

RCT**Rierden Chemical & Trading Company****115 West Church Street****P.O. Box 7072****Libertyville, IL 60048****Tel (847) 816-9310 Fax (847) 816-6364****sales@rierdenchemical.com****Safety Data Sheet****Potassium Carbonate****I IDENTIFICATION**

Synonyms	carbonic acid, dipotassium salt, potash, carbonate of potash & others
CAS #	584-08-7
Europe EC #	209-529-3
Material Use	glass manufacture, fertilizer, mfg. of potassium salts & others

EMERGENCY INFORMATION

In the U.S.A.	Call CHEMTREC	(800) 424-9300
In Canada	Call CANUTEC (collect)	(613) 996-6666

II HAZARD IDENTIFICATION

GHS Class (Category)	acute, oral (4)	skin irritant (3)	eye corrosive (1)	STOT (3)
Signal Words	WARNING	WARNING no Hazard Symbol	DANGER	WARNING
Hazard Statements	harmful if swallowed (H302)	causes mild skin irritation (H316)	causes serious eye damage (H318)	may cause respiratory irritation (H335)

**GHS Precautionary Statements for Labelling**

P260, P262, P264	Do not breathe dust. Do not get in eyes or on skin. Wash thoroughly after handling.
P280	Wear eye protection and protective gloves of rubber or leather.
P312	Call a poison control centre or doctor if you feel unwell.
P313 & P333	If skin irritation or rash occurs, get medical advice/attention.
P304, P340	If inhaled remove person to fresh air and keep comfortable for breathing.
P305, P351, P338	Rinse cautiously with water for several minutes. Remove contact lenses if present & easy to do. Continue rinsing.

WHMIS Class (Canada)	D 2B, E
Key:	B 2 – Flash Point <38°C, B 3 – Flash Point >38°C & <93°C D 1 – Immediately Toxic, D 2 – Chronic Toxicity, E – Corrosive

**III COMPOSITION**

	CAS NUMBER	%	TLV ppm / mg/m ³	LD ₅₀ (mg/kg) ORAL	LD ₅₀ (mg/kg) SKIN	LC ₅₀ mg/m ³ INHALATION
Potassium Carbonate	584-08-7	100%	not listed	>1870	>>2000	>>4960

IV FIRST AID

SKIN:	Wash with plenty of water. Remove contaminated clothing and do not reuse until thoroughly laundered. Seek medical help promptly if there is persistent itching or redness in the affected area.
EYES:	Wash eyes with plenty of water, holding eyelids open. Seek medical assistance if there is persistent irritation.
INHALATION:	Remove from contaminated area promptly. CAUTION: Rescuer must not endanger himself! If victim's breathing stops, administer artificial respiration and seek medical aid promptly.
INGESTION:	Give plenty of water to dilute product. Do not induce vomiting (NOTE below). Keep victim quiet. If vomiting occurs, lower victim's head below hips to prevent inhalation of vomited material. Seek medical help promptly.

NOTE: Potentially corrosive substance: apply first aid immediately! Inadvertent inhalation of vomited material may seriously damage the lungs. The stomach should only be emptied under medical supervision, after the installation of an airway to protect the lungs.

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V FLAMMABILITY & FIRE-FIGHTING

Flash Point	cannot burn
Autoignition Temperature	cannot burn
Flammable Limits	cannot burn
Combustion Products	potassium oxide
Firefighting Precautions	as for materials sustaining fire; compatible with water; firefighters must wear SCBA
Static Discharge	cannot accumulate a static charge

VI ACCIDENTAL RELEASE MEASURES

Leak Precaution	not applicable – <i>solid material</i>
Handling Spill	sweep, shovel (<i>take care to avoid raising dust</i>) & store in closed containers for disposal

VII HANDLING & STORAGE

Potassium carbonate is hygroscopic; store and use in a dry environment. Corrosive to aluminum alloys. Reacts violently with strong acids.

Avoid generating product dust. If dust is formed in handling, install exhaust ventilation to clear workplace air. Avoid prolonged contact with skin & wash work clothes frequently. An eye bath & safety shower must be available near the workplace.

VIII EXPOSURE CONTROL & PERSONAL PROTECTION

ACGIH TLV	not listed	ACGIH STEL	not listed
OSHA PEL	not listed	OSHA STEL	not listed
Ventilation	no special mechanical ventilation required		
Hands	leather or rubber gloves – <i>always confirm suitability with supplier</i>		
Eyes	safety glasses with side shields or goggles – <i>always protect eyes!</i>		
Clothing	no special protective clothing required		

IX PHYSICAL AND CHEMICAL PROPERTIES

NOTE: for Flash Point, Autoignition Temp, & Flammable Limits see Part 5.

