

SAFETY DATA SHEET

Product No. 46-6 Potassium Bromide Single Crystal Substrate
Issue Date (06/01/1989)
Review Date (08/29/2023) Rev. 02

Section 1: Product and Company Identification

Product Name: Potassium Bromide Single Crystal Substrate

Company Name

Ted Pella, Inc., P.O. Box 492477, Redding, CA 96049-2477

Inside USA and Canada 1-800-237-3526 (Mon-Thu. 6:00AM to 4:30PM PST; Fri 6:00AM to 4:00PM PST)

Outside USA and Canada 1-530-243-2200 (Mon-Thu. 6:00AM to 4:30PM PST; Fri 6:00AM to 4:00PM PST)

CHEMTREC USA and Canada Emergency Contact Number 1-800-424-9300 24 hours a day

CHEMTREC Outside USA and Canada Emergency Contact Number +1-703-741-5970 24 hours a day

Section 2: Hazard Identification

Emergency Overview

OSHA Hazards:	Target organ effect, irritant, mutagen
Target Organs:	Central nervous system, eyes
GHS Classification:	Acute toxicity, Oral (Category 5) Skin irritation (Category 2) Eye irritation (Category 2A) Specific target organ toxicity – single exposure (Category 3) Acute aquatic toxicity (Category 3)

GHS Label elements, including precautionary statements:



Pictogram:

Signal word: **Warning Hazard**
statement(s)

H303	May be harmful if swallowed
H315	Causes skin irritation
H319	Causes serious eye irritation
H335	May cause respiratory irritation
H402	Harmful to aquatic life

Precautionary statement(s)

P261	Avoid breathing dust/fume/gas/mist/vapors/spray
P305+P351+P338	If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

HMIS Classification

Health hazard: 2
Chronic health hazard *

Flammability: 0
Physical hazards: 1

FPA Rating

Health hazard: 2
Fire: 0
Reactivity Hazard: 1

Potential Health Effects

Inhalation: May be harmful if inhaled. Causes respiratory tract irritation.
Skin: May be harmful if absorbed through skin.
Causes skin irritation.
Eyes: Causes eye irritation
Ingestion: May be harmful if swallowed

Section 3: Composition / Information on Ingredients

Formula: KBr Molecular
Weight: 119.00 g/mol

Component

Potassium bromide
CAS-No. 7758-02-3
EC-No. 231-830-3

Section 4: First Aid Measures

General advice: Consult a physician.
Show this safety data sheet to the doctor in attendance.
Move out of dangerous area.

If inhaled: If breathed in, move person into fresh air.
If not breathing, give artificial respiration.
Consult a physician.

In case of skin contact: Wash off with soap and plenty of water. Consult a physician.

In case of eye contact: Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed: Never give anything by mouth to an unconscious person.
Rinse mouth with water. Consult a physician.

Section 5: Fire Fighting Measures

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

Special protective equipment for firefighters: Wear self-contained breathing apparatus for firefighting if necessary.

Hazardous combustion products: Hazardous decomposition products formed under fire conditions
– Hydrogen bromide gas, Potassium oxides

Further information: The product itself does not burn.

Section 6: Accidental Release Measures

Personal Precautions:

Use personal protective equipment. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

Environmental Precautions:

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

Methods and materials for containment and cleaning up:

Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

Section 7: Handling and Storage

PRECAUTIONS FOR SAFE HANDLING

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed.

CONDITIONS FOR SAFE STORAGE

Keep container tightly closed in a dry and well-ventilated place. Hygroscopic.

Section 8: Exposure Controls / Personal Protection

Contains no substances with occupational exposure limit values.

PERSONAL PROTECTIVE EQUIPMENT

Respiratory protection: For nuisance exposures use type P95 (US) or type P1 (EU EN 143) particle respirator. For higher level protection use type OV/AG/P99 (US) or type ABEK- P2 (EU EN 143) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

HAND PROTECTION

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

IMMERSION PROTECTION

Material: Nitrile rubber
Minimum layer thickness: 0.11 mm Break
through time: >480 min

SPLASH PROTECTION

Material: Nitrile rubber
Minimum layer thickness: 0.11mm Break
through time: >30 min

EYE PROTECTION

Safety glasses with side shields conforming to EN166. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166 (EU).

