



**Be Right™**

# SAFETY DATA SHEET

This safety data sheet complies with the requirements of: GB/T 17519-2013 and GB/T 16483-2008

Issue Date 11-Aug-2018

Version 1.4

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## Section 1: PRODUCT AND COMPANY IDENTIFICATION

### Product identifier

**Product Name** Potassium Chloride Standard Solution

### Other means of identification

**Product Code(s)** 2974249

**Safety data sheet number** M02715

**Alternate CAS Number** Not applicable

### Other Information

Not applicable

### Details of the supplier of the safety data sheet

#### **Supplier Address**

HACH CHINA Floor 23, Saite Building, Jianguomenwai Street  
No.22, Beijing 100004 Tel: 400-686-8899, 800-840-6026

#### **Manufacturer Address**

Hach Company, P.O. Box 389, Loveland, CO 80539, USA,  
+1(970) 669-3050

### Emergency Telephone - China

400-007-0792 - 24 Hour Service

### Recommended use of the chemical and restrictions on use

**Recommended Use** Standard solution. Water Analysis.

**Uses advised against** Consumer use.

**Restrictions on use** For Laboratory Use Only.

## Section 2: HAZARDS IDENTIFICATION

**Appearance** aqueous solution      **Physical state** Liquid.      **Odor** Odorless

### GHS Classification

Not a dangerous substance or mixture according to the Globally Harmonized System (GHS)

### Label elements

### Hazard statements

Not a dangerous substance or mixture according to the Globally Harmonized System (GHS)

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#### Physical Hazards

Not applicable.

#### Health hazards

Immediate Health Effects: Not applicable.

Chronic effects: Not applicable.

#### Environmental hazards

This material is a water pollutant. Keep out of drains, sewers, ditches and waterways. Minimize use of water to prevent environmental contamination. Hazardous to the ozone layer.

#### Other hazards which do not result in classification

Not applicable

### Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

**Chemical Family** Mixture

#### Substance

Not applicable

#### Mixture

**Chemical nature** aqueous solution.

Not a dangerous substance or mixture according to the Globally Harmonized System (GHS)

Chemical name	Percent Range	Formula	Molecular weight	CAS No	EC No
Potassium chloride	<0.1%	KCl	74.55	7447-40-7	231-211-8

### Section 4: FIRST AID MEASURES

#### Description of necessary first aid measures

**General advice** No hazards which require special first aid measures. Use first aid treatment according to the nature of the injury.

**Inhalation** Remove to fresh air.

**Skin contact** In the case of skin irritation or allergic reactions see a physician. Wash skin with soap and water.

**Eye contact** Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.

**Ingestion** Clean mouth with water and drink afterwards plenty of water.

#### For emergency responders

**Self-protection of the first aider** No information available.

#### Most important symptoms/effects, acute and delayed

**Symptoms** No information available.

#### Indication of immediate medical attention and special treatment needed, if necessary

**Note to physicians** Treat symptomatically.

## Section 5: FIRE FIGHTING MEASURES

**Suitable Extinguishing Media**  
**Suitable Extinguishing Media**

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Product itself does not burn.

**Unsuitable Extinguishing Media** No information available

**Specific hazards arising from the chemical**

**Specific hazards arising from the chemical** No information available.

**Flammable properties**

Not classified as flammable according to GHS criteria

**Explosive properties**

Not classified according to GHS criteria.

**Hazardous combustion products** No information available.

**Specific/special fire-fighting measures**

**Specific/special fire-fighting measures** No information available.

**Special protective equipment and precautions for fire-fighters**

**Special protective equipment for fire-fighters** Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear.  
Use personal protection equipment.

## Section 6: ACCIDENTAL RELEASE MEASURES

**Personal precautions, protective equipment and emergency procedures**

**Personal precautions** Ensure adequate ventilation.

**For emergency responders** Use personal protective equipment as required.

**Environmental precautions**

**Environmental precautions** See Section 12 for additional ecological information.

**Methods and material for containment and cleaning up**

**Methods for containment** Prevent further leakage or spillage if safe to do so.

**Methods for cleaning up**

Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Take up mechanically, placing in appropriate containers for disposal.

