



# Safety Data Sheet

Issue Date: 20-Mar-2015

Revision Date: 21-Mar-2015

Version 1

## 1. IDENTIFICATION

### Product Identifier

**Product Name** Brandt Reaction K LS

### Other means of identification

**Product Code** 27083

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

**Recommended Use** Fertilizer.

### Manufacturer/Importer/Supplier/Distributor information

#### Manufacturer

**Company name** Brandt Consolidated, Inc.  
**Address** 2935 South Koke Mill Road  
Springfield, IL 62711  
United States  
**Telephone** Corporate Office 1-217-547-5800  
**Website** www.brandt.co  
**E-mail** msds@brandt.co  
**Contact person** EH&S / Regulatory Department  
**Emergency phone number** Not available.  
CHEMTREC (24 hours):  
USA, Canada, Puerto Rico 1-800-424-3900  
Virgin Islands 1-800-424-3900  
International Maritime +1 (703) 527-3887

## 2. HAZARDS IDENTIFICATION

**Appearance** Cloudy liquid

**Physical State** Liquid

**Odor** Musty

### Classification

This chemical does not meet the hazardous criteria set forth by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200). However, this Safety Data Sheet (SDS) contains valuable information critical to the safe handling and proper use of this product. This SDS should be retained and available for employees and other users of this product.

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No	Weight-%
Potassium Nitrate	7757-79-1	Proprietary
Potassium Sulfate	7778-80-5	Proprietary
Citric Acid	77-92-9	Proprietary

\*\*If Chemical Name/CAS No is "proprietary" and/or Weight-% is listed as a range, the specific chemical identity and/or percentage of composition has been withheld as a trade secret.\*\*

## 4. FIRST-AID MEASURES

### First Aid Measures

<b>General Advice</b>	Provide this SDS to medical personnel for treatment.
<b>Eye Contact</b>	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If eye irritation persists: Get medical advice/attention.
<b>Skin Contact</b>	Wash off immediately with plenty of water. Take off contaminated clothing. Wash contaminated clothing before reuse.
<b>Inhalation</b>	Remove exposed individual(s) to fresh air for 20 minutes. Consult a physician / poison center if individual's condition declines or if symptoms persist.
<b>Ingestion</b>	Drink large quantities of water or milk. Do not induce vomiting. Contact a physician.

### Most important symptoms and effects

<b>Symptoms</b>	May cause eye, skin and respiratory tract irritation. Ingestion may result in nausea, vomiting, diarrhea, blood in vomitus and stools, burning pain in the mouth and throat, abdominal pain, lethargy, confusion, edema, leukocytosis, hyperglycemia, acidosis, shock, liver and kidney damage, and other gastrointestinal and neurologic symptoms and damage. Ingestion by a child of more than 60 ml. (2 oz.) or by an adult of more than 150 ml. (5 oz.) may be fatal.
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### Indication of any immediate medical attention and special treatment needed

<b>Notes to Physician</b>	Treat symptomatically.
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## 5. FIRE-FIGHTING MEASURES

### Suitable Extinguishing Media

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

**Unsuitable Extinguishing Media** Not determined.

### Specific Hazards Arising from the Chemical

Product is not flammable.

### Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

## 6. ACCIDENTAL RELEASE MEASURES

### Personal precautions, protective equipment and emergency procedures

<b>Personal Precautions</b>	Use personal protective equipment as required.
<b>Environmental Precautions</b>	See Section 12 for additional Ecological Information.

### Methods and material for containment and cleaning up

<b>Methods for Containment</b>	Prevent further leakage or spillage if safe to do so.
<b>Methods for Clean-Up</b>	Keep in suitable, closed containers for disposal.

**7. HANDLING AND STORAGE**

**Precautions for safe handling**

**Advice on Safe Handling** Wash thoroughly after handling. Use personal protection recommended in Section 8. Keep/Store away from clothing/incompatible/combustible materials.

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

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

**Incompatible Materials** Strong caustics. Flammable/combustible materials.

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

**Exposure Guidelines**

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Citric Acid 77-92-9	-	15 mg / m3 (Total)	-

**Appropriate engineering controls**

**Engineering Controls** Apply technical measures to comply with the occupational exposure limits.

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

**Eye/Face Protection** Wear eye/face protection.

**Skin and Body Protection** Acid-resistant gloves such as rubber or neoprene.

**Respiratory Protection** Ensure adequate ventilation, especially in confined areas.

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

**9. PHYSICAL AND CHEMICAL PROPERTIES**

**Information on basic physical and chemical properties**

<b>Physical State</b>	Liquid	<b>Odor</b>	Musty
<b>Appearance</b>	Cloudy liquid	<b>Odor Threshold</b>	Not determined
<b>Color</b>	Cloudy		

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	2.51	
Melting Point/Freezing Point	Not determined	
Boiling Point/Boiling Range	100 °C / 212 °F	
Flash Point	Not determined	
Evaporation Rate	Not determined	
Flammability (Solid, Gas)	n/a-liquid	
Upper Flammability Limits	Not determined	
Lower Flammability Limit	Not determined	
Vapor Pressure	Not determined	
Vapor Density	Not determined	
Specific Gravity	1.11	
Water Solubility	By Wt. Approx. 98%	
Solubility in other solvents	Not determined	
Partition Coefficient	Not determined	
Auto-ignition Temperature	Not determined	

<b>Decomposition Temperature</b>	Not determined
<b>Kinematic Viscosity</b>	Not determined
<b>Dynamic Viscosity</b>	Not determined
<b>Explosive Properties</b>	Not determined
<b>Oxidizing Properties</b>	Not determined

## 10. STABILITY AND REACTIVITY

### Reactivity

Not reactive under normal conditions.

