

Material Safety Data Sheet

Material Name: Potassium Carbonate

ID: C1-130

\*\*\* Section 1 - Chemical Product and Company Identification \*\*\*

Chemical Name: Potassium Carbonate (Food Grade, Industrial Grade, CP Grade, Light and Heavy Density)

Product Use: For Commercial Use

Synonyms: Salt of tartar; Pearl ash; Potash; Carbonate of potash; Carbonic acid, dipotassium salt; Carbonate de potassium

Supplier Information

Chem One Ltd.
8017 Pinemont Drive, Suite 100
Houston, Texas 77040-6519

Phone #: (713) 896-9966
Fax #: (713) 896-7540
Emergency #: (800) 424-9300 or (703) 527-3887

General Comments:

NOTE: Emergency telephone numbers are to be used only in the event of chemical emergencies involving a spill, leak, fire, exposure, or accident involving chemicals. All non-emergency questions should be directed to customer service.

\*\*\* Section 2 - Composition / Information on Ingredients \*\*\*

Table with 3 columns: CAS #, Components, Percent. Row 1: 584-08-7, Potassium Carbonate, 99-100

Component Information/Information on Non-Hazardous Components

This product is considered hazardous under 29 CFR 1910.1200 (Hazard Communication).

\*\*\* Section 3 - Hazards Identification \*\*\*

Emergency Overview

Product is a white, granular translucent powder. It is a severe irritant of the eyes, skin, nose and throat. Ingestion of large amounts is corrosive, and may result in circulatory collapse and death. Avoid contact with incompatible materials such as chlorine trifluoride, magnesium, and acids. Probably corrodes aluminum.

Hazard Statements

WARNING! HARMFUL IF SWALLOWED. CAUSES SEVERE EYE, SKIN, AND RESPIRATORY TRACT IRRITATION. Avoid contact with eyes and skin. Avoid breathing dusts. Wash thoroughly after handling. Keep container closed. Use with adequate ventilation.

Potential Health Effects: Eyes

Brief exposure can cause irritation. Extended exposure may cause permanent eye damage. Symptoms can include pain and watering.

Potential Health Effects: Skin

Product may cause mild to moderate irritation. Symptoms include itching, burning and inflammation. Longer exposures may cause burns.

Potential Health Effects: Ingestion

Large amounts of this material may be harmful or fatal if swallowed. May result in stomach cramps, vomiting, diarrhea, circulatory collapse and death.

Potential Health Effects: Inhalation

Irritating to nose, throat and respiratory tract. May cause coughing, sneezing and difficult breathing.

HMIS Ratings: Health Hazard: 2 Fire Hazard: 0 Physical Hazard: 1

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe \* = Chronic hazard

\*\*\* Section 4 - First Aid Measures \*\*\*

First Aid: Eyes

Immediately rinse affected eye with plenty of water for at least 15 minutes. Seek immediate medical attention if any adverse effect occurs after rinsing.

First Aid: Skin

Immediately take off all contaminated clothing. For skin contact, flush with large amounts of water. If irritation persists, get medical attention.

**\*\*\* Section 4 - First Aid Measures (Continued) \*\*\***

**First Aid: Ingestion**

DO NOT INDUCE VOMITING, unless directed by medical personnel. Have victim rinse mouth thoroughly with water, if conscious. Never give anything by mouth to a victim who is unconscious or having convulsions. If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration. Contact a physician or poison control center immediately.

**First Aid: Inhalation**

Remove source of contamination or move victim to fresh air. Apply artificial respiration if victim is not breathing. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Administer oxygen if breathing is difficult. Get immediate medical attention.

**First Aid: Notes to Physician**

Provide general supportive measures and treat symptomatically.

