SAFETY DATA SHEET

POTASSIUM CARBONATE (ANHYDROUS ALL GRADES)

North America EN
SDS No.: M1252 **Rev. Date:** 29-Mar-2023
Rev. Num. 05

SECTION 1. CHEMICAL PRODUCT / COMPANY IDENTIFICATION

Company Identification:	Armand Products Company 500 Charles Ewing Boulevard Ewing, NJ 08628
24-Hour Emergency Telephone Number:	1-800-733-3665 (USA); CANUTEC (Canada): 1-613-996-6666; CHEMTREC (within USA and Canada): 1-800-424-9300; CHEMTREC (outside USA and Canada): +1 703-527-3887; CHEMTREC Contract No: CCN16186
To Request an SDS:	MSDS@oxy.com or 1-972-404-3245
Customer Service:	1-800-522-0540 or 1-609-683-5900
Product Identifier:	**POTASSIUM CARBONATE (ANHYDROUS ALL GRADES)**
Trade Name:	Potassium Carbonate Extra Fine; Potassium Carbonate Glass; Potassium Carbonate Dense Granular; Potassium Carbonate Fine Potassium Carbonate Food Grade Potassium Carbonate Extra Fine Food Grade
Synonyms:	Pearlash; Potash; PotCarb
Product Use:	Glass Production; Photographic; detergents / soaps; Fertilizer *; Rubber products; Pharmaceuticals; Potassium Silicates; Food processing; Gas Treatment; Agricultural Chemicals; Cement; catalysts; Food Additive
Uses Advised Against:	*Check with national, state, and local regulatory agencies to determine status of use in a fertilizer application.
Restrictions on Use (United States):	Check with national, state, and local regulatory agencies to determine status of use in a fertilizer application.
Other Global Restrictions on Use:	Other restrictions on use based on local, regional, state, or national regulations may exist and must be determined on a case-by-case basis.
Chemical Family:	Alkali

SECTION 2. HAZARDS IDENTIFICATION

OSHA REGULATORY STATUS: This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

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EMERGENCY OVERVIEW:

Color: White
Physical State: Solid
Appearance: Free-flowing, Granular powder
Odor: Odorless

Signal Word: **WARNING**

MAJOR HEALTH HAZARDS: CAUSES SERIOUS EYE IRRITATION. CAUSES SKIN IRRITATION. MAY CAUSE RESPIRATORY TRACT IRRITATION. MAY BE HARMFUL IF SWALLOWED.

AQUATIC TOXICITY: May increase pH of waterways and adversely affect aquatic life.

PRECAUTIONARY STATEMENTS: Avoid breathing dust. Wash hands and exposed skin and clothing thoroughly after handling. Do not touch eyes. Do not eat, drink, or smoke when using this product. Wear protective gloves, protective clothing, eye, and face protection. Use only outdoors or in a well-ventilated area.

ADDITIONAL HAZARD INFORMATION: Potassium carbonate will dissolve in water forming liquid potassium carbonate, which is an irritating and corrosive material. Liquid potassium carbonate is corrosive to aluminum. Contact with acid liberates carbon dioxide.

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HAZARD CLASSIFICATION:

GHS: CONTACT HAZARD - SKIN:	Category 2 - Causes skin irritation
GHS: CONTACT HAZARD - EYE:	Category 2A - Causes serious eye irritation
GHS: TARGET ORGAN TOXICITY (SINGLE EXPOSURE):	- Category 3 - May cause respiratory tract irritation
HAZARDS NOT OTHERWISE CLASSIFIED (HNOC):	- ACUTE TOXICITY - ORAL: Category 5 (May be harmful if swallowed)

GHS SYMBOL: Exclamation mark

GHS SIGNAL WORD: **WARNING**

GHS HAZARD STATEMENTS:

GHS - Health Hazard Statement(s)
• Causes serious eye irritation
• Causes skin irritation
• May cause respiratory irritation

Additional Hazards - GHS Hazards Not Otherwise Classified (HNOC):
• ACUTE TOXICITY - ORAL: Category 5 (May be harmful if swallowed)

GHS - Precautionary Statement(s) - Prevention
• Avoid breathing dust
• Wash hands and exposed skin and clothing thoroughly after handling. Do not touch eyes
• Use only outdoors or in a well-ventilated area
• Wear protective gloves, protective clothing, eye, and face protection

GHS - Precautionary Statement(s) - Response
• IF ON SKIN: Wash with plenty of water
• Specific treatment for skin contact (see First Aid information on product label and/or Section 4 of the SDS)
• If skin irritation occurs: Get medical help
• Take off contaminated clothing and wash it before reuse
• IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
• If eye irritation persists: Get medical help
• IF INHALED: Remove person to fresh air and keep at rest in a position comfortable for breathing
• IF INHALED: Call a POISON CENTER or doctor/physician if you feel unwell

