

SAFETY DATA SHEET



POTASSIUM BICARBONATE (ANHYDROUS ALL GRADES)

MSDS No.: M25047

Rev. Date: 2010-Nov-11

Rev. Num. 02

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Company Identification: Armand Products Company
469 North Harrison Street
Princeton, NJ 08543-5297

24 Hour Emergency Telephone Number: 1-800-733-3665 or 1-972-404-3228 (U.S.); 32.3.575.55.55 (Europe); 1800-033-111 (Australia)

To Request an MSDS: MSDS@oxy.com or 1-972-404-3245

Customer Service: 1-800-522-0540 or 1-609-683-5900

Trade Name: Potassium Bicarbonate USP, ACS and Technical Grades.

Synonyms: Carbonic acid, monopotassium salt
KBC
Pot bicarb
Potassium acid carbonate
Potassium bicarbonate (Anhydrous all grades)

Product Use: Fire extinguishing agent, Pharmaceuticals, Healthcare, Food processing, Chemical processing.

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW:

Color: White
Physical State: Solid
Appearance: Granular, Powder
Odor: Odorless

Signal Word: WARNING

MAJOR HEALTH HAZARDS: CAUSES EYE IRRITATION. CAUSES MILD SKIN IRRITATION. MAY CAUSE RESPIRATORY TRACT IRRITATION.

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PRECAUTIONARY STATEMENTS: Avoid breathing dust. Wash skin and contaminated clothing thoroughly after handling. Use only with adequate ventilation. Store in well-ventilated place. Keep container tightly closed.

POTENTIAL HEALTH EFFECTS:

Inhalation: May cause irritation.

Skin contact: Substance may cause slight skin irritation.

Eye contact: May cause moderate eye irritation.

Ingestion: To our knowledge, no effects are known.

Chronic Effects: To our knowledge, no effects are known.

See Section 11: TOXICOLOGICAL INFORMATION

3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	Percentage	CAS Number
Potassium Bicarbonate	95 - 100	298-14-6
Potassium Carbonate	< 2.5	584-08-7

4. FIRST AID MEASURES

INHALATION: If adverse effects occur, remove to uncontaminated area. IF SYMPTOMS OF OVEREXPOSURE OCCUR, GET MEDICAL ATTENTION.

SKIN CONTACT Immediately brush off excess chemical and flush with plenty of soap and water. Remove contaminated clothing, jewelry, and shoes immediately. Remove contaminated clothing and gloves, and decontaminate or discard before reuse. Discard footwear which cannot be decontaminated. IF IRRITATION OCCURS, GET MEDICAL ATTENTION.

EYE CONTACT: Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Washing eyes within several seconds is essential to achieve maximum effectiveness. IF IRRITATION OCCURS, GET MEDICAL ATTENTION.

INGESTION: No hazard expected. IF LARGE AMOUNTS ARE INGESTED, GET MEDICAL ATTENTION.

5. FIRE-FIGHTING MEASURES

Fire Hazard: Negligible fire hazard.

Extinguishing Media: Use extinguishing agents appropriate for surrounding fire.

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Fire Fighting: Move container from fire area if it can be done without risk. Avoid inhalation of material or combustion by-products. Stay upwind and keep out of low areas.

Sensitivity to Mechanical Impact: Not sensitive.

Sensitivity to Static Discharge: Not sensitive.

Flash point: Not flammable

6. ACCIDENTAL RELEASE MEASURES

Occupational Release: Shovel dry material into suitable container. Flush spill area with water, if appropriate. Keep out of water supplies and sewers. Releases should be reported, if required, to appropriate agencies.

7. HANDLING AND STORAGE

Storage Conditions: Store and handle in accordance with all current regulations and standards. Keep container tightly closed and properly labeled. Material is very hygroscopic. Store in a cool, dry area. Keep separated from incompatible substances (see Section 10 of the Safety Data Sheet).