**\*\*\* Section 5 - Fire Fighting Measures \*\*\***

**Flash Point:** Does not burn

**Method Used:** Not applicable

**Upper Flammable Limit (UFL):** Not applicable

**Lower Flammable Limit (LFL):** Not applicable

**Auto Ignition:** Not applicable

**Flammability Classification:** Not applicable

**Rate of Burning:** Not applicable

**General Fire Hazards**

None. Potassium carbonate and its solutions will not burn or support combustion.

**Hazardous Combustion Products**

If strongly heated, potassium oxide may be formed.

**Extinguishing Media**

Use media for the surrounding fire and other materials involved in the fire.

**Fire Fighting Equipment/Instructions**

Firefighters should wear full protective equipment and clothing when fighting a fire involving this material.

**NFPA Ratings: Health: 2 Fire: 0 Reactivity: 1 Other:**

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

**\*\*\* Section 6 - Accidental Release Measures \*\*\***

**Containment Procedures**

Stop the flow of material, if this can be done without risk. Contain the discharged material. If sweeping of a contaminated area is necessary use a dust suppressant agent, which does not react with product (see Section 10 for incompatibility information).

**Clean-Up Procedures**

Small releases can be cleaned-up in gloves, goggles and suitable body protection. In case of a large spill (in which excessive dusts can be generated), clear the affected area, protect people, and respond with trained personnel. If a vacuum is used for spill clean-up, only an explosion-proof vacuum should be used, due to the potential for dust explosion. Place all spill residues in an appropriate container and seal. Thoroughly wash the area after a spill or leak clean-up. Prevent spill rinsate from contamination of storm drains, sewers, soil or groundwater.

**Evacuation Procedures**

Evacuate the area promptly and keep upwind of the spilled material. Isolate the spill area to prevent people from entering. In case of large spills, follow all facility emergency response procedures.

**Special Procedures**

Remove soiled clothing and laundry before reuse. Avoid all skin contact with the spilled material. Have emergency equipment readily available.

**\*\*\* Section 7 - Handling and Storage \*\*\***

**Handling Procedures**

Wear appropriate protective equipment to prevent contact with skin and eyes. Control dust and mist generation. When diluting or preparing a solution, add to water in small amounts to avoid boiling and splattering. Label and close containers when not in use.

**Storage Procedures**

Store in a cool, dry, well-ventilated area. Area should have a caustic-resistant floor and approved drainage system. Store away from other incompatible materials as listed in Section 10.

\*\*\* Section 8 - Exposure Controls / Personal Protection \*\*\*

**Exposure Guidelines**

**A: General Product Information**

No exposure guidelines have been established.

**B: Component Exposure Limits**

The exposure limits given are for Particulates Not Otherwise Classified (PNOC).

- OSHA: 15 mg/m<sup>3</sup> TWA (Total dust)
- 5 mg/m<sup>3</sup> TWA (Respirable fraction)
- DFG MAKs 4 mg/m<sup>3</sup> TWA (Inhalable fraction)
- 1.5 mg/m<sup>3</sup> TWA (Respirable fraction)

**Engineering Controls**

Use local exhaust ventilation and process enclosure to control airborne dust and mist. Supply sufficient replacement air to make up for air removed by exhaust systems.

**PERSONAL PROTECTIVE EQUIPMENT**

The following information on appropriate Personal Protective Equipment is provided to assist employers in complying with OSHA regulations found in 29 CFR Subpart I (beginning at 1910.132). Please reference applicable regulations and standards for relevant details.

**Personal Protective Equipment: Eyes/Face**

Wear chemical safety goggles or face shield. If necessary, refer to U.S. OSHA 29 CFR 1910.133.

**Personal Protective Equipment: Skin**

Wear impervious gloves, shoes, aprons and coveralls to avoid skin contact. If necessary, refer to U.S. OSHA 29 CFR 1910.138.

