



Revision Date: November 14, 2019

SAFETY DATA SHEET

POTASSIUM BENZOATE POWDER

PRODUCT INFORMATION AND COMPANY IDENTIFICATION

Product Name: Potassium Benzoate Powder
INCI Name: Potassium Benzoate
CAS Number: 582-25-2
Recommended Use: Additive, Industrial, Food and pharmaceutical applications
Distributor: Chemistry Connection
253 Sturgis Road
Conway, AR 72034
Phone: 501-470-9689
Emergency Contact: Chemtrec: 800-424-9300

1. HAZARD IDENTIFICATION

Classification of the chemical in accordance with 29 CFR 1910.1200(d)

Eye Irritation, category 2
Combustible Dust (OSHA Defined)

Label elements in accordance with 29 CFR 1910.1200(f)

Hazard Pictogram(s)



Signal Word

Warning

Hazard Statements

H319 Causes serious eye irritation
USH001 May form combustible dust concentrations in air

Precautionary Statements

P264 Wash thoroughly after handling
P280 Wear eye protection/face protection
IF IN EYES: Rinse cautiously with water for several minutes.
P305+P351+P338 Remove contact lenses, if present and easy to do. Continue rinsing
P337+P313 If eye irritation persists: Get medical advice/attention

Hazards not classified No additional information

Potential physical and environmental effects May form combustible dust concentrations in air

Potential health effects

Acute Causes serious eye irritation. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons. Dust inhalation may cause respiratory irritation. Repeated or prolonged skin contact may cause irritation. Ingestion may cause irritation

Chronic Prolonged or repeated contact may irritate the skin, causing dermatitis

2. COMPOSITION/INFORMATION ON INGREDIENTS

INCI NAME	CAS NO.	CONCENTRATION (%)
Potassium Benzoate	582-25-2	95 - 100

Amounts specified are typical and do not represent a specification. Remaining components are proprietary, non-hazardous, an/or present at amounts below reportable limits. Exact percentage values for components are proprietary in accordance with 29 CFR 1910.1200(i).

3. FIRST AID MEASURES

General If irritation or other symptoms occur or persists from any route of exposure, remove the effected individual from the area: see a physician/get medical attention

Eye Contact Immediately flush eyes with plenty of clean water for an extended time, not less than 15 minutes. Flush longer if there is any indication of residual chemical in the eye. Ensure adequate flushing of the eyes by separating the eyelids with fingers and roll eyes in a circular motion. If eye irritation persists: get medical attention

Skin Contact Wash the affected area thoroughly with plenty of soap and water. Get medical attention if symptoms occur.

Inhalation If affected, remove to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Call a POISON CENTER or doctor/physician if you feel unwell

Ingestion Do not induce vomiting. Never give anything by mouth to an unconscious person. Rinse out the mouth with water. Get medical attention immediately.

Protection of first aid responders Wear proper personal protective clothing and equipment

Symptoms both acute and delayed Coughing, irritation. Preexisting sensitization, skin and/or respiratory disorders or diseases may be aggravated.

Indication of immediate/special treatment needed Treat symptomatically

4. FIRE FIGHTING MEASURES

NFPA Flammability class N/A (Combustible solid)

Suitable Extinguishing Media Use water spray, dry chemical, or foam. Carbon dioxide may be ineffective on larger fires due to a lack of cooling capacity which may result in re-ignition

Unsuitable Extinguishing Media Avoid hose streams or any method which will create dust clouds

Unusual Fire/explosion Hazards Concentrated dust/air combinations may produce explosive conditions. As with all organic dusts, fine particles suspended in air in critical proportions and in the presence of an ignition source may ignite and/or explode. Dust may be sensitive to ignition by electrostatic discharge, electrical arcs, sparks, welding torches, cigarettes, open flame, or other significant heat sources. As a precaution, implement standard safety measures for handling finely divided organic powders

Hazardous Combustion Products Irritating or toxic substances may be emitted upon burning, combustion or decomposition.