Handling Procedures: Avoid breathing dust. Wash thoroughly after handling. When using, do not eat, drink or smoke. Do not reuse containers.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Regulatory Exposure limit(s):

Component	CAS Number	OSHA Final PEL TWA	OSHA Final PEL STEL	OSHA Final PEL Ceiling
Particulates not otherwise regulated	Not assigned	TWA 15 mg/m ³ (total) TWA 5 mg/m ³ (resp)	----	----

OEL: Occupational Exposure Limit; OSHA: United States Occupational Safety and Health Administration; PEL: Permissible Exposure Limit; TWA: Time Weighted Average; STEL: Short Term Exposure Limit

Non-Regulatory Exposure Limit(s):

Component	CAS Number	ACGIH Full Shift TWA	ACGIH STEL	ACGIH Ceiling	OSHA TWA (Vacated)	OSHA STEL (Vacated)	OSHA Ceiling (Vacated)
Particles Not Otherwise Specified (PNOS)	Not assigned	TWA 10 mg/m ³ (inhalable) TWA 3 mg/m ³ (resp)	----	----	----	----	----

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- The Non-Regulatory United States Occupational Safety and Health Administration (OSHA) limits shown in the table are the Vacated 1989 PEL's (vacated by 58 FR 35338, June 30, 1993).
- The American Conference of Governmental Industrial Hygienists (ACGIH) is a voluntary organization of professional industrial hygiene personnel in government or educational institutions in the United States. The ACGIH develops and publishes recommended occupational exposure limits each year called Threshold Limit Values (TLVs) for hundreds of chemicals, physical agents, and biological exposure indices.

ENGINEERING CONTROLS: Provide local exhaust ventilation where dust or mist may be generated. Ensure compliance with applicable exposure limits.

PERSONAL PROTECTIVE EQUIPMENT:

Eye Protection: Wear safety glasses with side-shields. If eye contact is likely, wear chemical resistant safety goggles.

Skin and Body Protection: When potential for contact with dry material exists, wear disposable coveralls suitable for dust exposure, such as Tyvek®. When potential for contact with wet material exists, wear Tychem® or similar chemical protective suit.

Hand Protection: Wear appropriate chemical resistant gloves.

Protective Material Types: Neoprene, Nitrile, Butyl rubber, Natural rubber

Respiratory Protection: A NIOSH approved respirator with high efficiency particulate air (HEPA) cartridges may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits, or when symptoms have been observed that are indicative of overexposure. When an air purifying respirator is not adequate for spills and/or emergencies of unknown concentrations, an approved self-contained breathing apparatus operated in the pressure demand mode is required. A respiratory protection program that meets 29 CFR 1910.134 must be followed whenever workplace conditions warrant use of a respirator.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	Solid
Appearance:	Granular, Powder
Color:	White
Odor:	Odorless
Molecular Weight:	100.12
Molecular Formula:	KHCO ₃
Boiling Point/Range:	Not applicable
Melting Point/Range:	212 - 392 F (100 - 200 C) (decomposes)
Decomposition temperature:	212 - 392 F (100 - 200 C)
Vapor Pressure:	Not applicable
Specific Gravity (water=1):	2.17
Density:	68 lbs/ft ³
Water Solubility:	23% @ 20 °C
pH:	slightly basic in solution
Flash point:	Not flammable
Hygroscopic:	Yes

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10. STABILITY AND REACTIVITY

Reactivity/ Stability: Stable at normal temperatures and pressures.

Conditions to Avoid: Avoid contact with lime to prevent formation of corrosive potassium hydroxide (KOH).
Temperatures above 100 °C.

Incompatibilities/ Materials to Avoid: Acids

Hazardous Decomposition Products: Oxides of carbon. Potassium oxides. Heating above 100 °C may cause dangerous levels of carbon dioxide gas to be present in the atmosphere.

Hazardous Polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

LD50 Oral:	2064 mg/kg oral-rat LD50
LC50 Inhalation:	>4880 mg/m ³ (4.5 hr - Rat)
LD50 Dermal:	>2000 gm/kg skin-rabbit LD50

ACUTE TOXICITY:

This material when applied to the skin of guinea pigs did not elicit any dermal sensitization reaction.

CARCINOGENICITY: This product is not classified as a carcinogen by NTP, IARC or OSHA.