**Personal Protective Equipment: Respiratory**

Use an approved respirator suitable for protection from alkaline dusts and mists. If respiratory protection is needed, use only protection authorized in the U.S. Federal OSHA Standard (29 CFR 1910.134), applicable U.S. State regulations. Oxygen levels below 19.5% are considered IDLH by OSHA. In such atmospheres, use of a full-facepiece pressure/demand SCBA or a full facepiece, supplied air respirator with auxiliary self-contained air supply is required under OSHA's Respiratory Protection Standard (1910.134-1998).

**Personal Protective Equipment: General**

Wash hands thoroughly after handling material. Do not eat, drink or smoke in work areas. Have a safety shower or eye-wash fountain available.

\*\*\* Section 9 - Physical & Chemical Properties \*\*\*

**Physical Properties: Additional Information**

The data provided in this section are to be used for product safety handling purposes. Please refer to Product Data Sheets, Certificates of Conformity or Certificates of Analysis for chemical and physical data for determinations of quality and for formulation purposes.

<b>Appearance:</b> White powder	<b>Odor:</b> Odorless
<b>Physical State:</b> Solid	<b>pH:</b> 11.6 (10% aqueous solution)
<b>Vapor Pressure:</b> Not volatile	<b>Vapor Density:</b> Not applicable
<b>Boiling Point:</b> Not applicable	<b>Freezing/Melting Point:</b> Decomposes at 1636 deg F (891 deg C)
<b>Solubility (H2O):</b> Freely soluble in water	<b>Specific Gravity:</b> 2.43 at 20 deg C (water=1)
<b>Softening Point:</b> Not available	<b>Particle Size:</b> Not available
<b>Viscosity:</b> Not applicable	<b>Evaporation Rate:</b> Does not evaporate
<b>Percent Volatile:</b> Not available	<b>Bulk Density:</b> 44-50 lbs/ft <sup>3</sup> (light); 81-83 lbs/ft <sup>3</sup> (dense)
<b>Chemical Formula:</b> K <sub>2</sub> CO <sub>3</sub>	<b>Molecular Weight:</b> 138.20

\*\*\* Section 10 - Chemical Stability & Reactivity Information \*\*\*

**Chemical Stability**

Stable

**Chemical Stability: Conditions to Avoid**

Avoid contact with skin, and with the incompatible materials listed below.

## \*\*\* Section 10 - Chemical Stability &amp; Reactivity Information (Continued) \*\*\*

**Incompatibility**

Incompatible with potassium cyanate, boric acid, copper oxychloride, chlorine trifluoride, magnesium. The mixture of magnesium and Potassium Carbonate recommended by Castellana as a safe substitute for molten sodium in the Lassaigne test can itself be hazardous, as an equimolar mixture gives an explosive substance (possibly 'carbonylpotassium', potassium benzenehexoxide) on heating. Reaction with acids may generate heat.

**Hazardous Decomposition**

If strongly heated, potassium oxide may be formed.

**Hazardous Polymerization**

Will not occur.

## \*\*\* Section 11 - Toxicological Information \*\*\*

**Acute Toxicity****A: General Product Information**

Repeated or prolonged skin contact may result in dermatitis.

**B: Component LD50/LC50****Potassium Carbonate (584-08-7)**

LD<sub>50</sub> (Oral-Rat) 1870 mg/kg; LD<sub>50</sub> (Oral-Mouse) 2570 mg/kg; LD<sub>50</sub> (Oral-Bird-wild bird species) 100 mg/kg; LC (Inhalation-Rat) > 500 mg/m<sup>3</sup>

**C: Component Analysis - TDL<sub>o</sub>/LDLo****Potassium Carbonate (584-08-7)**

TCL<sub>o</sub> (Inhalation-Rat) 43 mg/m<sup>3</sup>/17 weeks: Cardiac: EKG changes not diagnostic of specified effects; Kidney, Ureter, Bladder: other changes in urine composition; Nutritional and Gross Metabolic: changes in potassium

**Carcinogenicity****A: General Product Information**

Information not available.

**B: Component Carcinogenicity**

None of this product's components are listed by ACGIH, IARC, NIOSH, NTP, or OSHA.