Special Precautions for Fire-fighters Water spray (fog) can be used to absorb heat and to cool and protect surrounding exposed material. Avoid hose streams or any method which will create dust clouds. Wear self-contained breathing apparatus (SCBA) equipped with a full face piece and operated in a pressure-demand mode (or other positive pressure mode) and approved protective clothing. Personnel without suitable respiratory protection must leave the area to prevent significant exposure to hazardous gases from combustion, burning, or decomposition. In an enclosed or poorly ventilated area, wear SCBA during clean up immediately after a fire as well as during the attack phase of firefighting operations.

5. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective equipment, Emergency procedures If spilled in an enclosed area, ventilate. Avoid raising powdered material due to explosion hazard. Use spark proof and explosion proof equipment. If inhalation of dust cannot be avoided wear an approved particulate respirator. PPE must be worn.

Environmental Precautions	Do not flush product into public sewer, water systems or surface waters.
Methods for clean-up containment	Contain Spill. Wear proper personal protective clothing and equipment. Using care to avoid dust generation, vacuum or sweep into a container for re-use or disposal. Use approved industrial vacuum cleaner for removal. Avoid causing dust. Place into labeled, closed container; store in safe location to await disposal.

6. HANDLING AND STORAGE

Precautions for Safe Handling	<p>As with any chemical product, use good laboratory/workplace procedures. Wash thoroughly after handling this product. Always wash up before eating, smoking or using the facilities. Use under well-ventilated conditions. Avoid eye/skin contact. Avoid drinking, tasting, swallowing or ingesting this product. Avoid routine inhalation of dust of any kind. Exercise care when emptying containers, sweeping, mixing or doing other tasks which can create dust. Wash contaminated clothing before re-use. Provide eyewash fountains and safety showers in the work area. As a precaution to control dust explosion potential, implement the following safety measures: Eliminate ignition sources (e.g. sparks, static buildup, excessive heat, etc.) In general, dust of organic materials is a static charge generator which may be ignited by electrostatic discharge, electrical arcs, sparks, welding torches, cigarettes, open flame, or other significant heat sources. Use spark proof tools and equipment. Bond, ground and properly vent conveyors, dust control devices and other transfer equipment. Prohibit flow of polymer, powder or dust through non-conductive ducts, vacuum hoses or pipes, etc.: only use grounded, electrically conductive transfer lines when pneumatically conveying product. Good housekeeping and controlling of dusts are necessary for safe handling of product. Prevent accumulation of dust (e.g., well-ventilated conditions, promptly vacuuming spills, cleaning overhead horizontal surfaces, etc.) A properly engineered explosion suppression system must be considered. See standards such as National Fire Protection Association NFPA 654, "Standard for the Prevention of Fire and Dust Explosions from the manufacturing, processing, and handling of combustible particulate solids"; NFPA 69, "Standard on explosion prevention systems"; NFPA 68, "Standard on Explosion Protection by deflagration venting"; NFPA 77, "Recommended practice on static electricity" and other standards as the need exists.</p>
Safe Storage	Store cool and dry, under well-ventilated conditions away from incompatible substances. Do not store in open, unlabeled or mislabeled containers. Keep container closed when not in use. Do not reuse empty container without commercial cleaning or reconditioning. Product will absorb water vapor (hygroscopic).

7. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational exposure limits (OEL)			
Chemical Name	ACGIH-TWA	OSHA-PEL	OSHA-Ceiling
Potassium Benzoate	Not Established	Not Established	Not Established
	ACGIH-STEL	OSHA-STEL	Mexico
	Not Established	Not Established	Not Established

Exposure Controls**Appropriate engineering controls**

Always provide effective general and, when necessary, local exhaust ventilation to draw dust from workers to prevent routine inhalation. Ventilation must be adequate to maintain the ambient workplace atmosphere below the exposure limit(s) outlined in the SDS. Eliminate ignition sources (e.g. sparks, static buildup, excessive heat, etc.) Prohibit flow of powder or dust through non-conductive ducts, vacuum hoses, or pipes etc. Bond, ground and properly vent conveyors, dust control devices and other transfer equipment.

Individual Protection measures and equipment**Eye/Face protection**

Safety glasses or goggles required

Skin/Body protection

Wear protective gloves. Use good laboratory/workplace procedures including personal protective clothing: lab coat, safety glasses and protective gloves.

