Chemical Safety Data Sheet

SECTION 1 IDENTIFICATION

Product Name: Soda Ash

Chemical Name: Sodium Carbonate

Synonyms: Soda Ash Light/Dense, Disodium Carbonate

CAS No.: 497-19-8

EC No.: 207-838-8

Molecular Formula: Na_2CO_3

Molecular Weight: 105.99g/mol

Supplier / Manufacturer: Shandong Guowei Chemical Industry Co., Ltd.

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SECTION 2 HAZARDS IDENTIFICATION

Classification of the Substance or Mixture

Classified as hazardous substance per GB 30000-2013. Causes skin irritation, serious eye damage; irritates respiratory tract.

GHS Label Elements, Including Precautionary Statements

Signal word: WARNING

Hazard statements: Causes severe eye burns; Harmful if swallowed or inhaled; Causes irritation to skin and respiratory tract.

Precautionary statements: Avoid contact with eyes, skin and clothing; Avoid breathing dust; Keep container tightly closed; Use only in well-ventilated areas; Wash hands thoroughly after handling.

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Physical and Chemical Hazards

Non-flammable and non-explosive under normal conditions; May react violently with acids and generate carbon dioxide; Risk of explosion when contacting red-hot aluminum.

Health Hazards

Inhalation of dust irritates respiratory tract, may cause cough, dyspnea and nasal septum damage. Ingestion of large doses causes corrosion to gastrointestinal tract, leading to severe abdominal pain, vomiting, diarrhea, even collapse and death. Skin contact causes redness, blistering and irritation; aqueous

solution may cause chemical burns. Eye contact results in conjunctival edema and corneal injury, and may lead to permanent damage. Long-term repeated skin exposure causes dryness and persistent irritation.

Environmental Hazards

Has certain toxicity to aquatic organisms.

Emergency Overview

White crystalline powder or fine granules, hygroscopic with astringent taste. If inhaled, move victim to fresh air and give oxygen or artificial respiration if necessary. In case of skin or eye contact, rinse thoroughly with plenty of water for at least 15 minutes. If swallowed, do not induce vomiting, give large amounts of water and seek medical treatment immediately. Never give anything by mouth to an unconscious person.

SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	Sodium Carbonate
CAS No.	497-19-8
EC No.	207-838-8
Content	≥99%

SECTION 4 FIRST AID MEASURES

Description of Necessary First Aid Measures

If inhaled: Move the patient to fresh air immediately. If breathing stops, perform artificial respiration; if breathing is difficult, supply oxygen. Seek medical attention promptly.

In case of skin contact: Flush the contaminated skin with plenty of soap and running water for at least 15 minutes. Remove contaminated clothing and shoes. Seek medical attention. Launder clothing and thoroughly clean shoes before reuse.

In case of eye contact: Flush eyes continuously with plenty of water for at least 15 minutes, lift upper and lower eyelids occasionally during rinsing. Seek medical attention immediately.

If swallowed: Do not induce vomiting. Give large quantities of water to drink. Never give anything by mouth to an unconscious person. Seek medical attention immediately.

Rescuer Protection

Wear designated personal protective equipment; avoid inhaling dust and direct contact with the product.

Most Important Symptoms and Effects

Inhalation: Cough, dyspnea, nasal tissue damage.
Skin contact: Redness, blistering, irritation or chemical burns.
Eye contact: Severe pain, conjunctival edema, corneal injury.
Ingestion: Severe abdominal pain, vomiting, diarrhea, dehydration, electrolyte disorder, in severe cases collapse and death.

Indication of Immediate Medical Attention Needed

All exposure cases require symptomatic treatment and immediate medical intervention. For suspected poisoning, endoscopy and blood tests shall be conducted to check for dehydration, acidosis and electrolyte imbalance.

SECTION 5 FIREFIGHTING MEASURES

Fire:

Not considered to be a fire hazard.

Explosion:

Not considered an explosion hazard,but sodium carbonate may explode when applied to red-hot aluminum.

Fire Extinguishing Media:

Use any means suitable for extinguishing surrounding fire.

Special Information:

Use protective clothing and breathing equipment appropriate for the surrounding fire.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures

Evacuate irrelevant personnel, enhance ventilation in the spill area. Wear complete personal protective equipment to avoid inhaling dust and direct body contact.

Environmental Precautions

Prevent the spilled material from entering sewers, water bodies and soil to avoid environmental pollution.

Methods and Materials for Containment and Cleaning Up

Avoid dust generation. Sweep, vacuum or use wet sweeping method to collect the spilled material, place into sealed containers for recycling or compliant disposal.

SECTION 7 HANDLING AND STORAGE

Keep in a tightly closed container,stored in a cool,dry,ventilated area.Protect against physical damage.Isolate from incompatible substances.Containers of this material may be hazardous when empty

since they retain product residues(dust, solids);observe all warning sand precautions listed for the product.

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Airborne Exposure Limits:

None established.

Ventilation System:

A system of local and/or general exhaust is recommended to keep employee exposures as low as possible.Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source,preventing dispersion of it into the general work area.Please refer to the ACGIH document,*Industrial Ventilation,A Manual of Recommended Practices*,most recent edition,for details. Personal Respirators(NIOSH Approved):

For conditions of use where exposure to dust or mist is apparent and engineering controls are not feasible,a particulate respirator(NIOSH type N95 or better filters) may be worn.If oil particles(e.g.lubricants,cutting fluids,glycerine,etc.)are present,use a NIOSH type R or P filter.For emergencies or instances where the exposure levels are not known,use a full-face positive-pressure,air-supplied respirator.