**Epidemiology**

Information not available.

**Neurotoxicity**

Information not available.

**Mutagenicity**

Unscheduled DNA Synthesis (Oral-Rat) 504 gm/kg/4 weeks-continuous

**Teratogenicity**

Information not available.

**Other Toxicological Information**

None.

## \*\*\* Section 12 - Ecological Information \*\*\*

**Ecotoxicity**

No data available for this product as a whole.

**Environmental Fate**

No data available for this product as a whole.

## \*\*\* Section 13 - Disposal Considerations \*\*\*

**US EPA Waste Number & Descriptions****A: General Product Information**

Product is not listed as a hazardous material by the U.S. EPA.

**B: Component Waste Numbers**

No EPA Waste Numbers are applicable for this product's components.

**Disposal Instructions**

Dispose of this material in accordance with all Federal, State, provincial and local regulations. It may be possible to neutralize and create dilute solutions in order to flush the material into a sewer system.

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**\*\*\* Section 14 - Transportation Information \*\*\***

NOTE: The shipping classification information in this section (Section 14) is meant as a guide to the overall classification of the product. However, transportation classifications may be subject to change with changes in package size. Consult shipper requirements under I.M.O., I.C.A.O. (I.A.T.A.) and 49 CFR to assure regulatory compliance.

**US DOT Information**

**Shipping Name:** Non-regulated.  
**Hazard Class:** Not Applicable  
**UN/NA #:** Not Applicable  
**Packing Group:** Not Applicable  
**Required Label(s):** None  
**Additional Info.:** None.

**International Air Transport Association (IATA)**

For Shipments by Air transport: We classify this product as hazardous (Class 9) when shipped by air because 49 CFR 173.140 (a). "For the purposes of this subchapter, miscellaneous hazardous material (Class 9) means a material which presents a hazard during transportation, but which does not meet the definition of any other hazard class. This class includes: (a) Any material which has an anesthetic, noxious, or other similar property which could cause extreme annoyance or discomfort to a flight crew member so as to prevent the correct performance of assigned duties."

**UN:** UN 3077  
**Proper Shipping Name:** Environmentally hazardous substance, solid, n.o.s. (potassium carbonate)  
**Hazard Class:** 9  
**Packing Group:** III  
**Passenger & Cargo Aircraft Packing Instruction:** 911  
**Passenger & Cargo Aircraft Maximum Net Quantity:** No Limit  
**Limited Quantity Packing Instruction (Passenger & Cargo Aircraft):** Y911  
**Limited Quantity Maximum Net Quantity (Passenger & Cargo Aircraft):** 30 kg  
**Special Provisions:** A97  
**ERG Code:** 9L

**International Maritime Organization (I.M.O.) Classification**

Potassium Carbonate is not regulated under I.M.D.G./I.M.O. regulations.

**\*\*\* Section 15 - Regulatory Information \*\*\***

**US Federal Regulations**

**A: General Product Information**

No additional information.

**B: Component Information**

None of this products components are listed under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65), or CERCLA (40 CFR 302.4).

SARA 302 (EHS TPQ) There are no specific Threshold Planning Quantities for Potassium Carbonate. The default Federal MSDS submission and inventory requirement filing threshold of 10,000 lbs. (4,540 kg) therefore applies, per 40 CFR 370.20.

**C: Sara 311/312 Tier II Hazard Ratings:**

Component	CAS #	Fire Hazard	Reactivity Hazard	Pressure Hazard	Immediate Health Hazard	Chronic Health Hazard
Potassium Carbonate	584-08-7	No	No	No	Yes	No

**State Regulations**

**A: General Product Information**

No components require labeling under California Proposition 65.

**B: Component Information**

None of this product's components are listed on the state lists from CA, FL, MA, MN, NJ, or PA.