**Prevention of secondary hazards** Clean contaminated objects and areas thoroughly observing environmental regulations.

**Reference to other sections**

See section 8 for more information.  
See section 13 for more information.

## Section 7: HANDLING AND STORAGE

**Preventive measures for safe handling**

**Advice on safe handling** Handle in accordance with good industrial hygiene and safety practice.

**Precautions for safe handling**

**General Hygiene Considerations** Handle in accordance with good industrial hygiene and safety practice.

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

**Storage Conditions** Keep containers tightly closed in a dry, cool and well-ventilated place.

**Incompatible materials** Strong oxidizing agents, strong acids, and strong bases.

## Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

**Occupational exposure limits**

**Exposure Limits**

Chemical name	CAS No	Percent Range	China	ACGIH TLV	OSHA PEL
Potassium chloride	7447-40-7	<0.1%	NDF	NDF	NDF

Legend See section 16 for terms and abbreviations

**Appropriate engineering controls**

**Engineering Controls**

Showers  
Eyewash stations  
Ventilation systems. Technical measures and appropriate working operations should be given priority over the use of personal protective equipment. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

**Individual protection measures, such as personal protective equipment**

**Respiratory protection**

No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required. Ensure adequate ventilation.

**Hand Protection**

Wear suitable gloves. Barrier creams may help to protect the exposed areas of skin. Gloves must be inspected prior to use. The selected protective gloves have to satisfy the specifications of EU Directive 2016/425 and the standard EN 374 derived from it. Chemical resistant gloves made of butyl rubber or nitrile rubber category III according to EN 374-1:2016.

**Eye/face protection**

Wear safety glasses with side shields (or goggles).

**Skin and body protection**

No special protective equipment required. Avoid contact with eyes, skin and clothing.

**General Hygiene Considerations**

Handle in accordance with good industrial hygiene and safety practice.

**Environmental exposure controls**

Local authorities should be advised if significant spillages cannot be contained. Do not allow into any sewer, on the ground or into any body of water.

**Thermal hazards**

None under normal processing.

## Section 9: PHYSICAL AND CHEMICAL PROPERTIES

**Information on basic physical and chemical properties**

**Physical state** Liquid

**Appearance** aqueous solution

**Odor** Odorless

**Color** colorless

**Odor threshold** No information available

**Property**

**Values**

**Remarks • Method**

**Molecular weight** No data available

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**pH** 7 @ 20 °C

**Melting point/freezing point** ~ 0 °C / 32 °F

**Boiling point / boiling range** ~ 100 °C / 212 °F

**Evaporation rate** 1 (water = 1)

**Vapor pressure** 17.477 mm Hg / 2.33 kPa at 20 °C / 68 °F

**Relative vapor density** 0.62

**Specific gravity (water = 1 / air = 1)** 1.00

**Partition Coefficient (n-octanol/water)** Not applicable

**Soil Organic Carbon-Water Partition Coefficient** Not applicable

**Autoignition temperature** No data available

**Decomposition temperature** No information available

**Dynamic viscosity** 1 cP (mPa s) at 20 °C / 68 °F

**Kinematic viscosity** 1 cSt (mm<sup>2</sup>/s) at 20 °C / 68 °F

**Solubility(ies)**

**Water solubility**

<u>Water solubility classification</u>	<u>Water solubility</u>	<u>Water Solubility Temperature</u>
Completely soluble	> 10000 mg/L	25 °C / 77 °F

**Solubility in other solvents**

Acid	Soluble	> 1000 mg/L	25 °C / 77 °F
Most Polar Organic Solvents	Soluble	> 1000 mg/L	25 °C / 77 °F

**Other information**

**Metal Corrosivity**

**Steel Corrosion Rate** Not applicable  
**Aluminum Corrosion Rate** No data available

**Volatile Organic Compounds (VOC) Content**

<b>Chemical name</b>	<b>CAS No</b>	<b>Volatile organic compounds (VOC) content</b>	<b>CAA (Clean Air Act)</b>
Potassium chloride	7447-40-7	No data available	-