GHS - Precautionary Statement(s) - Storage
• Store in a well-ventilated place. Keep container tightly closed
• Store in a secure manner

GHS - Precautionary Statement(s) - Disposal
• Dispose of contents and container in accordance with applicable local, regional, national, and/or international regulations

Physical Hazards of Significance Not Mentioned in GHS Classification
• Liquid potassium carbonate is corrosive to aluminum

Health Hazards of Significance Not Mentioned in GHS Classification
• Potassium carbonate will dissolve in water forming liquid potassium carbonate, which is an irritating and corrosive material
• Contact with acid liberates carbon dioxide

Additional Hazard Information
Potassium carbonate will dissolve in water forming liquid potassium carbonate, which is an irritating and corrosive material. Liquid potassium carbonate is corrosive to aluminum

See Section 11: TOXICOLOGICAL INFORMATION

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Synonym(s) for Product: Pearlash; Potash; PotCarb

Component	Systematic Chemical Name	Common name	CAS Number	Percent [%]
Potassium Carbonate	Potassium Carbonate	Potassium Carbonate	584-08-7	98.5 - 100

SECTION 4. FIRST AID MEASURES

EYE CONTACT: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical help. Irrigate the eye for at least 30 minutes continuing until the pH is between 7 and 8. Transport for medical assessment.

SKIN CONTACT: Take off contaminated clothing and wash before reuse. IF ON SKIN: Wash with plenty of water. IF SKIN IRRITATION OCCURS: GET MEDICAL HELP.

INHALATION: IF INHALED: Remove person to fresh air and keep at rest in a position comfortable for breathing. IF INHALED: Get medical help if you feel unwell. Monitor symptomatic patients for airway obstruction. Administer humidified oxygen to all patients with respiratory symptoms. Transport for medical assessment.

INGESTION: IF SWALLOWED: Get medical help. Rinse mouth if ingested. Do not give fluids. Gastrointestinal decontamination is contraindicated.

Most Important Symptoms/Effects (Acute and Chronic [Delayed]):

Acute Symptoms/Effects:
Eye: Eye Irritation: Exposure to eyes may cause severe irritation and redness to the eye lids, conjunctiva. There is potential for permanent and severe eye damage if not treated immediately.
Skin: Skin Irritation: Exposure to skin may cause redness, or irritation.
Inhalation (Breathing): Respiratory Irritation: Upper airway irritation, may cause cough, redness of mouth and upper airways.
Ingestion (Swallowing): Gastrointestinal System Effects: Small amounts used in food application are not considered toxic by ingestion; however, slightly toxic if larger amounts are ingested. May be severely irritating to gastrointestinal tract possibly causing oral, esophageal, glottis redness, irritation, ulceration, edema, and stomach and intestinal irritation and burns. Ingestion of large quantities may cause ulceration, vomiting, shock, and death.

Chronic (Delayed) Symptoms/Effects:
Repeated or prolonged contact may result in dermatitis.

Protection of First-Aiders: Avoid contact with skin and eyes. Do not breathe dust. At minimum, treating

personnel should utilize PPE sufficient for prevention of bloodborne pathogen transmission.

Notes to Physician:
Treatment is based upon symptomatic and supportive care.

Interaction with Other Chemicals Which Enhance Toxicity: This chemical combination of this product with lime in contact with moisture in the form of water or perspiration will cause the formation of a very irritating and corrosive material, namely caustic potash (KOH).

Medical Conditions Aggravated by Exposure: May aggravate preexisting conditions, such as: eye disorders that decrease tear production or have reduced integrity of the eye; skin disorders that compromise the integrity of the skin.

SECTION 5. FIRE FIGHTING MEASURES

Fire Hazard: Product itself is non-combustible.

Explosive properties: This product is not combustible or explosive. May decompose under fire conditions emitting carbon dioxide.

Extinguishing Media: Use extinguishing medium as appropriate for surrounding fire. The product is not combustible. In case of fire in the surroundings, use water spray, foam, CO2, dry powder.

Unsuitable Extinguishing Media: High volume water jet.

Specific Hazards: The product itself does not burn.

Unusual Hazards: High temperatures due to fire or mixing with acids can cause this material to decompose releasing carbon dioxide gas.

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.

Advice for Firefighters: Water used to extinguish fire should not enter drainage systems, soil, or stretches of water. Ensure there are sufficient retaining facilities for water used to extinguish fire. Contaminated fire-extinguishing water must be disposed of in accordance with the regulations issued by the appropriate local authorities. Fire residues should be disposed of in accordance with the regulations.

