



DESIGN REPORT OF SAFETY DATA SHEET

No.: 220100320412794E

Date: Mar.31,2022

Name of the sample	CAUSTIC SODA		
Applicant	INNER MONGOLIA YIHUA CHEMICAL INDUSTRY CO., LTD		
Supplier	INNER MONGOLIA YIHUA CHEMICAL INDUSTRY CO., LTD		
Composition of the sample	Sodium hydroxide: $\geq 98.5\%$; Sodium carbonate: $\leq 0.8\%$; Sodium chloride: $\leq 0.05\%$; Diiron trioxide: $\leq 0.008\%$		
Warranty of Design	GLOBALLY HARMONIZED SYSTEM OF CLASSIFICATION AND LABELLING OF CHEMICALS (GHS) Ninth revised edition		
Design Result of SDS please see next page.			
Designer	孙越越	Approver	<p>For and on behalf of CCIC JIANGSU CO., LTD. 中国检验认证集团江苏有限公司</p> <p>王珍</p> <p>4 授权签字人 Authorized Signature (s)</p>

Notes: This SDS is valid before the implementation of the Tenth revised edition GHS.



Section 1 Product and Company Identification

> Product Identifier

Product Name	CAUSTIC SODA
Synonyms	-
CAS No.	1310-73-2
EC No.	215-185-5
Molecular Formula	NaOH

> Relevant Identified Uses of the Substance or Mixture and Uses Advised Against

Relevant Identified Uses	Please consult manufacturer.
Uses Advised Against	Please consult manufacturer.

> Details of the Supplier of the Safety Data Sheet

Applicant Name	INNER MONGOLIA YIHUA CHEMICAL INDUSTRY CO., LTD
Application Address	Wuda District Industrial Area, Wuhai City, Inner Mongolia, China
Applicant Post Code	016040
Applicant Telephone	+86-473-2218895
Applicant Fax	+86-473-2218895
Applicant E-mail	35513236@qq.com
Supplier Name	INNER MONGOLIA YIHUA CHEMICAL INDUSTRY CO., LTD
Supplier Address	Wuda District Industrial Area, Wuhai City, Inner Mongolia, China
Supplier Post Code	016040
Supplier Telephone	+86-473-2218895
Supplier Fax	+86-473-2218895
Supplier E-mail	35513236@qq.com

> Emergency Phone Number

Emergency Phone Number	+86-473-2218895
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Section 2 Hazards Identification

Hazard class and label elements of the product according to GHS (the ninth revised edition):

> GHS Hazard Class

Skin	Category 1
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Corrosion/Irritation

Eye Damage/Irritation Category 1

> GHS Label Elements

Pictogram



Signal Word

Danger

> Hazard Statements

H314 Causes severe skin burns and eye damage

H318 Causes serious eye damage

> Precautionary Statements

Prevention

P260 Do not breathe dust/fume/gas/mist/vapours/spray.

P264+P265 Wash hands and other contact area thoroughly after handling. Do not touch eyes.

P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.

Response

P316 Get emergency medical help immediately.

P317 Get medical help.

P321 Specific treatment (see measures on this label).

P363 Wash contaminated clothing before reuse.

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P302+P361+P354 IF ON SKIN: Take off immediately all contaminated clothing. Immediately rinse with water for several minutes.

P305+P354+P338 IF IN EYES: Immediately rinse with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Storage

P405 Store locked up.

Disposal

P501 Dispose of contents/container in accordance with local/regional/national/ international regulations.

Section 3 Composition/Information on Ingredients

Component

CAS No.

EC No.