**Explosive properties**

**Upper explosion limit** Not applicable  
**Lower explosion limit** No data available

**Flammable properties**

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<b>Flash point</b>	No data available
<b>Flammability Limit in Air</b>	
<b>Upper flammability limit:</b>	No data available
<b>Lower flammability limit:</b>	No data available
<b>Oxidizing properties</b>	No data available.
<b>Bulk density</b>	Not applicable

## Section 10: STABILITY AND REACTIVITY

**Reactivity**  
Not applicable.

**Chemical stability**  
**Stability** Stable under normal conditions.

**Explosion data**  
    **Sensitivity to Mechanical Impact** None.  
    **Sensitivity to Static Discharge** None.

**Possibility of hazardous reactions**  
**Possibility of Hazardous Reactions** None under normal processing.

**Hazardous polymerization**  
None under normal processing.

**Conditions to avoid**  
**Conditions to avoid** None known based on information supplied.

**Incompatible materials**  
**Incompatible materials** Strong oxidizing agents, strong acids, and strong bases.

**Hazardous decomposition products**  
None known based on information supplied.

## Section 11: TOXICOLOGICAL INFORMATION

### Information on likely routes of exposure

#### Product Information

<b>Inhalation</b>	No known effect based on information supplied.
<b>Eye contact</b>	No known effect based on information supplied.
<b>Skin contact</b>	No known effect based on information supplied.
<b>Ingestion</b>	No known effect based on information supplied.
<b>Symptoms</b>	No information available.

**Acute toxicity**  
Based on available data, the classification criteria are not met

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**Mixture**

No data available.

**Ingredient Acute Toxicity Data**

Test data reported below.

**Oral Exposure Route**

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Potassium chloride (<0.1%) CAS#: 7447-40-7	Rat LD <sub>50</sub>	2600 mg/kg	None reported	None reported	IUCLID

**Unknown Acute Toxicity**

0% of the mixture consists of ingredient(s) of unknown toxicity.

- 0 % of the mixture consists of ingredient(s) of unknown acute oral toxicity
- 0 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity
- 0% of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)
- 0% of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor)
- 0% of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas)

**Acute Toxicity Estimations (ATE)**

<b>ATEmix (oral)</b>	No information available
<b>ATEmix (dermal)</b>	No information available
<b>ATEmix (inhalation-dust/mist)</b>	No information available
<b>ATEmix (inhalation-vapor)</b>	No information available
<b>ATEmix (inhalation-gas)</b>	No information available

**Skin corrosion/irritation**

Based on available data, the classification criteria are not met.

**Product Skin Corrosion/Irritation Data**

No data available.

**Ingredient Skin Corrosion/Irritation Data**

No data available.

**Serious eye damage/eye irritation**

Based on available data, the classification criteria are not met.

**Mixture**

No data available.

**Ingredient Eye Damage/Eye Irritation Data**

No data available.

**Respiratory or skin sensitization**

Based on available data, the classification criteria are not met.

**Mixture**

No data available.

**Ingredient Sensitization Data**

No data available.

**STOT - single exposure**

Based on available data, the classification criteria are not met.

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**Mixture**

No data available.

**Ingredient Specific Target Organ Toxicity Single Exposure Data**

Test data reported below.

**Oral Exposure Route**

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Potassium chloride (<0.1%) CAS#: 7447-40-7	Man LD <sub>Lo</sub>	20 mg/kg	None reported	None reported	RTECS

**STOT - repeated exposure**

Based on available data, the classification criteria are not met.

**Mixture**

No data available.

**Ingredient Specific Target Organ Toxicity Repeat Exposure Data**

Test data reported below.

**Oral Exposure Route**

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Potassium chloride (<0.1%) CAS#: 7447-40-7	Rat TD <sub>Lo</sub>	75600 mg/kg	42 days	Kidney, Ureter, or Bladder Urine volume increased	RTECS

**Carcinogenicity**

Based on available data, the classification criteria are not met.

**Mixture**

No data available.

**Ingredient Carcinogenicity Data**

No data available.