### Chemical Stability

Stable under recommended storage conditions.

### Possibility of Hazardous Reactions

None under normal processing.

### Conditions to Avoid

Incompatible Materials.

### Incompatible Materials

Strong caustics. Flammable/combustible materials.

### Hazardous Decomposition Products

None known based on information supplied.

## 11. TOXICOLOGICAL INFORMATION

### Information on likely routes of exposure

#### Product Information

<b>Eye Contact</b>	Direct contact with eyes may cause temporary irritation.
<b>Skin Contact</b>	May cause temporary irritation on skin contact.
<b>Inhalation</b>	Avoid breathing vapors or mists.
<b>Ingestion</b>	Ingestion may cause irritation to mucous membranes.

### Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Potassium Nitrate 7757-79-1	= 3015 mg/kg ( Rat )	-	-
Potassium Sulfate 7778-80-5	= 6600 mg/kg ( Rat )	-	-
Citric Acid 77-92-9	= 3000 mg/kg ( Rat )	-	-

### Information on physical, chemical and toxicological effects

<b>Symptoms</b>	Please see section 4 of this SDS for symptoms.
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**Delayed and immediate effects as well as chronic effects from short and long-term exposure****Carcinogenicity**

Nitrate or nitrite (ingested) under conditions that result in endogenous nitrosation are considered IARC group 2A carcinogens.

Chemical Name	ACGIH	IARC	NTP	OSHA
Potassium Nitrate 7757-79-1		Group 2A		X

**Legend**

*IARC (International Agency for Research on Cancer)*

*Group 2A - Probably Carcinogenic to Humans*

*OSHA (Occupational Safety and Health Administration of the US Department of Labor)*

*X - Present*

**Chronic toxicity**

Chronic exposure may cause pneumonia, liver damage and neurologic damage.

**Numerical measures of toxicity**

Not determined

**12. ECOLOGICAL INFORMATION****Ecotoxicity**

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

**Component Information**

Chemical Name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Potassium Sulfate 7778-80-5	2900: 72 h <i>Desmodesmus subspicatus</i> mg/L EC50	653: 96 h <i>Lepomis macrochirus</i> mg/L LC50 3550: 96 h <i>Lepomis macrochirus</i> mg/L LC50 static 510 - 880: 96 h <i>Pimephales promelas</i> mg/L LC50 static		890: 48 h <i>Daphnia magna</i> mg/L EC50
Citric Acid 77-92-9		1516: 96 h <i>Lepomis macrochirus</i> mg/L LC50 static		120: 72 h <i>Daphnia magna</i> mg/L EC50

**Persistence/Degradability**

Not determined.

**Bioaccumulation**

Not determined.

**Mobility**

Chemical Name	Partition Coefficient
Citric Acid 77-92-9	-1.72

**Other Adverse Effects**

Not determined

**13. DISPOSAL CONSIDERATIONS****Waste Treatment Methods****Disposal of Wastes**

Disposal should be in accordance with applicable regional, national and local laws and regulations.

**Contaminated Packaging** Disposal should be in accordance with applicable regional, national and local laws and regulations.

**California Hazardous Waste Status**

Chemical Name	California Hazardous Waste Status
Potassium Nitrate 7757-79-1	Ignitable Reactive

**14. TRANSPORT INFORMATION**

**Note** Please see current shipping paper for most up to date shipping information, including exemptions and special circumstances.

**DOT** Not regulated

**IATA** Not regulated

**IMDG** Not regulated

**15. REGULATORY INFORMATION**

**International Inventories**

Chemical Name	TSCA	DSL	NDSL	EINECS	ELINCS	ENCS	IECSC	KECL	PICCS	AICS
Potassium Nitrate	Present	X		Present		Present	X	Present	X	X
Potassium Sulfate	Present	X		Present		Present	X	Present	X	X
Citric Acid	Present	X		Present		Present	X	Present	X	X

**Legend:**

- 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*
- IECSC - China Inventory of Existing Chemical Substances*
- KECL - Korean Existing and Evaluated Chemical Substances*
- PICCS - Philippines Inventory of Chemicals and Chemical Substances*
- AICS - Australian Inventory of Chemical Substances*

**US Federal Regulations**

**CERCLA**

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355).

**SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical Name	CAS No	Weight-%	SARA 313 - Threshold Values %
Potassium Nitrate - 7757-79-1	7757-79-1	Proprietary	1.0

**CWA (Clean Water Act)**

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

**US State Regulations**

**California Proposition 65**

This product does not contain any Proposition 65 chemicals.

**U.S. State Right-to-Know Regulations**

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Potassium Nitrate 7757-79-1	X	X	X

**16. OTHER INFORMATION**

<b><u>NFPA</u></b>	<b>Health Hazards</b>	<b>Flammability</b>	<b>Instability</b>	<b>Special Hazards</b>
	1	0	0	Not determined
<b><u>HMIS</u></b>	<b>Health Hazards</b>	<b>Flammability</b>	<b>Physical Hazards</b>	<b>Personal Protection</b>
	Not determined	Not determined	Not determined	Not determined

Issue Date: 20-Mar-2015  
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 Revision Note: New product

**Disclaimer**

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.

**End of Safety Data Sheet**