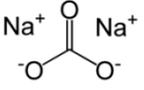


3. COMPOSITION / INFORMATION AND INGREDIENTS

Structural Formula		Chemical Family	
		Molecular weight	105.9885 g/mol
CAS No	497-19-8	Molecular Formula	Na ₂ CO ₃
Name	Product identifier	%	Classification
Sodium Carbonate	497-19-8	99.8%	

4. FIRST AID MEASURE

Ingestion	<ul style="list-style-type: none"> Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as a collar, tie, belt or waistband.
Inhalation	<ul style="list-style-type: none"> If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.
Eyes	<ul style="list-style-type: none"> Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention.
Skin	<ul style="list-style-type: none"> In case of contact, immediately flush skin with plenty of water. Cover the irritated skin with an emollient. Remove contaminated clothing and shoes. Cold water may be used. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention.
Antidote	
Most important symptoms/ effects, acute and or delayed	<p>Eye Contact- • causes Irritating to the eyes, redness, pain and lachrymation.</p> <p>Inhalation- • Prolonged inhalation of product dusts may irritate nose, throat, and lungs.</p> <p>Skin contact- Prolonged contact may cause skin irritation (red, dry, cracked skin).</p> <p>Ingestion- Although low in toxicity, ingestion may cause nausea, vomiting, stomachache, and diarrhea.</p>
Indication of immediate medical attention and special treatment needed	<p>If victim is conscious:</p> <ul style="list-style-type: none"> If swallowed, rinse mouth with water (only if the person is conscious). Do NOT induce vomiting. <p>If victim is unconscious but breathing:</p> <ul style="list-style-type: none"> Artificial respiration and/or oxygen may be necessary. Never give anything by mouth to an unconscious person.

5. FIRE FIGHTING MEASURES

Fire extinguishing media	In case of fire in proximity, all means of extinguishing are acceptable.
Hazardous decomposition products	None
Special fire fighting procedure	No special precautions required.
Precaution to Fire Fighters	Use Protective Equipment as applicable to the combustion products associated with the fire.

6. ACCIDENTAL RELEASE MEASURES

Personal precaution	<ul style="list-style-type: none">• Refer to Section 8 "Exposure Controls / Personal Protection".
Precautions for the environment	Do not flush into surface water or sanitary sewer system. If the product contaminates rivers and lakes or drains inform respective authorities.
Clean up method	<ul style="list-style-type: none">• Prevent large quantities of this product from contacting vegetation or waterways; large spills could kill vegetation and fish.• This product, if spilled, can be recovered and re-used if contamination does not present a problem. Vacuum or sweep up the material. If the spilled product is unusable due to contamination, consult state or federal environmental agencies for acceptable disposal procedures and locations.

7. HANDLING AND STORAGE

General precaution	<ul style="list-style-type: none">• Use air conveying / mechanical systems for bulk transfer to storage. For manual handling of bulk transfer use mechanical ventilation to remove airborne dust from railcar, ship or truck. Use approved respiratory protection when ventilation systems are not available. Selection of respirators is based on the dust cloud generation. Keep material out of lakes, streams, ponds and sewer drains. <p>Avoid eye contact or prolonged skin contact. Avoid breathing dusts. When dissolving, add to water cautiously and with stirring; solutions can get hot. Use good personal hygiene and housekeeping.</p>
Personal protection	Wear personal protective equipment as per Section-8
Storage	<ul style="list-style-type: none">• Store in a cool dry area, away from acids. Prolonged storage may cause product to cake from atmospheric moisture
Incompatibilities	Finely divided aluminum