Component	CAS #	CA	FL	MA	MN	NJ	PA
Potassium Carbonate	584-08-7	No	No	No	No	No	No

**Material Safety Data Sheet**

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**\*\*\* Section 15 - Regulatory Information (Continued) \*\*\***

**Other Regulations**

**A: General Product Information**

Not applicable.

**B: Component Analysis - Inventory**

Component	CAS #	TSCA	DSL	EINECS
Potassium Carbonate	584-08-7	Yes	Yes	Yes

**C: Component Analysis - WHMIS IDL**

The following components are identified under the Canadian Hazardous Products Act Ingredient Disclosure List:

Component	CAS #	Minimum Concentration
Potassium Carbonate	584-08-7	No disclosure limit.

**ANSI Labeling (Z129.1):**

WARNING! HARMFUL IF SWALLOWED. CAUSES SEVERE EYE, SKIN, AND RESPIRATORY TRACT IRRITATION. Avoid contact with eyes and skin. Avoid breathing dusts. Wash thoroughly after handling. Keep container closed. Use with adequate ventilation. Wear gloves, goggles, faceshields, suitable body protection, and NIOSH-approved respiratory protection, as appropriate. **FIRST-AID:** In case of contact, immediately flush skin or eyes with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. If inhaled, remove to fresh air. If ingested, do not induce vomiting. Get medical attention. **IN CASE OF FIRE:** Use water fog, dry chemical, CO<sub>2</sub>, or "alcohol" foam. **IN CASE OF SPILL:** Absorb spill with inert material. Place residue in suitable container. Consult Material Safety Data Sheet for additional information.

**\*\*\* Section 16 - Other Information \*\*\***

**Other Information**

Chem One Ltd. ("Chem One") shall not be responsible for the use of any information, product, method, or apparatus herein presented ("Information"), and you must make your own determination as to its suitability and completeness for your own use, for the protection of the environment, and for health and safety purposes. You assume the entire risk of relying on this Information. In no event shall Chem One be responsible for damages of any nature whatsoever resulting from the use of this product or products, or reliance upon this Information. By providing this Information, Chem One neither can nor intends to control the method or manner by which you use, handle, store, or transport Chem One products. If any materials are mentioned that are not Chem One products, appropriate industrial hygiene and other safety precautions recommended by their manufacturers should be observed. Chem One makes no representations or warranties, either express or implied of merchantability, fitness for a particular purpose or of any other nature regarding this information, and nothing herein waives any of Chem One's conditions of sale. This information could include technical inaccuracies or typographical errors. Chem One may make improvements and/or changes in the product (s) and/or the program (s) described in this information at any time. If you have any questions, please contact us at Tel. 713-896-9966 or E-mail us at [Safety@chemone.com](mailto:Safety@chemone.com).

**Key/Legend**

EPA = Environmental Protection Agency; TSCA = Toxic Substance Control Act; ACGIH = American Conference of Governmental Industrial Hygienists; IARC = International Agency for Research on Cancer; NIOSH = National Institute for Occupational Safety and Health; NTP = National Toxicology Program; OSHA = Occupational Safety and Health Administration

**Contact:** Sue Palmer-Koleman, PhD

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**Revision Log**

08/23/00 4:27 PM SEP Changed company name, Sect 1, from Corporation to Ltd.  
 05/31/01 9:31 AM HDF Checked exposure limits; made changes to Sect 9; overall review, add SARA 311/312 Haz Ratings.  
 08/20/01 2:15 PM CLJ Add Shipments by Air information to Section 14, Changed contact to Sue, non-800 Chemtrec Num.  
 09/16/03 4:25 PM HDF General review of entire MSDS. Up-graded Section 3 Health Hazard information, HMIS categories. Added PNOC exposure limits to Section 8. Up-dated incompatibility information in Section 10. Addition of currently available toxicity data to Section 11. Up-Dated Section 14 Transportation Information. Added SARA TPQ and ANSI Labeling information to Section 15.  
 06/22/05 9:36 AM SEP Updated IATA Section 14

This is the end of MSDS #C1-130