Concentration (weight percent, %)



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Sodium hydroxide	1310-73-2	215-185-5	≥ 98.5
Sodium carbonate	497-19-8	207-838-8	≤ 0.8
Sodium chloride	7647-14-5	231-598-3	≤ 0.05
Diiron trioxide	1309-37-1	215-168-2	≤ 0.008

Section 4 First Aid Measures

> Description of First Aid Measures

General Advice	Immediate medical attention is required. Show this safety data sheet (SDS) to the doctor in attendance.
Eye Contact	Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician if feel uncomfortable.
Skin Contact	Take off contaminated clothing and shoes immediately. Wash off with plenty of water for at least 15 minutes and consult a physician if feel uncomfortable.
Ingestion	Do not induce vomiting. Never give anything by mouth to an unconscious person. Call a physician or Poison Control Center immediately.
Inhalation	Move victim into fresh air. If breathing is difficult, give oxygen. Do not use mouth to mouth resuscitation if victim ingested or inhaled the substance. If not breathing, give artificial respiration and consult a physician immediately.
Protecting of First-aiders	Ensure that medical personnel are aware of the substance involved. Take precautions to protect themselves and prevent spread of contamination.

> Most Important Symptoms and Effects, both Acute and Delayed

- 1 Substance accumulation, in the human body, may occur and may cause some concern following repeated or long-term occupational exposure.

> Indication of Any Immediate Medical Attention and Special Treatment Needed

- 1 Treat symptomatically.
- 2 Symptoms may be delayed.

Section 5 Fire Fighting Measures

> Extinguishing Media

Suitable Extinguishing Media	Dry chemical, carbon dioxide or alcohol-resistant foam.
Unsuitable Extinguishing Media	Do not use a solid water stream as it may scatter or spread fire.

> Specific Hazards Arising from the Substance or Mixture

- 1 Fire may produce irritating, poisonous or corrosive gases.
- 2 Containers may explode when heated.
- 3 Fire exposed containers may vent contents through pressure relief valves.



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- 4 May expansion or decompose explosively when heated or involved in fire.

> Advice for Firefighters

- 1 As in any fire, wear self-contained breathing apparatus (MSHA/NIOSH approved or equivalent) and full protective gear.
- 2 Fight fire from a safe distance, with adequate cover.
- 3 Prevent fire extinguishing water from contaminating surface water or the ground water system.

Section 6 Accidental Release Measure**> Personal Precautions, Protective Equipment and Emergency Procedures**

- 1 Ensure adequate ventilation. Remove all sources of ignition.
- 2 Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.
- 3 Use personal protective equipment. Avoid breathing vapours, mist, gas or dust.

> Environmental Precautions

- 1 Prevent further leakage or spillage if safe to do so.
- 2 Discharge into the environment must be avoided.

> Methods and Materials for Containment and Cleaning Up

- 1 Absorb spilled material in dry sand or inert absorbent. In case of large amount of spillage, contain a spill by bunding.
- 2 Adhered or collected material should be promptly disposed of, in accordance with appropriate laws and regulations.
- 3 Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment.

Section 7 Handling and Storage**> Precautions for Handling**

- 1 Handling is performed in a well ventilated place.
- 2 Wear suitable protective equipment.
- 3 Avoid contact with skin and eyes.
- 4 Keep away from heat/sparks/open flames/ hot surfaces.
- 5 Take precautionary measures against static discharges.

> Precautions for Storage

- 1 Keep containers tightly closed.
- 2 Keep containers in a dry, cool and well-ventilated place.
- 3 Keep away from heat/sparks/open flames/ hot surfaces.



4 Store away from incompatible materials and foodstuff containers.

Section 8 Exposure Controls/Personal Protection

> Control Parameters

Occupational Exposure Limit Values

Component	Country/Region	Limit Value - Eight Hours		Limit Value - Short Term	
		ppm	mg/m ³	ppm	mg/m ³
Sodium hydroxide 1310-73-2	USA - OSHA	-	2	-	-
	Sweden	-	1	-	2
	South Korea	-	-	-	2
	Ireland	-	-	-	2
	Denmark	-	2	-	2
	Australia	-	-	-	2
Sodium chloride 7647-14-5	Latvia	-	5	-	-
Diiron trioxide 1309-37-1	USA - NIOSH	-	1	-	-
	South Korea	-	5	-	-
	Ireland	-	1	-	2
	Hungary	-	6	-	-
	Denmark	-	1	-	2
	Australia	-	1	-	-

Biological Limit Values

No information available

Monitoring Methods

- 1 EN 14042 Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents.
- 2 GBZ/T 160 Determination of toxic substances in workplace air(Series effective standard)and GBZ/T 300 Determination of toxic substances in workplace air(Series standard).

