merckgroup.com)

**1.4 Emergency telephone number** Please contact the regional company representation in your country.

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**SECTION 2. Hazards identification****2.1 Classification of the substance or mixture**

This substance is not classified as dangerous according to European Union legislation.

**2.2 Label elements****Labelling (REGULATION (EC) No 1272/2008)***Precautionary statements*

Prevention

P260 Do not breathe dust.

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Catalogue No. 104873  
Product name Potassium dihydrogen phosphate for analysis EMSURE® ISO

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Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008.

## 2.3 Other hazards

None known.

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## SECTION 3. Composition/information on ingredients

### 3.1 Substance

Formula	KH <sub>2</sub> PO <sub>4</sub>	H <sub>2</sub> KO <sub>4</sub> P (Hill)
EC-No.	231-913-4	
Molar mass	136,08 g/mol	

Remarks	No disclosure requirement according to Regulation (EC) No. 1907/2006.
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### 3.2 Mixture

Not applicable

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## SECTION 4. First aid measures

### 4.1 Description of first aid measures

After inhalation: fresh air.

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

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

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

irritant effects, gastric pain, Diarrhoea, Nausea, Vomiting, Discomfort

### 4.3 Indication of any immediate medical attention and special treatment needed

No information available.

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# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Catalogue No. 104873

Product name Potassium dihydrogen phosphate for analysis EMSURE® ISO

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## 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.

Fire may cause evolution of:

Oxides of phosphorus

### 5.3 Advice for firefighters

#### *Special protective equipment for firefighters*

In the event of fire, wear self-contained breathing apparatus.

#### *Further information*

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

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## 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.

Advice for emergency responders: Protective equipment see section 8.

### 6.2 Environmental precautions

Do not empty into 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.

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Catalogue No. 104873

Product name Potassium dihydrogen phosphate for analysis EMSURE® ISO

---

## 6.4 Reference to other sections

Indications about waste treatment see section 13.

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## SECTION 7. Handling and storage

### 7.1 Precautions for safe handling

#### *Advice on safe handling*

Observe label precautions.

#### *Hygiene measures*

Change contaminated clothing. Wash hands after working with substance.

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

#### *Storage conditions*

Tightly closed. Dry.

Recommended storage temperature see product label.

### 7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

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## SECTION 8. Exposure controls/personal protection

### 8.1 Control parameters

### 8.2 Exposure controls

#### **Engineering measures**

Technical measures and appropriate working operations should be given priority over the use of personal protective equipment.

See section 7.1.

#### **Individual protection measures**

Protective clothing needs to be selected specifically for the workplace, depending on concentrations and quantities of the hazardous substances handled. The chemical resistance of the protective equipment should be enquired at the respective supplier.

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Catalogue No. 104873  
Product name Potassium dihydrogen phosphate for analysis EMSURE® ISO

---

## *Eye/face protection*

Safety glasses

## *Hand protection*

full contact:

Glove material:	Nitrile rubber
Glove thickness:	0,11 mm
Break through time:	> 480 min

splash contact:

Glove material:	Nitrile rubber
Glove thickness:	0,11 mm
Break through time:	> 480 min

The protective gloves to be used must comply with the specifications of EC Directive 89/686/EEC and the related standard EN374, for example KCL 741 Dermatril® L (full contact), KCL 741 Dermatril® L (splash contact).

The breakthrough times stated above were determined by KCL in laboratory tests acc. to EN374 with samples of the recommended glove types.

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](http://www.kcl.de)).

## *Respiratory protection*

required when dusts are generated.

Recommended Filter type: Filter P 1 (acc. to DIN 3181) for solid particles of inert substances

The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented.

## **Environmental exposure controls**

Do not empty into drains.

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## **SECTION 9. Physical and chemical properties**

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

The Safety Data Sheets for catalogue items are available at [www.merckgroup.com](http://www.merckgroup.com)

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Catalogue No. 104873  
Product name Potassium dihydrogen phosphate for analysis EMSURE® ISO

---

Form	solid
Colour	colourless
Odour	odourless
Odour Threshold	Not applicable
pH	4,2 - 4,6 at 20 g/l 20 °C
Melting point	ca. 253 °C (decomposition)
Boiling point/boiling range	Not applicable, (decomposition)
Flash point	does not flash
Evaporation rate	No information available.
Flammability (solid, gas)	No information available.
Lower explosion limit	Not applicable
Upper explosion limit	Not applicable
Vapour pressure	No information available.
Relative vapour density	No information available.
Density	2,33 g/cm <sup>3</sup> at 21,5 °C Method: Tested according to Annex V of Directive 67/548/EEC.

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Catalogue No. 104873  
Product name Potassium dihydrogen phosphate for analysis EMSURE® ISO

---

Relative density	No information available.
Water solubility	208 g/l at 20,0 °C Method: Tested according to Annex V of Directive 67/548/EEC. soluble
Partition coefficient: n-octanol/water	No information available.
Auto-ignition temperature	No information available.
Decomposition temperature	No information available.
Viscosity, dynamic	No information available.
Explosive properties	Not classified as explosive.
Oxidizing properties	none

## 9.2 Other data

Ignition temperature	not combustible
Bulk density	ca. 1.200 kg/m <sup>3</sup>
Particle size	Mean particle size < 0,045 mm

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## SECTION 10. Stability and reactivity

### 10.1 Reactivity

See section 10.3

### 10.2 Chemical stability

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

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Catalogue No. 104873

Product name Potassium dihydrogen phosphate for analysis EMSURE® ISO

---

## 10.3 Possibility of hazardous reactions

Violent reactions possible with:

Strong oxidizing agents, Bases, acids

## 10.4 Conditions to avoid

Strong heating (decomposition).