WARNING: Air-purifying respirators do not protect workers in oxygen-deficient atmospheres.

Skin Protection:

Wear protective gloves and clean body-covering clothing.

Eye Protection:

Use chemical safety goggles and/or full face shield where dusting or splashing of solutions is possible.Maintaineyewashfountainandquick-drenchfacilitiesinwork area.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Item	Data
Appearance	White crystalline powder or fine granules, astringent taste, hygroscopic
pH (saturated solution at 20°C)	11.6
Melting Point	851°C
Boiling Point	1600°C
Relative Density (water=1)	2.53
Decomposition Temperature	744°C
Bulk Density (heavy soda ash)	≥0.90 g/cm³

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Bulk Density (Light Soda Ash)	0.5–0.7 g/cm³
Solubility	Soluble in water and glycerol; slightly soluble in anhydrous ethanol; insoluble in propanol
Flammability	Non- flammable

SECTION 10 STABILITY AND REACTIVITY

Stability:

Stable under ordinary conditions of use and storage.Hygroscopic.Readily absorbs moisture from the air.Solutions are strong bases.

Hazardous Decomposition Products:

Oxides of carbon and sodium oxide.

Hazardous Polymerization:

Will not occur.

Incompatibilities:

Fluorine,aluminum,phosphorous pentoxide,sulfuric acid,zinc,lithium,calcium hydroxide and 2,4,6-trinitrotoluene. Reacts violently with acids to form carbon dioxide.

Conditions to Avoid:

Moisture,heat,dusting and incompatibles.

SECTION 11 TOXICOLOGICAL INFORMATION

Parameter	Value / Description
Oral LD50 (rat)	4090 mg/kg
Inhalation LC50 (rat, 2h)	2300 mg/m³
Eye irritation (rabbit)	50 mg, severe irritation and injury
Skin irritation	Moderate to severe irritation, may cause blistering

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Chronic Health Effects

Long-term or repeated skin exposure leads to skin dryness and persistent irritation. The substance has been studied for mutagenicity and reproductive toxicity; it is not classified as a carcinogen.

Respiratory / Skin	No relevant data

Sensitisation	
Germ Cell Mutagenicity	Relevant research data exists
Carcinogenicity	Not listed as carcinogen (NTP, IARC)
Reproductive Toxicity	Relevant research data exists
STOT — Single Exposure	Irritation to respiratory tract, eyes and skin
STOT — Repeated Exposure	Skin dryness, chronic irritation
Aspiration Hazard	May cause respiratory tract irritation after aspiration

SECTION 12 ECOLOGICAL INFORMATION

Environmental Fate: No information found.

Environmental Toxicity:

96Hr LC50 Lepomis macrochirus：300 mg/L [static];

48Hr EC50 Daphnia magna：265 mg/L

SECTION 13 DISPOSAL CONSIDERATIONS

Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility.Processing,use or contamination of this product may change the waste management options.State and local disposal regulations may differ from federal disposal regulations.Dispose of container and unused contents in accordance with federal,state and local requirements.

SECTION 14 TRANSPORT INFORMATION

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UN Number: 3082 (non-hazardous for transport)

Transport Class: None

Packing Group: None

IMO/IMDG: Not dangerous goods

IATA: Not dangerous goods

Packaging: 25kg/50kg PP woven bags, sealed against moisture.

SECTION 15 REGULATORY INFORMATION

Chemical Inventory Status - Part 1			
TSCA	EC	Japan	Australia
Yes	Yes	Yes	Yes
Chemical Inventory Status - Part 2			
Korea	Canada DSL	Canada NDSL	Phil.
Yes	Yes	No	Yes
Federal, State & International Regulations - Part 1			
SARA302 RQ	**SARA302 TPQ**	**SARA313 List**	**SARA313 Chemical Catg.**
No	No	No	No
Federal, State & International Regulations - Part 2			
RCRA CERCLA	TSCA 261.33	TSCA 8(d)	
No	No	No	
Supplementary Regulatory Items			
Chemical Weapons Convention	No		
TSCA 12(b)	No		
CDTA	No		
SARA311/312 Acute	Yes		
SARA311/312 Chronic	No		
SARA311/312 Fire	No		
SARA311/312 Pressure	No		
SARA311/312 Reactivity (Pure/Solid)	No		

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Australian Hazchem Code: None allocated.

Poison Schedule:S5

GHS (UN): Compliant

EU CLP: Compliant

GB/T 16483-2008, GB 15258-2009

WHMIS: Controlled product

This MSDS has been prepared according to the hazard criteria of the Controlled Products Regulations(CPR)and the MSDS contains all of the information required by the CPR.

SECTION 16 OTHER INFORMATION

References

GB/T 16483-2008; GB/T 17519-2013; GB 30000 series standards; GB 15258-2009

Form Date & Revision Date

Creation Date: 2/26/2022
Revision Date: 1/29/2025

Abbreviations

Abbreviation	Full Name
LD50	Lethal Dose 50%
LC50	Lethal Concentration 50%
EC50	Effective Concentration 50%
STOT	Specific Target Organ Toxicity
GHS	Globally Harmonised System of Classification and Labelling of Chemicals
SDS	Safety Data Sheet
NTP	National Toxicology Program
IARC	International Agency for Research on Cancer

Disclaimer

The format of this Safety Data Sheet complies with relevant national standards. All data is sourced from authoritative international databases and enterprise test data, for reference only. The company makes every effort to ensure the authenticity and accuracy of the content, but does not assume any liability for losses caused by improper operation, storage, use and disposal of the product. Users shall judge the applicability of the information independently.