8. EXPOSURE CONTROL / PERSONAL PROTECTION

Personal protection			
			
Skin	<ul style="list-style-type: none"> Wear long-sleeve shirt and trousers, and impervious gloves for routine product use. Cotton gloves are sufficient for dry product; wear impervious (e.g., rubber, neoprene, etc.) gloves when handling solutions. 	Eyes	<ul style="list-style-type: none"> For dusty or misty conditions, or when handling solutions where there is reasonable probability of eye contact, wear chemical safety goggles and hardhat. Under these conditions do not wear contact lenses. Otherwise, appropriate eye and face protection equipment (ANSI Z87 approved) should be selected for the particular use intended for this material. Safety glasses with side shields are recommended.
Respiration	<ul style="list-style-type: none"> Whenever dust in the worker's breathing zone cannot be controlled with ventilation or other engineering means, workers should wear respirators or dust masks approved by NIOSH or comparable certification organization to protect them against airborne dust. 	Other	
Exposure limits			
TLV-TWA	10 mg/m ³ (Inhalable Dust) 3 mg/m ³ (Respirable Dust)	TLV-STEL	
Appropriate Engineering Control	<ul style="list-style-type: none"> Ensure adequate ventilation. Provide adequate exhaust ventilation at places where dust is formed. Refer to protective measures listed in sections 7 and 8. Apply technical measures to comply with the occupational exposure limits. 		

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	White granular solid	Molecular Weight	105.9885 g/mol	Specific gravity	No data available
Odour/Odor threshold	Odourless	Flash Point °C	Not Applicable	pH/ Acidity	11.6
Auto Ignition Temp. °C	Not Applicable	Boiling Point °C @ 760 mm Hg	Decompose	Melting Point °C	

Vapor Press. Mm Hg @ 20 °C	Not Applicable	Vapour Density	No data available	Water Solubility @ 20 °C	220 (g/L) @22°C
LEL %	Not Applicable	UEL %	Not Applicable	% Volatile	
Evaporation rate		Viscosity @ 25 °C		PH	
Octanol / Water Partition Coefficient	No data Available			No data available	

10. STABILITY AND REACTIVITY

Chemical Stability	Stable under normal conditions.	Possibility of Hazardous reaction	• May react with aluminium, acids, fluorine, lithium, and 2,4,6-Trinitrotoluene.
Hazardous Reactions/ Decomposition products	• When heated to decomposition, carbon dioxide is released.	Incompatible Materials	Finely divided aluminum
Condition to avoid	• Contact with acids will release carbon dioxide, heat. Contact with lime dust in the presence of moisture can produce corrosive sodium hydroxide.		

11. TOXICOLOGICAL INFORMATION

Routes of exposure	Inhalation, dermal, Mouth.				
LD50 (oral / rats) mg/kg	4,090 mg/kg	LD50 (dermal/ rats) mg/kg		LC50 (inhalation / rats)	24 – hour 800 mg/m3
Target Organ Effects	Respiratory system				
Symptoms related to physical, chemical & toxicological characteristics	No skin irritation. Eye irritant effects.				

12. ECOLOGICAL INFORMATION

Mobility in Soil	Not Significant
Persistence and degradability	Abiotic degradation <ul style="list-style-type: none">• Water, Hydrolysis• Result: acid/base equilibrium as a function of ph. Degradation products: carbonic acid / bicarbonate/ carbonate Biodegradation <ul style="list-style-type: none">• Remarks: The methods for determining biodegradability are not applicable to inorganic substances.
Bioaccumulative Potential	Not Applicable
Effects on fish (Ecotoxicity)	<ul style="list-style-type: none">• Fishes LC50, 96 h, 300 mg/l
Effects on birds	No data available
Effects on bees	No data available

13. DISPOSAL CONSIDERATIONS

- Waste must be disposed of in accordance with federal, state and local environmental control regulations

14. TRANSPORT INFORMATION

UN No.	---	IMDG No.	---
Shipping Name	---	Hazard class	---
Packing group	---	Hazard Sub class	---
Marine Pollutant	---	Labels required	---
Warning Statement	---		
Packaging / Precaution			
Shipping Marking			

15. REGULATORY INFORMATION

LABELING:

PHRASES R:

R36: Irritating to eyes

R37: Irritating to respiratory system

R38: irritating to skin.

PHRASES S:

S22: Do not breathe dust

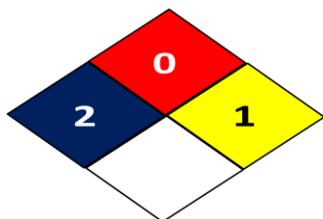
S24: Avoid contact with skin

S25: Avoid contact with eyes

S26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice

16. OTHER INFORMATION

NFPA Rating :



The information provided in this Material Safety data sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with other materials