SKIN AND BODY PROTECTION

Impervious clothing; the type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

HYGIENE MEASURES

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Section 9 Physical and Chemical Properties

APPEARANCE

Form: Solid
Color: No data available

SAFETY DATA

pH: 5.0 – 6 AT 119 g/l at 25°C (77°F)
Melting point/freezing point: 734°C (1353°F) –lit.
Boiling point: 1435°C (2615°F)
Flash point: No data available
Ignition temperature: No data available
Autoignition temperature: No data available
Lower explosion limit: No data available
Upper explosion limit: No data available
Vapor pressure: <0.01 hPa (<0.01 mmHg) at 20°C (68°F);
1 hPa (1 mmHg) at 795°C (1463°F)
Density: 2.750 (g/cm³)
Water solubility: 119 g/l at 20°C (68° F)
– completely soluble
Partition coefficient – n-octanol/water: No data available
Relative vapor density: No data available
Odor: No data available
Odor threshold: No data available
Evaporation rate: No data available

Section 10: Stability and Reactivity

CHEMICAL STABILITY

Stable under recommended storage conditions

POSSIBILITY OF HAZARDOUS REACTIONS

No data available

CONDITIONS TO AVOID

Exposure to moisture

MATERIALS TO AVOID

Strong oxidizing agents, strong acids, heavy metal salts, aluminum, potassium

Section 11: Toxicological Information

ACUTE TOXICITY

Oral LD50

LD50 Oral – rat-3070 mg/kg

Remarks: Sense organs and special senses (Nose, Eye, Ear and taste): Olfaction: Other changes:
Behavioral: Somnolence (general depressed activity). Behavioral: Ataxia

Inhalation LC50 No data available

Dermal LD50: No data available
Other information on acute toxicity: No data available

SKIN CORROSION/IRRITATION No data available
SERIOUS EYE DAMAGE/EYE IRRITATION No data available
RESPIRATORY OR SKIN SENSITIZATION No data available
GERM CELL MUTAGENICITY Laboratory experiments have shown mutagenic effects

CARCINOGENICITY

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

REPRODUCTIVE TOXICITY No data available

TERATOGENICITY No data available

SPECIFIC TARGET ORGAN TOXICITY – SINGLE EXPOSURE (GHS)
Inhalation – May cause respiratory irritation

SPECIFIC TARGET ORGAN TOXICITY – REPEAED EXPOSURE (GHS)
No data available

ASPIRATION HAZARD No data available

POTENTIAL HEALTH EFFECTS

Inhalation: May be harmful if inhaled.
Causes respiratory tract irritation
Ingestion: May be harmful if swallowed
Skin: May be harmful if absorbed through skin.
Causes skin irritation
Eyes: Causes eye irritation

SIGNS AND SYMPTOMS OF EXPOSURE

To the best of our knowledge, the chemical, physical and toxicological properties have not been thoroughly investigated.

SYNERGISTIC EFFECTS No data available

ADDITIONAL INFORMATION RTECS: TS7650000

Section 12: Ecological Information

Toxicity

Toxicity to fish: LC50 – Pimephale promelas (fathead minnow) -> 30 mg/l – 96 h

Persistence and degradability: No data available

Bioaccumulative potential: No data available

Mobility in soil: No data available

PBT and vPvB Assessment	No data available
Other adverse effects	An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
Harmful to aquatic life	No data available

Section 13 Disposal Considerations

Product:	Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.
Contaminated Packaging:	Dispose of as unused product.

Section 14: Transportation Information

DOT (US):	Not dangerous goods
IMDG:	Not dangerous goods
IATA:	Not dangerous goods

Section 15: Regulatory Information

OSHA HAZARDS:	Target organ effect, Irritant, Mutagen
SARA 302 COMPONENTS:	No chemicals in this material are subject to the reporting requirement of SARA Title III, Section 302 SARA 313
COMPONENTS:	This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.
SARA 311/312 HAZARDS:	Acute health hazard, Chronic health hazard
MASSACHUSETTS RIGHT TO KNOW COMPONENTS:	No components listed
PENNSYLVANIA RIGHT TO KNOW COMPONENTS:	Potassium bromide CAS-No. 7758-02-3
NEW JERSEY RIGHT TO KNOW COMPONENTS:	Potassium bromide CAS-No. 7758-02-3
CALIFORNIA PROP. 65 COMPONENTS:	This product does not contain any chemicals known to the state of California to cause cancer, birth defects or any other reproductive harm.
TCSA STATEMENT:	The components of this material appear in the Toxic Substances Control Act (TSCA) Chemical Substances Inventory and are available for commercial use.