Hazardous Combustion Products: Oxides of carbon; Potassium oxides

Products Formed During Combustion and Thermal Degradation: When heated to decomposition emits toxic fumes of potassium oxide (K2O)

Sensitivity to Mechanical Impact: Not sensitive.

Sensitivity to Static Discharge: Not sensitive.

Lower Flammability Level (air): Not flammable

Upper Flammability Level (air): Not flammable

Flash point: Not flammable

Auto-ignition Temperature: Non-combustible

Physical Hazards of Significance Not Mentioned in GHS Classification
- Liquid potassium carbonate is corrosive to aluminum

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions: Avoid contact with skin and eyes. Avoid breathing dust. Avoid dust formation. Wash thoroughly after handling.

Personal Protective Equipment: Cleanup personnel must wear proper protective equipment. See Section 8 for information on personal protective equipment.

Emergency Procedures: Restrict access to the area until cleanup is complete. Prevent material and runoff from entering sewers and waterways if it can be done safely well ahead of the release. All transfer facilities should have a documented spill prevention and containment program for all hazardous materials. Consideration must be given to the containment of spills and leaks to comply with applicable federal, state, and local regulations.

Environmental Precautions: Keep out of water supplies and sewers. This material is alkaline and may raise the pH of surface waters with low buffering capacity. Releases should be reported, if required, to appropriate agencies.

Methods and Materials for Clean-up

Recovery: Shovel dry material into suitable container. Avoid dust formation.
Neutralization: Wash away remainder with plenty of water.
Final Disposal: Recycle or dispose according to regulations. For waste disposal, see section 13.

Additional Disaster Prevention Measures: Potassium carbonate will dissolve in water forming liquid potassium carbonate, which is an irritating and corrosive material. Liquid potassium carbonate is corrosive to aluminum.

SECTION 7. HANDLING AND STORAGE

Handling:

Precautions for Safe Handling: Avoid contact with skin and eyes. Avoid creation of dust. Avoid breathing dust, mist, or spray. When using, do not eat, drink or smoke. Wash skin and contaminated clothing thoroughly after handling. Do not reuse containers. Use only outdoors or in a well-ventilated area. Wear protective gloves, protective

clothing, eye, and face protection.

Technical measures/precautions: Under severe winter conditions, liquid potassium carbonate may begin to crystallize below 8°F. Although anhydrous potassium carbonate is readily soluble in water, when large quantities of granular potassium carbonate are placed in solutions without active circulation, the granular material falls to the bottom and forms a layer of hydrate. This layer dissolves quite slowly, forming an area of heavy concentration that may lead to local overheating which in turn may cause an attack on the tank lining or coating.

Prevention of contact: The packing glands of pumps used in potassium carbonate service should be shielded to prevent spraying in the event of a leak. A safety shield of wrap-around polypropylene is recommended for all flanged joints. This will protect personnel against spraying in case a gasket leaks. Residues that dry on equipment can cause irritation. Keep equipment clean by washing off any accumulation.

Storage:

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

Incompatible Substances: Acids, lime, prolonged contact with aluminum, brass, bronze, copper, lead, tin, zinc or other alkali sensitive metals or alloys are incompatible substances. Aluminum, zinc, brass, bronze, and copper are NOT recommended for storage or handling due to the potential for a reaction. In addition, incompatible with chlorine trifluoride and magnesium, which may lead to an explosive and/or violent reaction.

Packaging or Materials of Construction: Iron, steel, stainless steel, rubber lined steel or phenolic lined steel is recommended. If heated to 120°F, the potential for iron contamination exists. Polyethylene drums can be used for liquid storage and handling at ambient temperatures. Aluminum, zinc, brass, bronze, and copper are NOT recommended for storage or handling due to the potential for a reaction.

Additional Information: Potassium carbonate will dissolve in water forming liquid potassium carbonate, which is an irritating and corrosive material. Liquid potassium carbonate is corrosive to aluminum.

Physical Hazards of Significance Not Mentioned in GHS Classification
- Liquid potassium carbonate is corrosive to aluminum

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

REGULATORY EXPOSURE LIMIT(S):
This product does not contain any components that have regulatory occupational exposure limits (OELs) established.

