

POTASSIUM BICARBONATE (ANHYDROUS ALL GRADES)  
M25047\_NA\_US

REVISION DATE: Oct 10 2007



## MATERIAL SAFETY DATA SHEET

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### 1. PRODUCT AND COMPANY INFORMATION

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**Armand Products Company**

**469 North Harrison Street**

**Princeton, New Jersey 08543-5297**

**24 HOUR EMERGENCY TELEPHONE:**

**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**

**MSDS NUMBER:** M25047

**SUBSTANCE:** POTASSIUM BICARBONATE (ANHYDROUS ALL GRADES)

**TRADE NAMES:**

Potassium Bicarbonate USP; ACS and Technical Grades

**SYNONYMS:**

Potassium acid carbonate; Carbonic acid, monopotassium salt; Pot bicarb; KBC

**PRODUCT USE:** fire extinguishing, pharmaceutical and healthcare, food and chemical processing

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### 2. HAZARDS IDENTIFICATION

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**OSHA REGULATORY STATUS:** This material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

**GHS CLASSIFICATION:**

No classification assigned.

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**EMERGENCY OVERVIEW:**

**COLOR:** white

**PHYSICAL FORM:** powder

**ODOR:** odorless

**SIGNAL WORD:** CAUTION

**MAJOR HEALTH HAZARDS:** MAY BE IRRITATING TO RESPIRATORY TRACT, SKIN, EYES, AND GASTROINTESTINAL TRACT.

**PRECAUTIONARY STATEMENTS:** Avoid breathing dust. Avoid contact with eyes, skin and clothing. Keep container tightly closed. Use only with adequate ventilation. Wash thoroughly after handling.

**POTENTIAL HEALTH EFFECTS:****INHALATION:**

May cause irritation.

**SKIN CONTACT:**

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.

**CARCINOGEN STATUS:**

**OSHA:** No

**NTP:** No

**IARC:** No

See Section 11: TOXICOLOGICAL INFORMATION

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### 3. COMPOSITION/INFORMATION ON INGREDIENTS

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**COMPONENT:** POTASSIUM BICARBONATE

**CAS NUMBER:** 298-14-6

**PERCENTAGE:** 95-100

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### 4. FIRST AID MEASURES

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

**SKIN CONTACT:** Wash contaminated areas with soap and water. Contaminated clothing should be

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removed, then discarded or laundered. Discard footwear which cannot be decontaminated. IF IRRITATION OCCURS, GET MEDICAL ATTENTION.

**EYE CONTACT:** Flush with water. IF IRRITATION OCCURS, GET MEDICAL ATTENTION.

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

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## 5. FIRE FIGHTING MEASURES

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**FIRE AND EXPLOSION HAZARDS:** Negligible fire hazard.

**EXTINGUISHING MEDIA:** Use extinguishing agents appropriate for surrounding fire.

**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

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## 6. ACCIDENTAL RELEASE MEASURES

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### **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.

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## 7. HANDLING AND STORAGE

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**STORAGE:** 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 place. Keep separated from incompatible substances (see Section 10 of the MSDS).

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

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## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

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**EXPOSURE LIMITS:**

**POTASSIUM BICARBONATE (ANHYDROUS ALL GRADES):  
NUISANCE PARTICULATES (NUISANCE DUST):**

5 mg/m<sup>3</sup> OSHA TWA (respirable fraction)  
15 mg/m<sup>3</sup> OSHA TWA (total dust)  
15 mppcf OSHA TWA (respirable fraction)  
50 mppcf OSHA TWA (total dust)  
10 mg/m<sup>3</sup> ACGIH TWA (inhalable particulate)  
3 mg/m<sup>3</sup> ACGIH TWA (respirable particulate)

**BIOLOGICAL LIMIT VALUES:**

**POTASSIUM BICARBONATE (ANHYDROUS ALL GRADES):**  
No biological limit value(s) available.

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

**EYE PROTECTION:** Wear safety glasses with side shields.

**CLOTHING:** Wear protective clothing to minimize skin contact.

**GLOVES:** Wear suitable gloves.

**PROTECTIVE MATERIAL TYPES:** leather, neoprene, nitrile, rubber, Tyvek®

**RESPIRATOR:** A NIOSH approved respirator with N100 (HEPA) filters may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits. Observe limitations specified by NIOSH or the respirator manufacturer. A respiratory protection program that meets 29 CFR 1910.134 must be followed whenever workplace conditions warrant the use of a respirator.

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

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**PHYSICAL STATE:** solid

**COLOR:** white

**TEXTURE:** granular

**PHYSICAL FORM:** powder

**ODOR:** odorless

**MOLECULAR WEIGHT:** 100.12

**MOLECULAR FORMULA:** KHCO<sub>3</sub>

**BOILING POINT:** Not applicable

**MELTING POINT:** 212-392 F (100-200 C) (decomposes)

**FLASH POINT:** not flammable

**DECOMPOSITION POINT:** 212-392 F (100-200 C)

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**VAPOR PRESSURE:** Not applicable  
**VAPOR DENSITY:** Not applicable  
**SPECIFIC GRAVITY (water=1):** 2.17  
**DENSITY:** 68 lbs/ft<sup>3</sup>  
**WATER SOLUBILITY:** 23% @ 20 C  
**PH:** slightly basic in solution  
**VOLATILITY:** Not applicable  
**ODOR THRESHOLD:** Not applicable  
**EVAPORATION RATE:** Not applicable  
**COEFFICIENT OF WATER/OIL DISTRIBUTION:** Not applicable

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## 10. STABILITY AND REACTIVITY

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**REACTIVITY:** Stable at normal temperatures and pressure.