Section 16: Other Information

This Safety Data Sheet (SDS) is intended to comply with the OSHA Hazard Communication Standard (29 CFR 1910.1200) and is consistent with the provisions of the United Nations Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

Full text of other abbreviations

ACGIH:	USA. ACGIH Threshold Limit Values (TLV)
ACGIH BEI:	ACGIH - Biological Exposure Indices (BEI)
NIOSH REL:	USA. NIOSH Recommended Exposure Limits
OSHA Z-1:	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
OSHA Z-2:	USA. Occupational Exposure Limits (OSHA) - Table Z-2
US WEEL:	USA. Workplace Environmental Exposure Levels (WEEL)
ACGIH / TWA:	8-hour, time-weighted average
ACGIH / STEL:	Short-term exposure limit
NIOSH REL/TWA:	Time-weighted average concentration for up to a 10-hour workday during a 40-hour workweek
NIOSH REL/ST:	STEL - 15-minute TWA exposure that should not be exceeded at any time during a workday OSHA Z-1 /
TWA:	8-hour time weighted average
OSHA Z-2/TWA:	8-hour time weighted average
OSHA Z-2/CEIL:	Acceptable ceiling concentration
OSHA Z-2/Peak:	Acceptable maximum peak above the acceptable ceiling concentration for an 8-hr shift
US WEEL/TWA:	8-hr TWA

AICS - Australian Inventory of Chemical Substances;
AIIC - Australian Inventory of Industrial Chemicals;
ASTM - American Society for the Testing of Materials;
bw - Body weight;
CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act;
CMR - Carcinogen, Mutagen or Reproductive Toxicant;
DIN - Standard of the German Institute for Standardization;
DOT - Department of Transportation;
DSL - Domestic Substances List (Canada);
ECx - Concentration associated with x% response;
EHS - Extremely Hazardous Substance;
ELx - Loading rate associated with x% response;
EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan);
ErCx - Concentration associated with x% growth rate response;
ERG - Emergency Response Guide;
GHS - Globally Harmonized System;
GLP - Good Laboratory Practice;
HMIS - Hazardous Materials Identification 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;
IECSC - Inventory of Existing Chemical Substances in China;
IMDG - International Maritime Dangerous Goods;
IMO - International Maritime Organization;
ISHL - Industrial Safety and Health Law (Japan);
ISO - International Organization for Standardization;
KECI - Korea Existing Chemicals Inventory;

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;
MSHA - Mine Safety and Health Administration;
n.o.s. - Not Otherwise Specified;
NFPA - National Fire Protection Association;
NO(A)EC - No Observed (Adverse) Effect Concentration;
NO(A)EL - No Observed (Adverse) Effect Level;
NOELR - No Observable Effect Loading Rate;
NTP - National Toxicology Program;
NZIoC - New Zealand Inventory of Chemicals;
OECD - Organization for Economic Co-operation and Development;
OPPTS - Office of Chemical Safety and Pollution Prevention;
PBT - Persistent, Bioaccumulative and Toxic substance;
PICCS - Philippines Inventory of Chemicals and Chemical Substances;
(Q)SAR - (Quantitative) Structure Activity Relationship;
RCRA - Resource Conservation and Recovery Act;
REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorization and Restriction of Chemicals;
RQ - Reportable Quantity;
SADT - Self-Accelerating Decomposition Temperature;
SARA - Superfund Amendments and Reauthorization Act;
SDS - Safety Data Sheet;
TCSI - Taiwan Chemical Substance Inventory;
TSCA - Toxic Substances Control Act (United States);
UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods;
vPvB - Very Persistent and Very Bioaccumulative

Disclaimer

Ted Pella, Inc. makes no warranty of any kind regarding the information furnished herein. Users should independently determine the suitability and completeness of information from all sources. While this data is presented in good faith and believed to be accurate, it should be considered only as a supplement to other information gathered by the user. It is the User's responsibility to assure the proper use and disposal of these materials as well as the safety and health of all personnel who may work with or otherwise come in contact with these materials.