NON-REGULATORY EXPOSURE LIMIT(S):
A manufacturer's advisory exposure limit for Potassium Carbonate of 10 mg/m^3 (as an inhalation Ceiling Limit) is recommended based on the European Union (EU) Derived No-Effect Level (DNEL) for Potassium Carbonate (10mg/m^3), when a regulatory exposure limit is not available. EU REACH (Annex I, 1.0.1) defines the DNEL as "the level of exposure above which humans should not be exposed". In addition to the Manufacturer Recommended Exposure Level (REL) for the ceiling exposure limit, the manufacturer [Occidental Chemical Corporation] has

established an 8-hour time weighted average (TWA) REL for Potassium Carbonate, of 2 mg/m^3. Contact the manufacturer for further information addressing appropriate exposure monitoring / sampling methods.
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Component	OXY REL 8 hr TWA	OXY REL STEL	OXY REL Ceiling
Potassium Carbonate 584-08-7	2 mg/m^3	NA	10 mg/m^3

Additional Advice: ACGIH and/or Recommended Exposure Level (REL) Ceiling values indicate the exposure limit, which at no time shall be exceeded. Instantaneous monitoring is the preferred method to determine compliance with Ceiling values. If instantaneous monitoring is not feasible, then the ceiling shall be assessed as a 15-minute time weighted average exposure, which shall not be exceeded at any time during the working day.

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

PERSONAL PROTECTIVE EQUIPMENT:

Eye Protection: If eye contact is likely, wear chemical resistant safety goggles. Where splashing or spraying is possible, use a face-shield in addition to chemical protective goggles. Provide an emergency eyewash fountain and quick drench shower in the immediate work area.

Skin and Body Protection: Wear protective clothing to minimize skin contact. When potential for contact with dry material exists, wear disposable coveralls suitable for dust exposure, such as Tyvek®. Contaminated clothing should be removed and laundered before reuse.

Hand Protection: Wear appropriate chemical resistant gloves. Consult a glove supplier for assistance in selecting an appropriate chemical resistant glove.

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

Respiratory Protection: A NIOSH approved respirator with N95 (dust, fume, mist) 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.

Other Protective Equipment: Provide an emergency eyewash fountain and quick drench shower in the immediate work area.

HYGIENE MEASURES: Handle in accordance with good industrial hygiene and safety practices. Good hygiene practices include but are not limited to: wearing suitable gloves and/or eye protection; washing hands and affected skin immediately after handling, before breaks, and at the end of the workday; regularly cleaning work area and clothing; etc.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Free-flowing, Granular powder
Physical State:	Solid
Color:	White
Odor:	Odorless
Odor Threshold [ppm]:	No odor warning properties
pH:	moderately basic in solution
Melting Point/Range:	1636 °F (891 °C)
Freezing Point/Range:	Not applicable to solids
Boiling Point °C	Decomposes prior to boiling
Boiling point / boiling range	Decomposes prior to boiling
Flash point:	Not flammable
Evaporation Rate (ether=1):	Not applicable
Flammability (solid, gas):	Not flammable
Lower Flammability Level (air):	Not flammable
Upper Flammability Level (air):	Not flammable
Explosion limits:	Not applicable
Explosive properties:	Not applicable
Oxidizing properties:	None
Vapor Pressure:	Not applicable
Water Solubility:	Water: 100%
Vapor Density (air=1):	Not applicable
Relative Density:	2.43 at 20°C
Relative Density/Specific Gravity (water=1):	2.428 @ 19 (°C)
Partition Coefficient (n-octanol/water):	Not applicable
Auto-ignition Temperature:	Non-combustible
Decomposition Temperature:	212 - 392 °F (100 - 200 °C)
Viscosity:	Not applicable
Molecular Weight:	138.21

Other Information

Molecular Formula:	K2CO3
Chemical Family:	Alkali
Density:	1201 - 1330 g/L (granular); 560 - 625 g/L (ground) @ 20 °C
Bulk Density:	75-83 lb/ft3 (granular; 35-39 lb/ft3 (ground) @ 20 °C
Volatility:	Not applicable
Surface tension:	Not applicable
Hygroscopic:	Hygroscopic product
Particle Size Distribution:	Regular Grade -18 mesh to +80 mesh, Extra Fine 80% through 325 mesh

SECTION 10. STABILITY AND REACTIVITY

Chemical Stability: Stable at normal temperatures and pressures.

Reactivity: Not reactive under normal temperatures and pressures.

Possibility of Hazardous Reactions: Avoid contact with lime to prevent formation of corrosive potassium hydroxide (KOH). 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. Combination of chlorine trifluoride and potassium carbonate results in a violent reaction.

Conditions to Avoid (e.g., static discharge, shock, or vibration): No information available.