Odour & Appearance	hygroscopic, odourless white crystals or powder
Odour Threshold	not known – <i>odourless</i>
Vapour Pressure	not known – <i>essentially zero at ambient temperature</i>
Evaporation Rate (<i>Butyl Acetate = 1</i>)	not volatile
Vapour Density (air = 1)	4.7 – <i>theoretical, does not form a vapour</i>
Decomposition Temperature	hydrated product loses moisture over 130°C / 266°F; anhydrous product decomposes above 890°C / 1634°F
Boiling Point	not known – <i>decomposes without boiling above 891°C / 1636°F</i>
Melting Point	891°C / 1636°F – <i>very close to decomposition temperature</i>
Specific Gravity	2.43kg/litre
Water Solubility	1100grams per litre (20°C / 68°F)
- in other solvents	not known – <i>insoluble in ethanol, methanol, acetone</i>
Log P _{o/w} (<i>Octanol/H₂O Partition Coefficient</i>)	not known – <i>often unobtainable with ionic compounds</i>
Viscosity	not applicable – <i>solid material</i>
pH	12.5 (10% aqueous solution) – <i>strongly alkaline</i>
Molecular Weight	138grams per mole

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X REACTIVITY

Dangerously Reactive With	violent reaction with strong acids; chlorine trifluoride,
Also Reactive With	magnesium, solutions corrode aluminum, somewhat corrosive to copper & its alloys
Chemical Stability	stable; will not polymerize
Decomposes in Presence of	high temperature (above 890°C)
Decomposition Products	apart from Hazardous Combustion Products, potassium oxide
Mechanical Impact	not sensitive

XI TOXICITY INFORMATION**i. ACUTE EXPOSURE**

Skin Contact	little to no effect on dry skin; moist skin may be irritated by potassium carbonate's alkalinity
Skin Absorption	no
Eye Contact	severely irritating, may cause corrosive damage if not removed promptly
Inhalation	potassium carbonate dust is likely to irritate respiratory system due to its alkalinity
Ingestion	irritating to mouth, throat and stomach; irritation ensures that only tiny amounts are ingested
LD ₅₀ (oral)	1870, 1983 & 2000mg/kg (rat) ¹ , 2570mg/kg (mouse)
LD ₅₀ (skin)	>2000mg/m ³ (rabbit) ¹ – <i>no mortality</i>
LC ₅₀ (inhalation)	4960mg/m ³ (rat) ¹ – <i>no mortality</i>

ii. CHRONIC EXPOSURE

General	prolonged or repeated exposure may cause dermatitis; increased mucus production from airways during inhalation – <i>stops rapidly when dust disappears</i>
Sensitising	not a sensitiser ¹
Carcinogen/Tumorigen	not known to be a tumorigen or a carcinogen in humans or animals ¹
Reproductive Effect	no known effect on humans or animals ¹
Mutagen	not known to be a mutagen or teratogen in humans or animals ¹
Synergistic With	not known

XII ECOLOGICAL INFORMATION

Bioaccumulation	potassium carbonate cannot bioaccumulate
Biodegradation	potassium carbonate cannot biodegrade
Abiotic Degradation	potassium carbonate will undergo ion exchange with soil salts; potassium is taken up by vegetation
Mobility in soil, water	water soluble; moves readily through soil & the water column <i>but not in limestone</i>
Aquatic Toxicity	
LC ₅₀ (Fish 96 hr)	510mg/litre (Pimephelas promelas), 68mg/litre (Oncorhynchus mykiss) ¹ , 230mg/litre (Lepomis macrochirus) ¹
LC ₅₀ (Crustacea, 48hr)	430mg/litre (Daphnia magna – <i>hard water</i>) ¹ , 200mg/litre (Daphnia pulex – <i>soft water</i>) ¹
LC ₅₀ (Algae)	not known
LC ₅₀ (Microorganisms)	not known

XIII DISPOSAL CONSIDERATIONS

Waste Disposal	do not flush to sewer; local regulations may permit disposal in sanitary landfill; a hazardous waste specialist may use it to neutralize an acidic waste
Containers	Drums should be reused. Recondition and pressure test by a licensed reconditioner prior to re-use. Pails must be vented and thoroughly dried prior to crushing and recycling. IBCs (intermediate bulk containers): polyethylene bottle must be pressure tested & recertified at 30 months. Replace at 60 months (5 years). Steel containers must be inspected, pressure tested & recertified every 5 years. Warning: never cut, drill, weld or grind on or near this container, even if empty.