## 10.5 Incompatible materials

no information available

## 10.6 Hazardous decomposition products

in the event of fire: See section 5.

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## SECTION 11. Toxicological information

### 11.1 Information on toxicological effects

#### *Acute oral toxicity*

LD50 Rat: > 2.000 mg/kg

OECD Test Guideline 420

The value is given in analogy to the following substances: dipotassium hydrogen phosphate

Symptoms: Nausea, Vomiting, gastric pain, Diarrhoea, Discomfort

#### *Acute inhalation toxicity*

This information is not available.

#### *Acute dermal toxicity*

LD50 Rabbit: > 4.640 mg/kg

(RTECS)

#### *Skin irritation*

Rabbit

Result: No skin irritation

Draize Test

(ECHA)

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# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Catalogue No. 104873  
Product name Potassium dihydrogen phosphate for analysis EMSURE® ISO

---

## *Eye irritation*

Rabbit

Result: No eye irritation

Draize Test

(ECHA)

## *Sensitisation*

Sensitisation test: Mouse

Result: negative

Method: OECD Test Guideline 429

The value is given in analogy to the following substances: sodium dihydrogen phosphate

## *Germ cell mutagenicity*

This information is not available.

## *Carcinogenicity*

This information is not available.

## *Reproductive toxicity*

This information is not available.

## *Teratogenicity*

This information is not available.

## *Specific target organ toxicity - single exposure*

This information is not available.

## *Specific target organ toxicity - repeated exposure*

This information is not available.

## *Aspiration hazard*

This information is not available.

## **11.2 Further information**

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.

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Catalogue No. 104873

Product name Potassium dihydrogen phosphate for analysis EMSURE® ISO

---

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## SECTION 12. Ecological information

### 12.1 Toxicity

#### *Toxicity to fish*

LC0 *Leuciscus idus* (Golden orfe): ca. 900 mg/l; 48 h  
(IUCLID)

#### *Toxicity to bacteria*

static test EC50 activated sludge: > 1.000 mg/l; 3 h  
OECD Test Guideline 209

The value is given in analogy to the following substances: dipotassium hydrogen phosphate

### 12.2 Persistence and degradability

No information available.

### 12.3 Bioaccumulative potential

No information available.

### 12.4 Mobility in soil

No information available.

### 12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted.

### 12.6 Other adverse effects

#### *Additional ecological information*

Depending on the concentration, phosphates may contribute to the eutrophication of water supplies.

Discharge into the environment must be avoided.

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Catalogue No. 104873  
Product name Potassium dihydrogen phosphate for analysis EMSURE® ISO

---

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## SECTION 13. Disposal considerations

### *Waste treatment methods*

See [www.retrologistik.com](http://www.retrologistik.com) for processes regarding the return of chemicals and containers, or contact us there if you have further questions.

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## SECTION 14. Transport information

### Land transport (ADR/RID)

14.1 - 14.6 Not classified as dangerous in the meaning of transport regulations.

### Inland waterway transport (ADN)

Not relevant

### Air transport (IATA)

14.1 - 14.6 Not classified as dangerous in the meaning of transport regulations.

### Sea transport (IMDG)

14.1 - 14.6 Not classified as dangerous in the meaning of transport regulations.

### 14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not relevant

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## SECTION 15. Regulatory information

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

#### *EU regulations*

Major Accident Hazard SEVESO III  
Legislation Not applicable

Regulation (EC) No 1005/2009 on substances that deplete the ozone layer not regulated

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Catalogue No. 104873  
Product name Potassium dihydrogen phosphate for analysis EMSURE® ISO

---

Regulation (EC) No 850/2004 of the European Parliament and of the Council of 29 April 2004 on persistent organic pollutants and amending Directive 79/117/EEC not regulated

Substances of very high concern (SVHC) This product does not contain substances of very high concern according to Regulation (EC) No 1907/2006 (REACH), Article 57 above the respective regulatory concentration limit of  $\geq 0.1$  % (w/w).

#### *National legislation*

Storage class 10 - 13

## 15.2 Chemical safety assessment

For this product a chemical safety assessment was not carried out.

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## SECTION 16. Other information

### Training advice

Provide adequate information, instruction and training for operators.

### Labelling

#### *Precautionary statements*

Prevention

P260 Do not breathe dust.

### Key or legend to abbreviations and acronyms used in the safety data sheet

Used abbreviations and acronyms can be looked up at [www.wikipedia.org](http://www.wikipedia.org).

### Regional representation

This information is given on the authorised Safety Data Sheet for your country.

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Catalogue No. 104873

Product name Potassium dihydrogen phosphate for analysis EMSURE® ISO

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*The information contained herein is based on the present state of our knowledge. It characterises the product with regard to the appropriate safety precautions. It does not represent a guarantee of any properties of the product.*