Incompatible Substances: Acids, lime, prolonged contact with aluminum, brass, bronze, copper, lead, tin, zinc or other alkali sensitive metals or alloys are incompatible substances. Aluminum, zinc, brass, bronze, and copper are NOT recommended for storage or handling due to the potential for a reaction. In addition, incompatible with chlorine trifluoride and magnesium, which may lead to an explosive and/or violent reaction.

Hazardous Decomposition Products: Carbon oxides, Potassium oxides, Carbon dioxide.

Hazardous Polymerization: Will not occur.

SECTION 11. TOXICOLOGICAL INFORMATION

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POTENTIAL HEALTH EFFECTS:

ACUTE TOXICITY:

Eye contact: Eye exposure may cause severe irritation and redness to the eye lids, conjunctiva. Untreated, prolonged eye contact can cause permanent and severe eye damage.

Skin contact: Exposure to skin may cause redness, irritation. This material is not a skin sensitizer based on studies with guinea pigs.

Inhalation: Inhalation of this material may cause upper airway irritation, cough, redness of mouth and upper airways.

Ingestion: Ingestion of this material may cause oral, esophageal, glottis redness, irritation, ulceration, edema, and stomach and intestinal irritation and burns. Ingesting large quantities may cause ulceration, vomiting, shock, and death.

CHRONIC TOXICITY:

Chronic Effects: Repeated or prolonged contact may result in dermatitis.

SIGNS AND SYMPTOMS OF EXPOSURE:

Inhalation (Breathing): Respiratory Irritation: Upper airway irritation, may cause cough, redness of mouth and upper airways.

Skin: Skin Irritation: Exposure to skin may cause redness, or irritation.

Eye: Eye Irritation: Exposure to eyes may cause severe irritation and redness to the eye lids, conjunctiva. There is potential for permanent and severe eye damage if not treated immediately.

Ingestion (Swallowing): Gastrointestinal System Effects: Small amounts used in food application are not

considered toxic by ingestion; however, slightly toxic if larger amounts are ingested. May be severely irritating to gastrointestinal tract possibly causing oral, esophageal, glottis redness, irritation, ulceration, edema, and stomach and intestinal irritation and burns. Ingestion of large quantities may cause ulceration, vomiting, shock, and death.

Interaction with Other Chemicals Which Enhance Toxicity: This chemical combination of this product with lime in contact with moisture in the form of water or perspiration will cause the formation of a very irritating and corrosive material, namely caustic potash (KOH).

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GHS HEALTH HAZARDS:

GHS: CONTACT HAZARD - SKIN: Category 2 - Causes skin irritation
GHS: CONTACT HAZARD - EYE: Category 2A - Causes serious eye irritation
GHS: ACUTE TOXICITY - ORAL: Category 5 - May be harmful if swallowed
GHS: TARGET ORGAN TOXICITY (SINGLE EXPOSURE):
Category 3 - May cause respiratory tract irritation

TOXICITY DATA:

PRODUCT TOXICITY DATA:
The test material for the toxicological studies was potassium carbonate.

LD50 Oral:	LD50 Dermal:	LC50 Inhalation:
2000 mg/kg bw (male/female Rat)	>2000 mg/kg (Rabbit)	> 4.96 mg/l (rat/4.5 hour)

COMPONENT TOXICITY DATA: The component toxicity data is populated by the LOLI database and may differ from the product toxicity data given

Component	Oral LD50	Dermal LD50	Inhalation LC50
Potassium Carbonate 584-08-7	1870 mg/kg (Rat)	>2000 mg/kg (Rabbit)	>4.96 mg/L (4.5-h Rat)

EYE IRRITATION/CORROSION: Potassium carbonate shows indications of intrinsic irritating activity. Serious eye irritation caused by potassium carbonate is documented; however, no clear proof that it is not reversible after 21 days is given due to study design. Data from accidental exposure to humans indicate a serious irritation potential to the eyes; however, permanent damage is not expected. Therefore, the product was classified as Category 2A under GHS criteria for eye irritation.

Standard Draize (Eye): The 24-hour Maximum Mean Total Score (MMTS), a classification system of Kay and Calandra, J. Soc. Cos. Chem 13: 281-289 1962, for the unwashed eye was 70 (E), extremely irritating to the unwashed eye when instilled as received, undiluted.

SKIN IRRITATION/CORROSION: Potassium carbonate did not cause any significant irritation on intact skin within the reported animal tests. However, given that potassium carbonate has an intrinsic irritating activity based on animal and human data on eye effects and on read across data and argumentations for sodium carbonate, classification as a Category 2 skin irritant is justified as a prudent approach.