**CONDITIONS TO AVOID:** Avoid contact with lime to prevent formation of corrosive potassium hydroxide (KOH).

**INCOMPATIBILITIES:** acids

**HAZARDOUS DECOMPOSITION:**

Thermal decomposition products: oxides of carbon, oxides of potassium

**POLYMERIZATION:** Will not polymerize.

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## 11. TOXICOLOGICAL INFORMATION

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**POTASSIUM BICARBONATE (ANHYDROUS ALL GRADES):**

**TOXICITY DATA:** 2064 mg/kg oral-rat LD50; >2000 mg/kg skin-rabbit LD50

During an acute 4.5 hour inhalation LC50 test, no mortalities occurred at a concentration of 4880 mg/m<sup>3</sup>. This material when applied to the skin of guinea pigs did not elicit any dermal sensitization reaction.

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## 12. ECOLOGICAL INFORMATION

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**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:**

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**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

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Reuse or reprocess if possible. Dispose in accordance with all applicable regulations.

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### 14. TRANSPORT INFORMATION

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**U.S. DEPARTMENT OF TRANSPORTATION:** Not regulated.

**CANADIAN TRANSPORTATION OF DANGEROUS GOODS:** Not regulated.

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### 15. REGULATORY INFORMATION

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**U.S. REGULATIONS:**

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

**SARA TITLE III SECTION 302 EXTREMELY HAZARDOUS SUBSTANCES (40 CFR 355.30):** Not regulated.

**SARA TITLE III SARA SECTIONS 311/312 HAZARDOUS CATEGORIES (40 CFR 370.21):**

ACUTE: No

CHRONIC: No

FIRE: No

REACTIVE: No

SUDDEN RELEASE: No

**SARA TITLE III SECTION 313 (40 CFR 372.65):** Not regulated.

**OSHA PROCESS SAFETY (29CFR1910.119):** Not regulated.

**STATE REGULATIONS:**

**California Proposition 65:** Not regulated.

**NEW JERSEY WORKER AND COMMUNITY RIGHT TO KNOW:  
REPORTING REQUIREMENT:**

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**RIGHT TO KNOW HAZARDOUS SUBSTANCE LIST:**

Not regulated.

**SPECIAL HEALTH HAZARD SUBSTANCE LIST:**

Not regulated.

**PENNSYLVANIA RIGHT TO KNOW:**

**REPORTING REQUIREMENT:**

POTASSIUM BICARBONATE 298-14-6 95-100%

**HAZARDOUS SUBSTANCE LIST:**

Not regulated.

**ENVIRONMENTAL HAZARDOUS SUBSTANCE LIST:**

Not regulated.

**SPECIAL HAZARDOUS SUBSTANCE LIST:**

Not regulated.

**CANADIAN REGULATIONS:**

**WHMIS CLASSIFICATION:** Not regulated.

**NATIONAL INVENTORY STATUS:**

**U.S. INVENTORY (TSCA):** All the components of this substance are listed on or are exempt from the inventory.

**TSCA 12(b) EXPORT NOTIFICATION:** Not listed.

**CANADA INVENTORY (DSL/NDL):** All components of this product are listed on the DSL.

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**16. OTHER INFORMATION**

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**NFPA RATINGS (SCALE 0-4):** HEALTH=1 FIRE=0 REACTIVITY=0

**HMIS RATINGS (SCALE 0-4):** HEALTH=1 FLAMMABILITY=0 REACTIVITY=0

This information is intended solely for the use of individuals trained in the NFPA and/or HMIS systems.  
Rated using 2nd Edition HMIS Instructions.

**MSDS SUMMARY OF CHANGES**

2. HAZARDS IDENTIFICATION

3. COMPOSITION/INFORMATION ON INGREDIENTS

4. FIRST AID MEASURES

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- 8. EXPOSURE CONTROLS/PERSONAL PROTECTION
- 11. TOXICOLOGICAL INFORMATION
- 15. REGULATORY INFORMATION

**Standard 29 CFR 1910.1200 requires that information be provided to employees regarding the hazards of chemicals by means of a hazard communication program including labeling, material safety data sheets, training and access to written records. We request that you, and it is your legal duty to, make all information in this Material Safety Data Sheet available to your employees.**

**IMPORTANT: The information presented herein, while not guaranteed, was prepared by competent technical personnel and is true and accurate to the best of our knowledge. NO WARRANTY OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE, OR WARRANTY OR GUARANTY OF ANY OTHER KIND, EXPRESS OR IMPLIED, IS MADE REGARDING PERFORMANCE, SUITABILITY, STABILITY OR OTHERWISE. The information included herein is not intended to be all-inclusive as to the appropriate manner and/or conditions of use, handling and/or storage. Factors pertaining to certain conditions of storage, handling, or use of this product may involve other or additional safety or performance considerations. While our technical personnel will be happy to respond to questions regarding safe handling and use procedures, safe handling and use remains the responsibility of the customer. No suggestions for use are intended to, and nothing herein shall be construed as a recommendation to, infringe any existing patents or violate any laws, rules, regulations or ordinances of any governmental entity.**