

# SAFETY DATA SHEET

ANGUS CHEMICAL COMPANY

Product name : Potassium Chloride, USP Grade

Issue Date: 11/02/2017

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ANGUS CHEMICAL COMPANY encourages and expects you to read and understand the entire (M)SDS, as there is important information throughout the document. We expect you to follow the precautions identified in this document unless your use conditions would necessitate other appropriate methods or actions.

## 1. PRODUCT AND COMPANY IDENTIFICATION

Product name Potassium Chloride, USP Grade

### Manufacturer or supplier's details

Company name of supplier ANGUS CHEMICAL COMPANY

Address 1500 E. LAKE COOK ROAD  
Buffalo Grove IL 60089-6553

Customer Information Number +1-847-808-3711

E-mail address NAR\_CC@ANGUS.COM

Emergency telephone number 800-424-9300

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

Recommended use For industrial use.  
The ANGUS Chemical Company recommends that you use this product in a manner consistent with the listed use. If your intended use is not consistent with the stated use, please contact the Customer Information Group (see Section 1 of this data sheet).

## 2. HAZARDS IDENTIFICATION

### GHS Classification

Eye irritation Category 2A

### GHS Label elements, including precautionary statements

Hazard pictograms



Signal word

Warning

Hazard statements

Causes serious eye irritation.

Precautionary statements

**Prevention:**

Wash skin thoroughly after handling.

Wear eye protection/ face protection.

**Response:**

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

If eye irritation persists: Get medical advice/ attention.

**Other hazards**

None known.

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### 3. COMPOSITION/INFORMATION ON INGREDIENTS

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This product is a substance.

**Components**

Chemical Name	CAS-No.	Concentration (% w/w)
Potassium chloride	7447-40-7	>= 99.0 - <= 100.0 %

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### 4. FIRST AID MEASURES

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If inhaled	Move person to fresh air; if effects occur, consult a physician.
In case of skin contact	Wash off with plenty of water.
In case of eye contact	Immediately flush eyes with water; remove contact lenses, if present, after the first 5 minutes, then continue flushing eyes for at least 15 minutes. Obtain medical attention without delay, preferably from an ophthalmologist. Eye wash fountain should be located in immediate work area.
If swallowed	If swallowed, seek medical attention. Do not induce vomiting unless directed to do so by medical personnel.
Most important symptoms and effects, both acute and delayed	Aside from the information found under Description of first aid measures (above) and Indication of immediate medical attention and special treatment needed (below), any additional important symptoms and effects are described in Section 11:

Protection of first-aiders	<p>Toxicology Information.                  First Aid responders should pay attention to self-protection and use the recommended protective clothing (chemical resistant gloves, splash protection).                  If potential for exposure exists refer to Section 8 for specific personal protective equipment.</p>
Notes to physician	<p>Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.                  No specific antidote.</p>

**5. FIREFIGHTING MEASURES**

Suitable extinguishing media	<p>This material does not burn. If exposed to fire from another source, use suitable extinguishing agent for that fire.</p>
Specific hazards during firefighting	<p>None known.</p>
Hazardous combustion products	<p>Fire conditions may cause this product to decompose. Refer to section 10 - Thermal Decomposition.</p>
Further information	<p>Keep people away. Isolate fire and deny unnecessary entry. This material does not burn. Fight fire for other material that is burning.</p>
Special protective equipment for firefighters	<p>Wear positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots, and gloves).                  If protective equipment is not available or not used, fight fire from a protected location or safe distance.</p>

**6. ACCIDENTAL RELEASE MEASURES**

Personal precautions, protective equipment and emergency procedures	<p>Isolate area.                  Keep unnecessary and unprotected personnel from entering the area.                  Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.                  Refer to section 7, Handling, for additional precautionary measures.</p>
Environmental precautions	<p>Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information.</p>
Methods and materials for containment and cleaning up	<p>Contain spilled material if possible.                  Collect in suitable and properly labeled containers.                  See Section 13, Disposal Considerations, for additional information.</p>

**7. HANDLING AND STORAGE**

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Advice on safe handling	Keep container closed. Avoid contact with eyes, skin, and clothing. Do not swallow. Wash thoroughly after handling. See Section 8, EXPOSURE CONTROLS AND PERSONAL PROTECTION.
Conditions for safe storage	Avoid temperatures above 40°C (104°F) Keep container tightly closed in a dry and well-ventilated place. Avoid moisture. Shelf life: Use within 48

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## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

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### Components with workplace control parameters

Contains no substances with occupational exposure limit values.

### Engineering measures

Local exhaust ventilation may be necessary for some operations.  
Use local exhaust ventilation, or other engineering controls to maintain airborne levels below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, general ventilation should be sufficient for most operations.

### Personal protective equipment

#### Respiratory protection

Respiratory protection should be worn when there is a potential to exceed the exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, wear respiratory protection when adverse effects, such as respiratory irritation or discomfort have been experienced, or where indicated by your risk assessment process.  
In dusty or misty atmospheres, use an approved particulate respirator.