Standard Draize (Skin): Primary Dermal Irritation Index (PDII) = 0.6 (Maximum = 4) when tested on the skin of adult New Zealand albino rabbits. Classified as slightly irritating to the skin when moistened with distilled water prior to application

SKIN ABSORBENT / DERMAL ROUTE: NO

Besides slight irritating effects to skin there was no evidence for an intrinsic toxic property after dermal exposure.

RESPIRATORY OR SKIN SENSITIZATION: Based on the structure of potassium carbonate, no respiratory sensitizing effects are expected. There is no evidence of skin sensitization from a Buehler sensitization study. The abiotic dissociation of potassium carbonate with tissue water results in the formation of potassium and carbonate ions. Potassium and carbonate ions are naturally occurring, effectively processed, and regulated essential compounds in the body.

CARCINOGENICITY: This product is not classified as a carcinogen by NTP, IARC or OSHA. No reliable studies on carcinogenicity of potassium carbonate are available. Reliable oral studies on closely related read-across substance potassium hydrogen carbonate give no indications on intrinsic carcinogenicity relevant to humans. In addition, available information from assessments carried out on investigation of high production volume chemicals on compounds which have a carbonate, or a potassium moiety gives no indication on a carcinogenic potency of potassium or carbonate. Therefore, not classified as a carcinogen per GHS criteria.

SPECIFIC TARGET ORGAN TOXICITY (Single Exposure): Product is classified as a Category 3 Respiratory Tract Irritant under GHS criteria. Reversible histopathological changes were noted in the nasal cavities and in the lungs of animals treated with an aqueous scrubbing solution (pH 9.9) containing potassium carbonate as an ingredient. Observations were indicative of a local response to the irritant property of the test solution. The respiratory-tract findings were considered a local response to the distinct alkalinity of the test material as substantiated by the return to normal upon cessation of exposure.

SPECIFIC TARGET ORGAN TOXICITY (Repeated or Prolonged Exposure): There is no evidence for intrinsic toxic properties relevant to humans obtained from the results of reliable and adequate subacute, sub-chronic and chronic oral studies on rats on the closely related read across substance potassium hydrogencarbonate. In addition, no persistent systemic toxicity or neurotoxicity in either male or female rats were observed in a sub-acute inhalation toxicity study of an aerosol of a used potassium carbonate-based scrubbing solution.

INHALATION HAZARD: In a limit test via inhalation route, the determined LC50 was > 4 .96 ± 1.14 mg/L air (analytical). The GHS limit values for acute inhalation toxicity are 1.0 mg/L < category 4 ≥ 5.0 mg/L for dust/mist. However, as no animal died and furthermore the exposure time was slightly increased (4.5 hours) when compared with the GHS requirement of 4 hours inhalation exposure, the test result is considered to be adequate not to classify the substance for acute inhalation toxicity according to GHS criteria.

INGESTION HAZARD: From an internally owned study the LD50 ≥ 2000 mg/kg bw (male/female) rats with LD50: of 1900 mg/kg bw for male rat and LD50 of 2100 mg/kg bw for female rat. The LD50 Acute Toxicity Oral meets the GHS classification criteria of Category 5 (≥ 2000 mg/kg) and therefore, may be harmful if swallowed.

GERM CELL/IN-VITRO MUTAGENICITY: There is no evidence for mutagenic potential of potassium carbonate relevant to humans obtained from the results of a chromosome aberration study and bacterial mutation assays with potassium carbonate and two mammalian cell gene mutation studies from the read-across substance potassium chloride.

REPRODUCTIVE TOXICITY: A study on fertility, e. g. a 1- or 2- generation study, is not available for potassium carbonate. However, there are no indications on an intrinsic toxicity to reproduction of potassium carbonate from the results of reliable developmental toxicity and teratogenicity studies performed on potassium carbonate itself, reliable repeated dose toxicity studies with macroscopic and histological examination of the male and female reproductive organs (epididymites, testes, ovaries, and uterus) performed with closely related read across substance potassium hydrogen carbonate and available information from assessments carried out on investigation of high production

volume chemicals on compounds which have a carbonate or a potassium moiety. Furthermore, based on chemistry considerations of the structure of potassium carbonate, no reproductive toxicity is expected to occur because potassium carbonate will not influence the natural K+ or CO32- level in the body and will not reach the fetus nor reach male and female reproductive organs under normal handling and use conditions.

DEVELOPMENTAL TOXICITY: Not classified as a developmental or reproductive toxin per GHS criteria.

ASPIRATION HAZARD: Not classified as an aspiration hazard per GHS criteria.

TOXICOKINETICS: The dermal as well as the inhalation absorption of potassium carbonate is expected to be low due to its ionic structure. In addition, the ions K+ and CO32- resulting from the ionization (dissociation) of K2CO3 will not influence the natural K+ or CO32- level in the body due to the body's natural regulation mechanisms.