12. ECOLOGICAL INFORMATION

ECOTOXICITY DATA:

- **Fish Toxicity:**
1500 mg/L 96 hour(s) LC50 Bluegill sunfish (practically nontoxic); 1300 mg/L 96 hour(s) LC50 Rainbow trout (practically nontoxic)
- **Invertebrate Toxicity:**
1200 mg/L 48 hour(s) EC50 Daphnia magna (practically nontoxic)

FATE AND TRANSPORT:

BIODEGRADATION: This material is inorganic and not subject to biodegradation.

PERSISTENCE: This material is believed not to persist in the environment.

BIOCONCENTRATION: This material is believed not to bioaccumulate.

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13. DISPOSAL CONSIDERATIONS

Waste from material: Reuse or reprocess, if possible. Dispose in accordance with all applicable regulations.

14. TRANSPORT INFORMATION

U.S. DOT 49 CFR 172.101: Not regulated

CANADIAN TRANSPORTATION OF DANGEROUS GOODS: Not regulated

15. REGULATORY INFORMATION

U.S. REGULATIONS

OSHA REGULATORY STATUS:

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200) (US)

CERCLA SECTIONS 102a/103 HAZARDOUS SUBSTANCES (40 CFR 302.4): Not regulated.

EPCRA EXTREMELY HAZARDOUS SUBSTANCES (40 CFR 355.30): Not regulated

EPCRA SECTIONS 311/312 HAZARD CATEGORIES (40 CFR 370.21):

None

EPCRA SECTION 313 (40 CFR 372.65): Not regulated.

OSHA PROCESS SAFETY (PSM) (29 CFR 1910.119): Not regulated

NATIONAL INVENTORY STATUS

U.S. INVENTORY STATUS: Toxic Substance Control Act (TSCA): All components are listed or exempt.

TSCA 12(b): This product is not subject to export notification.

Canadian Chemical Inventory: All components are listed.

STATE REGULATIONS

Potassium Bicarbonate		
	California Proposition 65 Cancer WARNING:	Not Listed
	California Proposition 65 CRT List - Male reproductive toxin:	Not Listed
	California Proposition 65 CRT List - Female reproductive toxin:	Not Listed
	Massachusetts Right to Know Hazardous Substance List	Not Listed
	New Jersey Right to Know Hazardous Substance List	Not Listed
	New Jersey Special Health Hazards Substance List	Not Listed

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Potassium Bicarbonate		
	New Jersey - Environmental Hazardous Substance List	Not Listed
	Pennsylvania Right to Know Hazardous Substance List	Not Listed
	Pennsylvania Right to Know Special Hazardous Substances	Not Listed
	Pennsylvania Right to Know Environmental Hazard List	Not Listed
	Rhode Island Right to Know Hazardous Substance List	Not Listed
Potassium Carbonate		
	California Proposition 65 Cancer WARNING:	Not Listed
	California Proposition 65 CRT List - Male reproductive toxin:	Not Listed
	California Proposition 65 CRT List - Female reproductive toxin:	Not Listed
	Massachusetts Right to Know Hazardous Substance List	Not Listed
	New Jersey Right to Know Hazardous Substance List	Not Listed
	New Jersey Special Health Hazards Substance List	Not Listed
	New Jersey - Environmental Hazardous Substance List	Not Listed
	Pennsylvania Right to Know Hazardous Substance List	Not Listed
	Pennsylvania Right to Know Special Hazardous Substances	Not Listed
	Pennsylvania Right to Know Environmental Hazard List	Not Listed
	Rhode Island Right to Know Hazardous Substance List	Not Listed

CANADIAN REGULATIONS

All components of this product are listed on either the DSL or the NDSL.

WHMIS - Classifications of Substances

- Not regulated

16. OTHER INFORMATION

Prepared by: OxyChem Corporate HESS - Health Risk Management

HMIS: (SCALE 0-4) (Rated using National Paint & Coatings Association HMIS: Rating Instructions, 2nd Edition)

Health: 1 Flammability: 0 Reactivity: 0

IMPORTANT:

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