> Engineering Controls

- 1 Ensure adequate ventilation, especially in confined areas.
- 2 Ensure that eyewash stations and safety showers are close to the workstation location.
- 3 Use explosion-proof electrical/ventilating/lighting/equipment.
- 4 Set up emergency exit and necessary risk-elimination area.

> Personal Protection Equipment

Eye Protection Tightly fitting safety goggles (approved by EN 166(EU) or NIOSH (US)).
Hand Protection Wear protective gloves (such as butyl rubber) , passing the tests according to EN



374(EU),US F739 or AS/NZS 2161.1 standard.

Respiratory protection

If exposure limits are exceeded or if irritation or other symptoms are experienced, use a full-face respirator with multi-purpose combination (US) or type AXBEK (EN 14387) respirator cartridges.

Skin and Body Protection

Wear fire/flame resistant/retardant clothing and antistatic boots.

Section 9 Physical and Chemical Properties

Appearance: White flaky

Odor: No information available

Odor Threshold: No information available

pH: 12.7

Melting Point/Freezing Point (°C): 318

Initial Boiling Point and Boiling Range (°C): 1388

Flash Point (°C)(Closed Cup): Not applicable

Evaporation Rate: Not applicable

Flammability: No information available

Upper/lower explosive limits[% (v/v)]: Upper limit: No information available; Lower limit: No information available

Vapor Pressure (KPa): Not applicable

Relative Vapour Density(Air=1): Not applicable

Relative Density(Water=1): 2.12

Solubility: Miscible with water

n-Octanol/Water Partition Coefficient: No information available

Auto-Ignition Temperature(°C): No information available

Decomposition Temperature (°C): No information available

Kinematic Viscosity (mm²/s): Not applicable

Particle characteristics: No information available

Section 10 Stability and Reactivity

Reactivity

Contact with incompatible substances can cause decomposition or other chemical reactions.

Chemical Stability

Stable under proper operation and storage conditions.

Possibility of Hazardous Reactions

React violently with acids, phenols or alcohols. May react with strong acids, strong alkalis, strong oxidants and strong reducing agents. In contact with organic peroxides cause a fire immediately. Reacts with active metals and poses an explosive potential or fire.

Conditions to Avoid

Incompatible materials, heat, flame and spark.

Incompatible Materials

acids, phenols, alcohols and nitro substituted hydrocarbon. Strong acids, strong alkalis, strong oxidants and strong reducing agents. Organic peroxides. Active metal, alcohols, aldehydes, carbon disulfide, carbon, sulfur, phosphorus, boron, reducing agents, metallic acetylenes and metallic carbonates.

Hazardous

Decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.



Section 11 Toxicological Information

> Acute Toxicity

Component	CAS No.	LD ₅₀ (Oral)	LD ₅₀ (Dermal)	LC ₅₀ (Inhalation, 4h)
Sodium chloride	7647-14-5	3000mg/kg(Rat)	> 10000mg/kg(Rabbit)	No information available
Sodium carbonate	497-19-8	4090mg/kg(Rat)	No information available	No information available

> Skin Corrosion/Irritation

Causes severe skin burns and eye damage(Category 1)

> Serious Eye Damage/Irritation

Causes serious eye damage(Category 1)

> Skin Sensitization

No information available

> Respiratory Sensitization

No information available

> Germ Cell Mutagenicity

No information available

> Carcinogenicity

ID	CAS No.	Component	IARC	NTP
1	1310-73-2	Sodium hydroxide	Not Listed	Not Listed
2	497-19-8	Sodium carbonate	Not Listed	Not Listed
3	7647-14-5	Sodium chloride	Not Listed	Not Listed
4	1309-37-1	Diiron trioxide	Category 3	Not Listed