METABOLISM: After ingestion, potassium carbonate rapidly dissociates in the gastric juice to yield carbonate ions (CO3 2-) and potassium ions (K+), at this stage, the alkalinity is neutralized by the stomach acid. For this reason, undissociated potassium carbonate is not expected to be systemically available in the body under normal handling and use conditions and the systemic action of potassium carbonate must be discussed for its dissociation products, carbonate, and potassium ions, separately. All ions involved, are naturally occurring essential ions in human beings effectively processed and regulated in the body by natural physiological mechanism.

ENDOCRINE DISRUPTOR: This product does not contain any known or suspected endocrine disruptors.

NEUROTOXICITY: No relevant information available.

IMMUNOTOXICITY: No relevant information available.

Health Hazards of Significance Not Mentioned in GHS Classification
• Potassium carbonate will dissolve in water forming liquid potassium carbonate, which is an irritating and corrosive material
• Contact with acid liberates carbon dioxide

SECTION 12. ECOLOGICAL INFORMATION

ECOTOXICITY (EC, IC, and LC):

Ecotoxicity - Available LOLI Data for Components: The component toxicity data is populated by the LOLI database and may differ from the product toxicity data given

Component:	*Freshwater Fish:*	*Invertebrate Toxicity:*	*Algae Toxicity:*	*Other Toxicity:*
Potassium Carbonate 584-08-7 (98.5 - 100 %)	No data available	*LC50 Ceriodaphnia dubia: 630 mg/L 48h	No data available	No data available

Aquatic Toxicity:
• Potassium carbonate is not expected to have an intrinsic toxic activity to aquatic organisms and sediment organisms

Fish Toxicity:
LC50 Bluegill sunfish: 230 mg/L (96 hour)
LC50 Rainbow trout: 68 mg/L (96 hour)

LC50 Fathead minnow: 940 mg/L (24 hour)
LC50 Fathead minnow: 820 mg/L (48 hour)
LC50 Fathead minnow: <510 mg/L (96 hour)

Invertebrate Toxicity:
EC50 Daphnia magna: 430 mg/L (48 hour) - hard water
EC50 Daphnia pulex: 200 mg/L (48 hour) - soft water

FATE AND TRANSPORT:

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

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

BIOCONCENTRATION: Considering its high water solubility, this substance is not expected to bioconcentrate in organisms.

BIOACCUMULATIVE POTENTIAL: This material is believed not to bioaccumulate. Potassium carbonate is very soluble in water. Therefore, the substance does not accumulate in lipophilic tissues of living organisms.

MOBILITY IN SOIL: Due to the ionic character and the high-water solubility of potassium carbonate, no sorption onto soil and sediment organic matter occurs. High water solubility and very low vapor pressure indicate that potassium carbonate will be found predominantly in the aquatic environment. In water potassium carbonate dissociates completely to K+ and inorganic carbon species. Both potassium and inorganic carbon are ubiquitously present in the environment.

ADDITIONAL ECOLOGICAL INFORMATION: May increase pH of waterways and adversely affect aquatic life.

PBT and vPvB assessment: This product does not fulfill the criteria for persistence, bioaccumulation, and toxicity. Therefore, this substance is not considered a PBT or a vPvB substance.

SECTION 13. DISPOSAL CONSIDERATIONS

Waste from material:
Reuse or reprocess, if possible. May be subject to disposal regulations. Measure the pH of solutions to determine disposal restrictions. Dispose in accordance with all applicable regulations.

Container Management:
Dispose of container in accordance with applicable local, regional, national, and/or international regulations. Container rinsate must be disposed of in compliance with applicable regulations.

Contaminated Material:
Contaminated packaging should be disposed of as unused product.

SECTION 14. TRANSPORT INFORMATION

LAND TRANSPORT

U.S. DOT 49 CFR 172.101:

Status:	Not Regulated
UN NUMBER:	Not Applicable
PROPER SHIPPING NAME:	Not Applicable
HAZARD CLASS/ DIVISION:	Not applicable
PACKING GROUP:	Not applicable
LABELING REQUIREMENTS:	Not applicable
MARINE POLLUTANT:	Not Applicable
Special provisions for transport:	Not applicable.