#### Hand protection

Use gloves chemically resistant to this material when prolonged or frequently repeated contact could occur. If hands are cut or scratched, use gloves chemically resistant to this material even for brief exposures. Examples of preferred glove barrier materials include: Neoprene. Polyvinyl chloride ("PVC" or "vinyl"). Nitrile/butadiene rubber ("nitrile" or "NBR"). When prolonged or frequently repeated contact may occur, a glove is recommended to prevent contact with the solid material. NOTICE: The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all relevant workplace factors such as, but not limited to: Other chemicals which may be

handled, physical requirements (cut/puncture protection, dexterity, thermal protection), potential body reactions to glove materials, as well as the instructions/specifications provided by the glove supplier.

Skin and body protection      Wear clean, body-covering clothing.

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

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Appearance	Solid.
Color	White
Odor	Odorless
Odor Threshold	Odorless Method: Literature
pH	7 Method: Supplier saturated
Freezing point	No test data available
Melting point/range	770 °C (1,418 °F) Method: Supplier
Boiling point/boiling range	1,500 °C (2,732 °F) Method: Supplier
Flash point	Test Type: closed cup No test data available
Evaporation rate	No test data available
Flammability (solid, gas)	No data available.
Upper explosion limit	No test data available
Lower explosion limit	No test data available
Vapor Pressure	14.00 mmHg (20 °C) Method: Supplier
Relative Vapor Density (air = 1)	0.7 Method: Supplier
Relative density	1.984 (20 °C) Method: Supplier (water = 1)
Water solubility	340 G/L (20 °C) Method: Supplier

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Partition coefficient: n-octanol/water	Partitioning from water to n-octanol is not applicable. No bioconcentration is expected because of the relatively high water solubility.
Auto-ignition temperature	No test data available
Decomposition temperature	No test data available
Viscosity Viscosity, kinematic	No test data available
Explosive properties	No data available.
Oxidizing properties	No data available.
Molecular weight	74.55 g/mol Method: Supplier
Hygroscopic	yes

NOTE: The physical data presented above are typical values and should not be construed as a specification.

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## 10. STABILITY AND REACTIVITY

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Reactivity	No dangerous reaction known under conditions of normal use.
Chemical stability	Hygroscopic Thermally stable at typical use temperatures.
Possibility of hazardous reactions	Polymerization will not occur.
Conditions to avoid	Exposure to elevated temperatures can cause product to decompose. Avoid moisture.
Incompatible materials	Avoid contact with: Strong acids. Strong oxidizers. Sulfuric acid. Bromine trifluoride. Potassium permanganate
Hazardous decomposition products	Decomposition products can include and are not limited to: Chlorine. Hydrogen chloride.

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## 11. TOXICOLOGICAL INFORMATION

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*Toxicological information on this product or its components appear in this section when such data is available.*

### Acute toxicity

#### Product:

Acute oral toxicity

Remarks: Low toxicity if swallowed.  
Small amounts swallowed incidentally as a result of normal handling operations are not likely to cause injury; however, swallowing larger amounts may cause injury.  
Gastrointestinal irritation.  
Excessive exposure may cause:

LD50 (Rat, female): 3,020 mg/kg

Acute inhalation toxicity

Remarks: Dust may cause irritation to upper respiratory tract (nose and throat).

Remarks: The LC50 has not been determined.

Acute dermal toxicity

Remarks: Prolonged skin contact is unlikely to result in absorption of harmful amounts.

Remarks: The dermal LD50 has not been determined.

### Skin corrosion/irritation

#### Product:

Remarks: Prolonged contact may cause skin irritation with local redness.  
Repeated contact may cause skin irritation with local redness.  
May cause more severe response if skin is abraded (scratched or cut).

### Serious eye damage/eye irritation

#### Product:

Result: Eye irritation  
Remarks: May cause severe eye irritation.  
May cause slight temporary corneal injury.  
Effects may be slow to heal.

### Respiratory or skin sensitization

#### Product:

Remarks: For skin sensitization:  
No relevant data found.

Remarks: For respiratory sensitization:  
No relevant data found.

### Carcinogenicity

#### Product:

Did not cause cancer in laboratory animals.

### IARC

No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

**OSHA** No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

**NTP** No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

**Teratogenicity**

**Product**

Did not cause birth defects or any other fetal effects in laboratory animals.

**Mutagenicity**

**Product**

In vitro genetic toxicity studies were positive.  
However, the relevance of this to humans is unknown.

**Reproductive toxicity**

**Product:**

No relevant data found.

**STOT - single exposure**

**Product:**

Assessment: Evaluation of available data suggests that this material is not an STOT-SE toxicant.

**Repeated dose toxicity**

**Product:**

Remarks: In animals, effects have been reported on the following organs:  
Gastrointestinal tract.  
Heart.  
Kidney.

**Aspiration toxicity**

**Product:**

Aspiration Hazard Based on physical properties, not likely to be an aspiration hazard.