> Reproductive Toxicity

No information available

> Reproductive Toxicity (Additional)

No information available

> STOT-Single Exposure



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No information available

> STOT-Repeated Exposure

No information available

> Aspiration Hazard

No information available

Section 12 Ecological Information

> Acute Aquatic Toxicity

Component	CAS No.	Fish	Crustaceans	Algae
Sodium chloride	7647-14-5	LC ₅₀ : 7400mg/L (96h)(Fish)	EC ₅₀ : 2120mg/L (48h)	No information available
Sodium hydroxide	1310-73-2	LC ₅₀ : 196mg/L (96h)(Fish)	EC ₅₀ : 40.4mg/L (48h)	No information available
Sodium carbonate	497-19-8	LC ₅₀ : 300mg/L (96h)(Fish)	EC ₅₀ : 200mg/L (48h)	No information available

> Chronic Aquatic Toxicity

No information available

> Others

Persistence and Degradability No information available

Bioaccumulative Potential No information available

Mobility in Soil No information available

Results of PBT and vPvB Assessment

Sodium hydroxide does not meet the criteria for PBT and vPvB according to Regulation (EC) No 1907/2006, annex XIII.

Sodium carbonate does not meet the criteria for PBT and vPvB according to Regulation (EC) No 1907/2006, annex XIII.

Sodium chloride does not meet the criteria for PBT and vPvB according to Regulation (EC) No 1907/2006, annex XIII.

Diiron trioxide does not meet the criteria for PBT and vPvB according to Regulation (EC) No 1907/2006, annex XIII.

Section 13 Disposal Considerations



Waste Chemicals Contaminated Packaging Disposal Recommendations

Before disposal should refer to the relevant national and local laws and regulation. Containers may still present chemical hazard when empty. Keep away from hot and ignition source of fire. Return to supplier for recycling if possible. Refer to Waste chemicals and Contaminated packaging.

Section 14 Transport Information

Transporting Label



Marine pollutant No
UN Number 1823
UN Proper Shipping Name SODIUM HYDROXIDE, SOLID
Transport Hazard Class 8
Transport Subsidiary Hazard Class NONE
Packing Group II

Section 15 Regulatory Information

> International Chemical Inventory

Component	EINECS	TSCA	DSL	IECSC	NZIoC	PICCS	KECI	AICS	ENCS
Sodium hydroxide	√	√	√	√	√	√	√	√	√
Sodium carbonate	√	√	√	√	√	√	√	√	√
Sodium chloride	√	√	√	√	√	√	√	√	√
Diiron trioxide	√	√	√	√	√	√	√	√	√

- [EINECS] European Inventory of Existing Commercial Chemical Substances.
- [TSCA] United States Toxic Substances Control Act Inventory.
- [DSL] Canadian Domestic Substances List.
- [IECSC] China Inventory of Existing Chemical Substances.
- [NZIoC] New Zealand Inventory of Chemicals.
- [PICCS] Philippines Inventory of Chemicals and Chemical Substances.
- [KECI] Existing and Evaluated Chemical Substances.
- [AICS] Australia Inventory of Chemical Substances.
- [ENCS] Existing And New Chemical Substances.

Note
“√” Indicates that the substance included in the regulations



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"x" That no data or included in the regulations

Section 16 Additional Information

Creation Date	Mar.31,2022
Revision Date	Mar.31,2022
Reason for Revision	-

> Disclaimer

This Safety Data Sheet (SDS) was prepared according to UN GHS (the 9th revised edition). The data included was derived from international authoritative database and provided by the enterprise. Other information was based on the present state of our knowledge. We try to ensure the correctness of all information. However, due to the diversity of information sources and the limitations of our knowledge, this document is only for user's reference. Users should make their independent judgment of suitability of this information for their particular purposes. We do not assume responsibility for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product.



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2. According to the demand of this SDS, CCIC requires the applicant to provide true and exact sample and data.
3. Information from applicant is the key of this SDS, so CCIC will not respond for the wrong of applicant.
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