Chemical name	CAS No	ACGIH	IARC	NTP	OSHA
Potassium chloride	7447-40-7	-	-	-	-

**Legend**

<b>ACGIH (American Conference of Governmental Industrial Hygienists)</b>	Does not apply
<b>IARC (International Agency for Research on Cancer)</b>	Does not apply
<b>NTP (National Toxicology Program)</b>	Does not apply
<b>OSHA</b>	Does not apply

**Mutagenicity**

Based on available data, the classification criteria are not met.

**Mixture invitro Data**

No data available.

**Substance invitro Data**

Test data reported below.



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Chemical name	Test	Cell Strain	Reported dose	Exposure time	Results	Key literature references and sources for data
Potassium chloride (<0.1%) CAS#: 7447-40-7	Mutation in microorganisms	Mouse lymphocyte	2048 mmol/L	None reported	Positive test result for mutagenicity	RTECS

**Mixture in vivo Data**  
No data available.

**Substance in vivo Data**  
Test data reported below.

#### Oral Exposure Route

Chemical name	Test	Species	Reported dose	Exposure time	Results	Key literature references and sources for data
Potassium chloride (<0.1%) CAS#: 7447-40-7	Unscheduled DNA synthesis	Rat	1.5 mg/kg	None reported	Positive test result for mutagenicity	RTECS

**Reproductive toxicity**  
Based on available data, the classification criteria are not met.

**Product Skin Corrosion/Irritation Data**  
No data available.

**Ingredient Reproductive Toxicity Data**  
No data available.

**Aspiration hazard**  
Based on available data, the classification criteria are not met.

## Section 12: ECOLOGICAL INFORMATION

**Ecotoxicity** Based on available data, the classification criteria are not met.

**Unknown Aquatic Toxicity** 0% of the mixture consists of components(s) of unknown hazards to the aquatic environment.

#### Product Ecological Data

**Aquatic Acute Toxicity**  
No data available.

**Aquatic Chronic Toxicity**  
No data available.

#### Ingredient Ecological Data

**Aquatic Acute Toxicity**  
Test data reported below.

#### Fish

Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
Potassium chloride (<0.1%)	96 hours	<i>Pimephales promelas</i>	LC <sub>50</sub>	880 mg/L	IUCLID

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CAS#: 7447-40-7					
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**Aquatic Chronic Toxicity**

No data available.

**Persistence and degradability**

**Product Biodegradability Data**

No data available.

**Product Bioaccumulation Data**

No data available.

**Partition Coefficient (n-octanol/water)**

Not applicable

**Mobility**

**Soil Organic Carbon-Water Partition Coefficient**

Not applicable

**Other adverse effects**

No information available

**Section 13: DISPOSAL CONSIDERATIONS**

**Disposal methods**

**Waste from residues/unused products**

Dispose of waste in accordance with environmental legislation. Dispose of in accordance with local regulations.

**Contaminated packaging**

Do not reuse empty containers.

**Section 14: TRANSPORTATION INFORMATION**

**DOT**

Not regulated

**IMDG**

Not regulated

**IATA**

Not regulated

**China**

Not regulated

**Additional information**

There is a possibility that this product could be contained in a reagent set or kit composed of various compatible dangerous goods. If the item is not in a reagent set or kit, the classification given above applies.

If the item is part of a reagent set or kit the classification would change to the following:

UN3316 Chemical Kit, Hazard Class 9, Packing Group II or III.

If the item is not regulated, the Chemical Kit classification does not apply.

**Section 15: REGULATORY INFORMATION**

**National Regulations**

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**Law of the People's Republic of China on Prevention and Control of Occupational Diseases**

**Catalogue of occupational hazard factors:** Not applicable.  
**Catalogue of occupational diseases:** Not applicable.

**Regulations on the Control over Safety of Hazardous Chemicals**

**Inventory of hazardous chemicals** Not applicable.

**GB 18218-2009 Identification of major hazard installations for dangerous chemicals** Not applicable.

**List of hazardous chemicals under priority management** Not applicable.

**Regulations on Labor Protection in Workplaces Where Toxic Substances Are Used**

**Inventory of highly toxic goods** Not applicable.

**Regulations for Environmental Management on the First Import of Chemicals and the Import and Export of Toxic Chemicals**