Respiratory protection

In case of insufficient ventilation, wear suitable respiratory equipment. If inhalation of dust cannot be avoided, wear an approved particulate respirator. Use respirator in accordance with manufacturer's use limitations and OSHA standard 1910.134 (29 CFR)

Further information

Eyewash fountains and safety showers are recommended in the work area.

8. PHYSICAL AND CHEMICAL PROPERTIES

Form	Powder
Appearance	White
Odor	Odorless
Odor threshold	Not available
Solubility in water	Appreciable
Evaporation rate	Not available
Vapor pressure	Negligible @ 20°C
Vapor density	Not available
Viscosity	Not available
Melting point/ Freezing point	> 300°C (> 572°F)

Oxidizing properties	Not oxidizing	
Explosive properties	Not explosive	
Decomposition temperature	Not available	
pH	Not available	
Relative density	1.5	
Partition coefficient (n-octanol/water)	1.88 (Benzoic acid)	
% Volatile by weight	Not available	
VOC	Not available	
Boiling point °C	Not available	
Boiling point °F	Not available	
Flash point	Not applicable	
Auto-ignition temperature	> 510 °C (> 950°F)	
Flammability (solid, gas)	Not flammable (may form combustible dust-air mixtures)	
Flammability or Explosive limits	LFL/LEL	Not available
	UFL/UEL	Not available

Dust Combustion data Particle size variation is considered a critical factor in regards to dust explosion hazard information. Results applicable as follows: sample particle size <75 um, 0.1% moisture content. Sample tested is not typical of product:

Minimum ignition energy (dust cloud)	50 – 100mJ
Minimum explosive concentration	50 – 60 g/m ³
Maximum rate of pressure rise	581 bars/sec @ 750 g/m ³
Maximum pressure of explosion	7.2 bars-gauge @ 500 g/m ³
Deflagration Index, Kst (estimate)	158 bar-m/sec
Volume resistivity (ambient relative humidity)	2.5 x 10 ⁽¹⁰⁾ ohm-m
Volume resistivity (low relative humidity)	6.3 x 10 ⁽¹²⁾ ohm-m
Charge decay (ambient relative humidity)	1 second
Charge decay (low relative humidity)	752 seconds

9. STABILITY AND REACTIVITY

Reactivity	None Known
Chemical Stability	Product is stable
Possible Hazardous Reactions	Hazardous polymerization will not occur
Conditions to avoid	Excessive heat and ignition sources. Contact with water or moist air. Avoid static discharge. Avoid dust formation.
Incompatible Materials	Avoid strong acids and oxidizing agents. Avoid contact with iron salts

Hazardous decomposition Product

Carbon dioxide and carbon monoxide

10. TOXICOLOGICAL INFORMATION**Likely routes of exposure**

General	Caution must be exercised through the prudent use of protective equipment and handling procedures to minimize exposure.
Eyes	Causes serious eye irritation
Skin	Repeated or prolonged skin contact may cause irritation. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons
Inhalation	Dust inhalation may cause respiratory irritation
Ingestion	Ingestion may cause irritation
Symptoms/effects Acute and delayed	Coughing, irritation
Acute Toxicity information	Not classified (based on available data, the classification criteria are not met)

Chemical Name	Inhalation LC50	Species
Potassium Benzoate	> 12.2 mg/l (no mortality, based on benzoic acid)	Rat/adult
	Oral LD50	Species
	> 10000 mg/kg	Rat/adult
	Dermal LD50	Species
	> 2000 mg/kg (based on benzoic acid)	Rabbit/adult

Skin corrosion/irritation Not classified (based on available data, the classification criteria are not met). Potassium Benzoate: The following is data is for sodium benzoate. Skin irritation: Slight to non-irritating.

Chemical Name	Skin Irritation	Species
Potassium Benzoate	Slight Irritant	Similar materials

Serious eye damage/irritation Causes serious eye irritation (Category 2A). Potassium Benzoate: The following is data for sodium benzoate. Eye irritation: Moderate irritation.

Chemical Name	Eye Irritation	Species
Potassium Benzoate	Irritant	Similar materials

Respiratory or Skin sensitization Not classified (based on available data, the classification criteria are not met). Read-Across (Benzoic Acid): Not a skin sensitizer in the mouse local lymph node assay or Buehler guinea pig test

Chemical Name	Skin sensitization	Species
Potassium Benzoate	Non-sensitizer (read-across)	Guinea pig and mouse local lymph node assay

Carcinogenicity Not classified (based on available data, the classification criteria are not met). Benzoic acid and benzoate salts: Studies of benzoic acid and sodium benzoate in the Ames point mutation assay do not show evidence of mutagenicity. However, some studies have been reported to be positive in the less commonly used Bacillus subtilis recombination assay. In a number of cases adverse effects on the chromosome could be noticed, however also negative and/or equivocal results were reported. However many higher-level in vivo tests (clastogenicity inclusive) were negative. Sodium benzoate exhibited no genotoxicity in several in-vivo assays.

Reproductive toxicity Not classified (based on available data, the classification criteria are not met). Benzoic acid and benzoate salts: Reproductive toxicity (benzoic acid), 4-generation oral study in rats: NOAEL (no observed adverse effect level) 500 mg/kg bw/day. Developmental toxicity (sodium benzoate), oral, rats and mice: NOAEL of ≥ 175 mg/kg bw/day can be established for developmental effects.

Specific target organ toxicity (STOT) – single exposure

Not classified (based on available data, the classification criteria are not met)

Specific target organ toxicity (STOT) - repeated exposure:

Not classified (based on available data, the classification criteria are not met). POTASSIUM BENZOATE: READ-ACROSS (SODIUM BENZOATE): Repeated dose oral toxicity studies for salts of benzoic acids: NOAEL (no-observed-adverse-effect-level) 1000 mg/kg bw/day. READ-ACROSS (BENZOIC ACID): Repeated dose toxicity study, inhalation: NOAEC (No-Observed-Adverse-Effect-Concentration), inhalation, rat: 250 mg/m³ (systemic effects); 25 mg/m³ (local). Local effects including nasal redness, pulmonary fibrosis and inflammatory cell infiltrates in the lungs were observed at lowest dose of 25 mg/m³ and can be attributed to the irritant properties and to the physico-chemical properties of fine low-solubility particles of benzoic acid. NOAEL (No-Observed-Adverse-Effect-Level), dermal, rabbit - 2500 mg/kg bw/day. BENZOIC ACID AND BENZOATE SALTS: At higher doses (oral) increased mortality, reduced weight gain, convulsions (central nervous system effects), liver and kidney effects were observed.

Aspiration Hazard Not classified (technical impossibility to obtain the data).

Other toxicity information: No additional information available.

11. ECOLOGICAL INFORMATION

Chemical Name	Fish 96 hour LC50	Fish 96 hour LC50
Potassium Benzoate	>100 mg/L (Sodium benzoate)	Not Established
	Fish Chronic NOEC	Invertebrates 48 hour EC50
	10 mg/L (Sodium benzoate)	>100 mg/L (Sodium benzoate)
	Invertebrates 24 hour EC50	Invertebrates Chronic NOEC
	Not Established	Not Established
	Algae 96 hour EC50	Algae 72 hour EC50
	> 30.5 mg/L (Sodium benzoate)	Not Established
Algae Chronic NOEC		
EC10=6.5 mg/L (72 hours) (Sodium benzoate)		

Persistence and degradability:

Chemical Name	Biodegradation
Potassium Benzoate	Readily biodegradable

Bioaccumulative Potential:

Chemical Name	Bio concentration Factor (BCF)	Log Pow
Potassium Benzoate	Not Established	1.88 (Benzoic acid)

Mobility in Soil:

Chemical Name	Mobility in Soil
Potassium Benzoate	14.5 (calculated)

Other adverse effects No additional information available

12. DISPOSAL CONSIDERATIONS

Although this product is not defined or designated as hazardous by current provisions of the Federal (EPA) Resource Conservation and Recovery Act (RCRA, 40CFR261), recognize that in appropriate dust/air ratio, dust cloud in air may have explosion potential. Incinerate or landfill waste in a properly permitted facility in accordance with federal, state and local regulations.

13. TRANSPORT INFORMATION

The information below is provided to assist in documentation. It may supplement the information on the package. The package in your possession may carry a different version of the label depending on the date of manufacture. Depending on inner packaging quantities and packaging instructions, it may be subject to specific regulatory exceptions.

UN number N/A

UN proper shipping name Not regulated

Transport hazard Class(es)

US DOT	Product is not regulated for transport by this regulation
Canada TDG	Product is not regulated for transport by this regulation
Europe ADR/RID	Product is not regulated for transport by this regulation
UMDG CODE (Ocean)	Product is not regulated for transport by this regulation
ICAO/IATA (Air)	Product is not regulated for transport by this regulation
Packing Group	N/A

Environmental hazards

Marine pollutant	N/A
Hazardous substance (USA)	N/A

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC code:
Not applicable

Special precautions Not applicable

14. REGULATORY INFORMATION

U.S. federal and state regulations/legislation:

This SDS has been prepared in accordance with the hazard criteria of the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

U.S. Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) Reportable Quantity (RQ):

Not Applicable

California Proposition 65:

Warning: The following ingredients present in the product are known to the state of California to cause Cancer: None known to be present or none in reportable amounts for occupational exposure as per OSHA's approval of the California Hazard Communication Standard, Federal Register, page 31159 ff, 6 June 1997.

Warning: The following ingredients present in the product are known to the state of California to cause birth defects, or other reproductive hazards: None known to be present or none in reportable amounts for occupational exposure as per OSHA's approval of the California Hazard Communication Standard, Federal Register, page 31159 ff, 6 June 1997.

U.S. Superfund Amendments and Reauthorization Act (SARA) - SARA Section 313:

This product contains the following toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 and 40 CFR 372: None known

U.S. TSCA Section 12(b) Export Notification:

This product is not subject to TSCA 12(b) reporting requirements.

Canada regulations/legislation:

This product has been classified in accordance with the hazard criteria of the Hazardous Products Regulations and the SDS contains all the information required by the Hazardous Products Regulations.

Mexico regulations/legislation:

This SDS contains the information required by NOM-018-STPS-2000 Workplace Hazardous Chemical Substances Communication and Identification Standard.

Chemical Inventories

Regulation	Status
Australian Inventory of Chemical Substances (AICS):	Y
Canadian Domestic Substances List (DSL):	Y
Canadian Non-Domestic Substances List (NDSL):	N
China Inventory of Existing Chemical Substances (IECSC):	Y
European Inventory of Existing Chemical Substances (EINECS):	Y
European List of Notified Chemical Substances (ELINCS):	N
Japan Existing and New Chemical Substances (ENCS):	Y
Japan Industrial Safety and Health Law (ISHL):	Y
Korean Existing and Evaluated Chemical Substances (KECL):	Y
New Zealand Inventory of Chemicals (NZIoC):	Y
Philippines Inventory of Chemicals and Chemical Substances (PICCS):	Y
Taiwan Inventory of Existing Chemicals:	Y
U.S. Toxic Substances Control Act (TSCA):	Y

A "Y" listing indicates all intentionally added components are either listed or are otherwise compliant with the regulation. A "N" listing indicates that for one or more components: 1) there is no listing on the public inventory; 2) no information is available; or 3) the component has not been reviewed. A "Y" for New Zealand may mean that a qualified group standard may exist for the components in this product.

Europe REACH (EC) 1907/2006:

Applicable components are pre-registered, exempt or otherwise compliant. REACH is only relevant to substances either manufactured or imported into the EU. Kraft Chemical Company has met its obligations under the REACH regulation. REACH information regarding this product is provided for informational purposes only. Each Legal Entity may have differing REACH obligations, depending on their place in the supply chain. For material manufactured outside of the EU, the importer of record must understand and meet their specific obligations under the regulation.

15. OTHER INFORMATION

All statements, technical information and recommendations contained herein are based on tests and data which Chemistry Connection believes to be currently reliable, but this accuracy or completeness thereof is not guaranteed and no warranty of any kind is made with respect thereto. This information is not intended as a license to operate under or a recommendation to practice or infringe any patent of this company or others covering any process, composition of matter or use. Since we shall have no control of the use of the product described here in, we assume no Liability for loss or damage incurred from the proper or improper use of such product.