CANADIAN TRANSPORTATION OF DANGEROUS GOODS:

Status:	Not Regulated
LABELING REQUIREMENTS:	Not applicable

MARITIME TRANSPORT (IMO / IMDG)

Status - IMO / IMDG:	Not Regulated.
UN NUMBER:	Not applicable
PROPER SHIPPING NAME:	Not applicable
HAZARD CLASS / DIVISION:	Not applicable
Packing Group:	Not applicable
MARINE POLLUTANT:	No

AIR TRANSPORT (ICAO / IATA)

Status - ICAO/IATA:	Not Regulated
UN Number:	Not applicable
Proper shipping name:	Not applicable
Hazard Class:	Not applicable
Packing group:	Not applicable

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code: The product is not listed in annex II to the Marpol 73/78 Convention and IBC Code.

SECTION 15. REGULATORY INFORMATION

U.S. REGULATIONS

OSHA REGULATORY STATUS:
This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

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

SARA EHS Chemical (40 CFR 355.30)
Not regulated.

SARA HAZARD CATEGORIES ALIGNED WITH GHS (2018):
Health Hazard - Skin Corrosion or Irritation
Health Hazard - Serious eye damage or eye irritation
Health Hazard - Specific Target Organ Toxicity (STOT) Single Exposure (SE)
Health Hazard - HNOC

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

DEPARTMENT OF HOMELAND SECURITY (DHS)- Chemical Facility Anti-Terrorism Standards (6 CFR 27):
No components in this material are regulated under DHS

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

FDA: This material has Generally Recognized As Safe (GRAS) status under specific U.S. Food and Drug Administration (FDA) regulations. Additional information is available from the Code of Federal Regulations, which is accessible on the FDA's website. Only food grade product is guaranteed to be produced under all current Good Manufacturing Practices (cGMP) requirements as defined by the FDA. Food grade product is produced in a facility that is accredited as a Safe Quality Food (SQF) Level 2 Facility, certified under the Global Food Safety Initiative (GFSI), and meets the Food Chemical Codex (FCC) requirements

EPA'S CLEAN WATER AND CLEAN AIR ACTS:
Component(s) not listed on impacted regulatory lists.

NATIONAL INVENTORY STATUS

U.S. INVENTORY STATUS: Toxic Substance Control Act (TSCA):

Component	TSCA Inventory	TSCA ACTIVE LIST	TSCA 12(b)	TSCA/Section 4	TSCA/Section 5	TSCA/Section 6	TSCA/Section 8
Potassium Carbonate 584-08-7 (98.5 - 100 %)	Listed	ACTIVE	Not Listed	Not listed	Not Listed	Not Listed	Not listed

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

Canadian Chemical Inventory: All components of this product are listed on either the DSL or the NDSL.

Component	DSL	NDSL
Potassium Carbonate 584-08-7 (98.5 - 100)	Listed	Not Listed

STATE REGULATIONS

California Proposition 65:

This product is not listed on the California Governor's current list of Carcinogens, Reproductive Toxicants, and/or Candidate Carcinogens (Proposition 65), but it may contain trace amounts of impurities that are listed. For additional information, contact Occidental Chemical Corporation Customer Service (1-800-752-5151 or 1-972-404-3700).

Component	U.S. - California - Proposition 65 - Carcinogens List	CA. Prop. 65 Teratogen	California Proposition 65 CRT List - Male reproductive toxin:	California Proposition 65 CRT List - Female reproductive toxin:	Massachusetts Right to Know Hazardous Substance List	Rhode Island Right to Know Hazardous Substance List
Potassium Carbonate 584-08-7 (98.5 - 100 %)	Not listed	Not listed	Not Listed	Not Listed	Not Listed	Not Listed

CANADIAN REGULATIONS

This product has been classified in accordance with the hazard criteria of the Workplace Hazardous Materials Information System (WHMIS 2015) which includes the amended Hazardous Products Act (HPA) and the Hazardous Product Regulations (HPR).

Component	Canada - CEPA - Schedule I - List of Toxic Substances	Canada - NPRI	Canada - CEPA - Greenhouse Gases (GHG) Subject to Mandatory Reporting	Canadian Chemical Inventory:	NDSL
Potassium Carbonate 584-08-7 (98.5 - 100)	Not listed	Not Listed	Not Listed	Listed	Not Listed

SECTION 16. OTHER INFORMATION

Prepared by: Occidental Chemical Corporation - HES&S Product Stewardship Department

Rev. Date: 29-Mar-2023

Reason for Revision:
• Change of company physical address: SEE SECTION 1
• Revised precautionary phrases to be in compliance with GHS Revision 9
• Changed GHS Classification: SEE SECTION 2
• Modified GHS Hazard and Precautionary Statements: SEE SECTION 2

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POTASSIUM CARBONATE (ANHYDROUS ALL GRADES)

OSHA 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, 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 Safety Data Sheet available to your employees.

End of Safety Data Sheet