**List of toxic chemicals severely restricted for import and export in China** Not applicable.

**Measures for the Environmental Management of New Chemical Substances**

**IECSC** Complies  
*IECSC - China Inventory of Existing Chemical Substances*

**International Inventories**

<b>TSCA</b>	Complies
<b>DSL/NDSL</b>	Complies
<b>EINECS/ELINCS</b>	Complies
<b>ENCS</b>	Complies
<b>KECL - Existing substances</b>	Complies
<b>PICCS</b>	Complies
<b>TCSI</b>	Complies
<b>AICS</b>	Complies
<b>NZIoC</b>	Complies

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory  
**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List  
**EINECS/ELINCS** - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances  
**ENCS** - Japan Existing and New Chemical Substances  
**KECL** - Korean Existing and Evaluated Chemical Substances  
**PICCS** - Philippines Inventory of Chemicals and Chemical Substances  
**TCSI** - Taiwan Chemical Substances Inventory  
**AICS** - Australian Inventory of Chemical Substances  
**NZIoC** - New Zealand Inventory of Chemicals

**International Regulations**

**The Montreal Protocol on Substances that Deplete the Ozone Layer** Not applicable

**The Stockholm Convention on Persistent Organic Pollutants** Not applicable

**The Rotterdam Convention** Not applicable

**Section 16: OTHER INFORMATION**

**Prepared By** Hach Product Compliance Department

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**Revision Note**

**Reference Sources for Section 11** See Section 11: TOXICOLOGICAL INFORMATION

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

ACGIH	ACGIH (American Conference of Governmental Industrial Hygienists)
ATSDR	ATSDR (Agency for Toxic Substances and Disease Registry)
CCRIS	CCRIS (Chemical Carcinogenesis Research Information System)
CDC	CDC (Center for Disease Control)
CEPA	CEPA (Canadian Environmental Protection Agency)
CICAD	CICAD (Concise International Chemical Assessment Documents)
ECHA	ECHA (The European Chemicals Agency)
EEA	EEA (European Environment Agency)
EPA	EPA (Environmental Protection Agency)
ERMA	ERMA (New Zealand's Environmental Risk Management Authority)
ECOSARS	Estimation through ECOSARS v1.11 part of the Estimation Programs Interface (EPI) Suite™
FDA	FDA (Food & Drug Administration)
GESTIS	GESTIS (Information System on Hazardous Substances of the German Social Accident Insurance)
HSDB	HSDB (Hazardous Substances Data Bank)
INERIS	INERIS (The National Industrial Environment and Risks Institute)
IPCS INCHEM	IPCS INCHEM (International Programme on Chemical Safety)
IUCLID	IUCLID (The International Uniform Chemical Information Database)
NITE	Japan National Institute of Technology and Evaluation (NITE)
NIH	NIH (National Institutes of Health)
NIOSH	NIOSH (National Institute for Occupational Safety and Health)
LOLI	LOLI (List of Lists - An International Chemical Regulatory Database)
NDF	no data
NICNAS	Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
NIOSH IDLH	Immediately Dangerous to Life or Health
OSHA	OSHA (Occupational Safety and Health Administration of the US Department of Labor)
PEEN	PEEN (Pan European Ecological Network)
RTECS	RTECS (Registry of Toxic Effects of Chemical Substances)
SIDS	SIDS (Screening Information Dataset) for High Volume Chemicals
SYKE	The Finnish Environment Institute (SYKE)
USDA	USDA (United States Department of Agriculture)
USDC	USDC (United States Department of Commerce)
WHO	WHO (World Health Organization)

**Legend - Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
X	Listed	Vacated	These values have no official status. The only binding levels of contaminants are those listed in the final OSHA PEL. These lists are for reference purposes only. Please note that some reference state regulations of these "liberated" exposure limits in their state regulations.
SKN*	Skin designation	SKN+	Skin sensitization
RSP+	Respiratory sensitization	**	Hazard Designation
C	Carcinogen	R	Reproductive toxicant
M	mutagen		

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**Disclaimer**

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**End of Safety Data Sheet**