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XIV TRANSPORT INFORMATION**USA 49 CFR & Canada TDG**

Product Identification Number

Shipping Name

Classification

Marine Pollution**ERAP Required****Reportable Quantity (RQ)****UN – not regulated for transport****not regulated for transport****not regulated for transport****not a marine pollutant****No****none****XV REGULATIONS****Canada DSL****on inventory****U.S.A. TSCA****ACTIVE****Europe EINECS****on inventory****NOTE: This very common substance is present on most national chemical inventories.****U.S.A. Regulations:**

Allowable Tolerances: Residues of carbonic acid, dipotassium salt are exempted from the requirement of a tolerance when used in accordance with good agricultural practice as inert (or occasionally active) ingredients in pesticide formulations applied to growing crops only. Use: buffering agent.

FIFRA Requirements: Residues of carbonic acid, dipotassium salt are exempted from the requirement of a tolerance when used in accordance with good agricultural practice as inert (or occasionally active) ingredients in pesticide formulations applied to growing crops only. Use: buffering agent. As the federal pesticide law FIFRA directs, EPA is conducting a comprehensive review of older pesticides to consider their health and environmental effects and make decisions about their continued use. Under this pesticide reregistration program, EPA examines newer health and safety data for pesticide active ingredients initially registered before November 1, 1984, and determines whether the use of the pesticide does not pose unreasonable risk in accordance to newer safety standards, such as those described in the Food Quality Protection Act of 1996. Pesticides for which EPA had not issued Registration Standards prior to the effective date of FIFRA '88 were divided into three lists based upon their potential for human exposure and other factors, with List B containing pesticides of greater concern than those on List C, and with List C containing pesticides of greater concern than those on List D. Potassium carbonate is found on List D. Case No: 4066; Pesticide type: fungicide, herbicide, antimicrobial; Case Status: None of the active ingredients in the case are being supported for reregistration by their registrants. All are unsupported, or some are unsupported and some are cancelled. Cases described as "unsupported" generally are being processed for cancellation. AI Status: The active ingredient is no longer contained in any registered pesticide products ... "cancelled."

FDA Requirements: Substance added directly to human food affirmed as generally recognized as safe. Potassium carbonate used as a general purpose food additive in animal drugs, feeds, and related products is generally recognized as safe when used in accordance with good manufacturing or feeding practice. Drug products containing certain active ingredients offered over-the-counter (OTC) for certain uses. A number of active ingredients have been present in OTC drug products for various uses, as described below. However, based on evidence currently available, there are inadequate data to establish general recognition of the safety and effectiveness of these ingredients for the specified uses: potassium carbonate is included in antidiarrheal drug products. Drug products containing certain active ingredients offered over-the-counter (OTC) for certain uses. A number of active ingredients have been present in OTC drug products for various uses, as described below. However, based on evidence currently available, there are inadequate data to establish general recognition of the safety and effectiveness of these ingredients for the specified uses: potassium carbonate is included in digestive aid drug products.

SARAPhysical Hazards

- ☐ Explosive
☐ Flammable
☐ Oxidizer (liquid, solid or gas)
☐ Self-reactive
☐ Pyrophoric (liquid or solid)
☐ Pyrophoric Gas
☐ Self-heating
☐ Organic peroxide
☐ Corrosive to metal
☐ Gas under pressure (compressed gas)
☐ In contact with water emits flammable gas
☐ Combustible Dust
☐ Hazard Not Otherwise Classified

Chemical Hazards

- ☒ Acute toxicity (any route of exposure)
☒ Skin corrosion or irritation
☒ Serious eye damage or eye irritation
☐ Respiratory or skin sensitization
☐ Germ cell mutagenicity
☐ Carcinogenicity
☐ Reproductive toxicity
☒ Specific target organ toxicity (single or repeated ex.)
☐ Aspiration hazard
☐ Simple Asphyxiant
☐ Hazard Not Otherwise Classified

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XVI OTHER INFORMATION**Date of Preparation** June 2011**Date of Revision** December 2017, November 2015, May 2013, February 2019 (D. Moreno)Prepared for Rierden Chemical & Trading Company, by **Peter Bursztyn***With data from Registry of Toxic Effects of Chemical Substances (RTECS - USA), Hazardous Substance Data Base (HSDB - USA), Cheminfo (CCOHS - Canada), OSHA website, European Chemicals Agency (EChA) dossiers & other sources (below if used), as required/available.**(1) European Chemicals Agency (EChA) dossier on potassium carbonate: <http://apps.echa.europa.eu/registered/data/dossiers/DISS-9d87f419-6f81-418c-e044-00144f67d249/DISS-9d87f419-6f81-418c-e044-00144f67d249> DISS-9d87f419-6f81-418c-e044-00144f67d249.html***last page of SDS****PLEASE ENSURE THAT THIS SDS IS GIVEN TO, AND EXPLAINED TO PEOPLE USING THIS PRODUCT.****EMERGENCY INFORMATION: Call CHEMTREC (800) 424-9300**