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**12. ECOLOGICAL INFORMATION**

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**Ecotoxicity**

**Product:**

Toxicity to fish

Remarks: Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested).



	LC50 (Pimephales promelas (fathead minnow)): 880 mg/l Exposure time: 96.0 h Test Type: Static Method: OECD Test Guideline 203
Toxicity to daphnia and other aquatic invertebrates	EC50 (Daphnia magna): 440.00 mg/l Exposure time: 48.0 h Test Type: static test Method: OECD Test Guideline 202
Toxicity to algae	EC50 (Desmodesmus subspicatus (green algae)): > 100 mg/l Exposure time: 72 h Test Type: static test Method: OECD Test Guideline 201 GLP: yes

**Persistence and degradability****Product:**

Biodegradability

Remarks: Biodegradation is not applicable.

**Bioaccumulative potential****Product:**

Partition coefficient: n-octanol/water

Remarks: Partitioning from water to n-octanol is not applicable.  
No bioconcentration is expected because of the relatively high water solubility.**Mobility in soil****Product:**

Distribution among environmental compartments

Remarks: No relevant data found.

**Other adverse effects****Product:**

Results of PBT and vPvB assessment

This substance has not been assessed for persistence, bioaccumulation and toxicity (PBT).

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**13. DISPOSAL CONSIDERATIONS**

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**Disposal methods**

Waste from residues

DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OF WATER.  
All disposal practices must be in compliance with all Federal, State/Provincial and local laws and regulations.  
Regulations may vary in different locations.  
Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator.  
THE INFORMATION PRESENTED HERE PERTAINS ONLY

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TO THE PRODUCT AS SHIPPED IN ITS INTENDED  
CONDITION AS DESCRIBED IN MSDS SECTION:  
Composition Information.  
FOR UNUSED & UNCONTAMINATED PRODUCT, the  
preferred options include sending to a licensed, permitted:  
Incinerator or other thermal destruction device.  
Landfill.  
ANGUS HAS NO CONTROL OVER THE MANAGEMENT  
PRACTICES OR MANUFACTURING PROCESSES OF  
PARTIES HANDLING OR USING THIS MATERIAL.

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## 14. TRANSPORT INFORMATION

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### International Regulation

#### IATA-DGR

Not regulated as a dangerous good

#### IMDG-Code

Not regulated as a dangerous good

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

Not applicable for product as supplied.

### National Regulations

#### 49 CFR (DOT) – NON BULK

Not regulated as a dangerous good

#### 49 CFR (DOT) - BULK

Not regulated as a dangerous good

*This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Transportation classifications may vary by container volume and may be influenced by regional or country variations in regulations. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.*

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## 15. REGULATORY INFORMATION

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### OSHA Hazards

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

### EPCRA - Emergency Planning and Community Right-to-Know Act

#### CERCLA Reportable Quantity

This material does not contain any components with a CERCLA RQ.

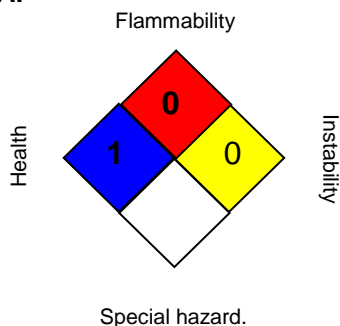
#### SARA 304 Extremely Hazardous Substances Reportable Quantity



**16. OTHER INFORMATION**

**Further information**

**NFPA:**



**HMIS III:**

<b>HEALTH</b>	<b>0</b>
<b>FLAMMABILITY</b>	<b>0</b>
<b>PHYSICAL HAZARD</b>	<b>0</b>

0 = not significant, 1 =Slight,  
 2 = Moderate, 3 = High  
 4 = Extreme, \* = Chronic

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US / EN

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

**Full text of other abbreviations**

(Q)SAR - (Quantitative) Structure Activity Relationship; ASTM - American Society for the Testing of Materials; bw - Body weight; DIN - Standard of the German Institute for Standardisation; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying

Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISO - International Organisation for Standardization; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative; DSL - Domestic Substances List (Canada); KECI - Korea Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); AICS - Australian Inventory of Chemical Substances; IECSC - Inventory of Existing Chemical Substances in China; ENCS - Existing and New Chemical Substances (Japan); ISHL - Industrial Safety and Health Law (Japan); PICCS - Philippines Inventory of Chemicals and Chemical Substances; NZIoC - New Zealand Inventory of Chemicals; TCSI - Taiwan Chemical Substance Inventory; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; DOT - Department of Transportation; EHS - Extremely Hazardous Substance; HMIS - Hazardous Materials Identification System; MSHA - Mine Safety and Health Administration; NFPA - National Fire Protection Association; RCRA - Resource Conservation and Recovery Act; RQ - Reportable Quantity; SARA - Superfund Amendments and Reauthorization Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; GLP - Good Laboratory Practice; ERG - Emergency Response Guide; NTP - National Toxicology Program; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods