



# Safety Data Sheet (SDS) International (GHS)

Revision date: 2019-09-26

## SECTION 1: Identification

### Product identifiers:

**Product trade name:** Kalama\* Potassium Benzoate FCC  
**Company product number:** POTBENZ  
**Other means of identification:** Benzoic acid potassium salt

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

**Uses:** Additive. Industrial applications. Food and pharmaceutical applications.  
**Restrictions on use:** None identified

### Details of the supplier:

**Manufacturer/Supplier:** Emerald Performance Materials, LLC  
1499 SE Tech Center Place, Suite 300  
Vancouver, WA 98683  
United States  
Telephone: +1-360-954-7100  
FAX: +1-360-954-7201  
Email: product.compliance@emeraldmaterials.com

**For further information about this SDS:**

### Emergency telephone number:

ChemTel (24 hours): 1-800-255-3924 (USA); +1-813-248-0585 (outside USA);  
1-300-954-583 (Australia); 000-800-100-4086 (India).

## SECTION 2: Hazard(s) identification

### Classification of the substance or mixture:

Eye Irritation, category 2, H319

### Label elements:

#### Hazard pictogram(s):



#### Signal word:

Warning

#### Hazard statements:

H319 Causes serious eye irritation.

#### Precautionary statements:

P264 Wash skin thoroughly after handling..

P280 Wear eye protection/face protection.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P337+P313 If eye irritation persists: Get medical advice/attention.

#### Supplemental information: No Additional Information

Precautionary statements are listed according to the United Nations Globally Harmonized System of Classification and Labelling of Chemicals (GHS) - Annex III. Regulations in individual countries/regions may determine which statements are required on the product label. See product label for specifics.

### Other hazards: May form explosible dust-air mixture if dispersed.

See Section 11 for toxicological information.

### SECTION 3: Composition/information on ingredients

**Substance:**

<u>CAS-No.</u>	<u>Chemical Name</u>	<u>Weight%</u>
0000582-25-2	Potassium benzoate	99-100

Amounts specified are typical and do not represent a specification. Remaining components are proprietary, non-hazardous, and/or present at amounts below reportable limits.

### SECTION 4: First-aid measures

**Description of first aid measures:**

**General:** If irritation or other symptoms occur or persist from any route of exposure, remove the affected 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 fifteen (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 advice/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.

**Most important symptoms and effects, both acute and delayed:** Coughing, Irritation. Preexisting sensitization, skin and/or respiratory disorders or diseases may be aggravated. See section 11 for additional information.

**Indication of any immediate medical attention and special treatment needed, if necessary:** Treat symptomatically.

### SECTION 5: Fire-fighting measures

**Extinguishing media:**

**Suitable:** 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 reignition.

**Unsuitable:** Avoid hose streams or any method which will create dust clouds.

**Special hazards arising From the chemical:**

**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. See Section 7 for suggested measures.

**Hazardous combustion products:** Irritating or toxic substances may be emitted upon burning, combustion or decomposition. See section 10 (Hazardous decomposition products) for additional information.

**Special protective equipment and 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 facepiece 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 cleanup immediately after a fire as well as during the attack phase of firefighting operations.

See section 9 for additional information.

## SECTION 6: Accidental release measures

**Personal precautions, protective equipment and emergency procedures:** See Section 8 for recommendations on the use of personal protective equipment. 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. Personal Protective Equipment must be worn.

**Environmental precautions:** Do not flush product into public sewer, water systems or surface waters.

**Methods and materials for containment and cleaning up:** Contain spill. Wear proper personal protective clothing and equipment. Using care to avoid dust generation, vacuum or sweep into a closed container for reuse or disposal. Use approved industrial vacuum cleaner for removal. Avoid causing dust. Place into labeled, closed container; store in safe location to await disposal. Change contaminated clothing and launder before reuse.

## SECTION 7: Handling and storage

**Precautions for safe handling:** 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 and 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 reuse. 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.).

**Conditions for safe storage, including any incompatibilities:** Store cool and dry, under well-ventilated conditions. Store this material away from incompatible substances (see section 10). 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).

## SECTION 8: Exposure controls / personal protection

### Control parameters:

#### Occupational exposure limits (OEL):

<u>Chemical Name</u>	<u>ACGIH - TWA/Ceiling</u>	<u>ACGIH - STEL</u>		
Potassium benzoate	N/E			
<u>Chemical Name</u>	<u>Australia</u>	<u>New Zealand</u>	<u>Korea</u>	<u>Taiwan</u>
Potassium benzoate	N/E	N/E	N/E	N/E
<u>Chemical Name</u>	<u>Japan ISHL</u>	<u>Japan JSOH</u>	<u>Indonesia</u>	<u>Malaysia</u>
Potassium benzoate	N/E	N/E	N/E	N/E
<u>Chemical Name</u>	<u>Philippines</u>	<u>Singapore</u>		
Potassium benzoate	N/E	N/E		

N/E=Not established (no exposure limits established for the listed substances for listed country/region/organization).

### Exposure controls:

**Appropriate engineering controls:** Always provide effective general and, when necessary, local exhaust ventilation to draw dust away 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, such as personal protective equipment:

**Eye/face protection:** Safety glasses or goggles required.

**Skin and body protection:** Wear protective gloves. Use good laboratory/workplace procedures including personal

protective clothing: labcoat, 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.

**Further information:** Eyewash fountains and safety showers are recommended in the work area.

## SECTION 9: Physical and chemical properties

<b>Form:</b>	Granules/ powder	<b>pH:</b>	Not Available
<b>Appearance:</b>	White	<b>Relative density:</b>	1.5
<b>Odor:</b>	Odorless	<b>Partition coefficient (n-octanol/water):</b>	1.88 (Benzoic acid)
<b>Odor threshold:</b>	Not Available	<b>% Volatile by weight:</b>	Not Available
<b>Solubility in water:</b>	Appreciable	<b>VOC:</b>	Not Available
<b>Evaporation rate:</b>	Not Available	<b>Boiling point °C:</b>	Not Available
<b>Vapor pressure:</b>	Negligible @ 20 °C	<b>Boiling point °F:</b>	Not Available
<b>Vapor density:</b>	Not Available	<b>Flash point:</b>	Not Applicable
<b>Viscosity:</b>	Not Available	<b>Auto-ignition temperature:</b>	>510 °C (>950 °F)
<b>Melting point/Freezing point:</b>	>300 °C (>572 °F)	<b>Flammability (solid, gas):</b>	Not flammable (may form combustible dust concentrations in air)
<b>Oxidizing properties:</b>	Not oxidizing	<b>Flammability or explosive limits:</b>	LFL/LEL: Not Available
<b>Explosive properties:</b>	Not explosive		UFL/UEL: Not Available
<b>Decomposition temperature:</b>	Not Available	<b>Surface tension:</b>	

**Other information:** Amounts specified are typical and do not represent a specification.

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

## SECTION 10: Stability and reactivity

**Reactivity:** None known.

**Chemical stability:** This product is stable.

**Possibility of hazardous reactions:** Hazardous polymerization will not occur.

**Conditions to avoid:** 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 products:** Carbon dioxide and carbon monoxide.

## SECTION 11: Toxicological information

**Information on likely routes of exposure:**

SDS Name: Kalama\* Potassium Benzoate FCC

**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.

**Acute toxicity information:** Not classified (based on available data, the classification criteria are not met).

<u>Chemical Name</u>	<u>Inhalation LC50</u>	<u>Species</u>	<u>Oral LD50</u>	<u>Species</u>	<u>Dermal LD50</u>	<u>Species</u>
Potassium benzoate	>12.2 mg/l (no mortality, based on benzoic acid)	Rat/ adult	>10000 mg/kg	Rat/ adult	>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 for sodium benzoate. Skin irritation: Slight to non-irritating.

<u>Chemical Name</u>	<u>Skin irritation</u>	<u>Species</u>
Potassium benzoate	Slight irritant	Similar materials

**Serious eye damage/irritation:** Causes serious eye irritation - Category 2 (2A). POTASSIUM BENZOATE: The following is data for sodium benzoate. Eye irritation: Moderate irritation.

<u>Chemical Name</u>	<u>Eye irritation</u>	<u>Species</u>
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.

<u>Chemical Name</u>	<u>Skin sensitisation</u>	<u>Species</u>
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). READ-ACROSS (SODIUM BENZOATE): In a 2-year animal feeding study (2% in food), sodium benzoate was not carcinogenic.

**Germ cell mutagenicity:** 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 subtilus 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  $\geq 175$  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/m<sup>3</sup> (systemic effects); 25 mg/m<sup>3</sup> (local). Local effects including nasal redness, pulmonary fibrosis and inflammatory cell infiltrates in the lungs were observed at lowest dose of 25 mg/m<sup>3</sup> 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.

## SECTION 12: Ecological information

**Ecotoxicity:**

<u>Chemical Name</u>	<u>Species</u>	<u>Acute</u>	<u>Acute</u>	<u>Chronic</u>
Potassium benzoate	Fish	LC50 >100 mg/L (Sodium benzoate) (96 hours)	N/E	NOEC 10 mg/L (Sodium benzoate) (144 hours)
Potassium benzoate	Invertebrates	EC50 >100 mg/L (Sodium benzoate) (96 hours)	EC50 650 mg/L (Sodium benzoate)(48 hours)	N/E
Potassium benzoate	Algae	EC50 >30.5 mg/L (Sodium benzoate) (72 hours)	N/E	EC10 6.5 mg/L (Sodium benzoate) (72 hours)

**Persistence and degradability:**

<u>Chemical Name</u>	<u>Biodegradation</u>
Potassium benzoate	Readily biodegradable

**Bioaccumulative potential:**

<u>Chemical Name</u>	<u>Bioconcentration Factor (BCF)</u>	<u>Log Kow</u>
Potassium benzoate	N/E	1.88 (Benzoic acid)

**Mobility in soil:**

<u>Chemical Name</u>	<u>Mobility in soil (Koc/Kow)</u>
Potassium benzoate	14.5 (calculated)

**Other adverse effects:** No additional information available.

## SECTION 13: Disposal considerations

Dispose of unused contents (incineration or landfill) in accordance with national and local regulations. Dispose of container in accordance with national and local regulations. Ensure the use of properly authorized waste management companies, where appropriate.

See Section 8 for recommendations on the use of personal protective equipment.

## SECTION 14: 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 - See Bill of Lading for Details

**Transport hazard class(es):**

**U.S. DOT hazard class:** N/A  
**Canada TDG hazard class:** N/A  
**Europe ADR/RID hazard class:** N/A  
**IMDG Code (ocean) hazard class:** N/A  
**ICAO/IATA (air) hazard class:** N/A

A "N/A" listing for the hazard class indicates the product is not regulated for transport by that regulation.

**Packing group:** N/A

**Environmental hazards:**

**Marine pollutant:** Not Applicable  
**Hazardous substance (USA):** Not Applicable

**Special precautions for user:** Not Applicable

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC code:**

Not Applicable

<b>SECTION 15: Regulatory information</b>
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Safety, health and environmental regulations specific for the product in question:

**Japan regulations:**

**Japan Industrial Safety and Health Law:**

<u>Chemical name</u>	<u>Category</u>
No subject chemicals	

**Japan Fire Service Law:**

<u>Chemical name</u>	<u>Category</u>
No subject chemicals	

**Japan Poisonous and Deleterious Substances:**

<u>Chemical name</u>	<u>Category</u>	<u>Threshold</u>
No subject chemicals		

**Japan Prevention of Marine Pollution and Disaster:**

<u>Chemical name</u>	<u>Category</u>
No subject chemicals	

**Japan Chemical Substances Control Law:**

<u>Chemical name</u>	<u>Category</u>	<u>Notes</u>
No subject chemicals		

**Korean regulations:**

**Korea Industrial Safety and Health Act:**

<u>Chemical name</u>	<u>Category</u>	<u>Threshold</u>
No subject chemicals		

**Korea Act on Registration and Evaluation of Chemical Substances (K-REACH) - Substances subject to registration:**

No subject chemicals

**Korea Chemical Control Act (CCA):**

<u>Chemical name</u>	<u>Category</u>	<u>Code</u>	<u>Threshold</u>
No subject chemicals			

**Korea Safety Control of Dangerous Substances Act (MPSS):**

<u>Chemical name</u>	<u>Class</u>	<u>Threshold</u>
No subject chemicals		

**Korea Waste Control Act: Waste disposal methods must comply with local and national laws.**

<u>Chemical name</u>	<u>Notes</u>
No subject chemicals	

**Other regulations:** No Additional Information

**Chemical inventories:**

<u>Regulation</u>	<u>Status</u>
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 EC Inventory (EINECS, ELINCS, NLP):	Y
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) (Active):	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 (or is not on the ACTIVE inventory for U.S. TSCA); 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.

**Chemical inventory notes:** New Zealand: One or more components may be covered by a group standard.

**Europe REACH (EC) 1907/2006:** Not all applicable components are registered. Please contact your sales representative for further information regarding REACH compliance. REACH is only relevant to substances either manufactured or imported into the EU. 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.

**SECTION 16: Other information**

**Legend:**

\* : Trademark owned by Emerald Performance Materials, LLC.

ACGIH: American Conference of Governmental Industrial Hygienists

N/A: Not Applicable

N/E: None Established

STEL: Short Term Exposure Limit

TWA: Time Weighted Average (exposure for 8-hour workday)

**Users Responsibility/Disclaimer of Liability:**

The information set forth herein is based on our current knowledge, and is intended to describe the product solely with respect to health, safety and the environment. As such, it must not be interpreted as a guarantee of any specific property of the product. As a result, the customer shall be solely responsible for deciding whether said information is suitable and beneficial.

Safety Data Sheet Preparer:

Product Compliance Department

Emerald Performance Materials, LLC

1499 SE Tech Center Place, Suite 300

Vancouver, WA 98683

United States