

## Caustic Soda Flakes

### Section 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1 Product identifier

Substance name: Caustic Soda  
REACH Reg. No.: The substance has been pre-registered. The transition time according to REACH Regulation, Article 23 is still not expired.  
CAS No.: 1310-73-2  
EC No.: 215-185-5

#### 1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses: Used as a raw material in the manufacture of soaps, detergents, textiles and paper. Also, in water softening and treatment, drilling mud in oil field, refining petroleum products, in sanitation, hygiene and production chemicals.  
Uses advised against: Not available.

#### 1.3 Details of the supplier of the SDS

Company name (Manufacturer): Tianjin Yuanlong Chemical Industry Co., Ltd  
Address: Room 605, Kangning Tower B, Xikang Ave., Heping District, Tianjin, China  
Postcode: 300070  
E-mail: info@yuanlongchem.com  
Telephone: +86-22-23528561  
Fax: +86-22-23523959  
Emergency telephone number: +86-22-23528561

### Section 2: Composition/information on ingredients

#### 2.1 Substance information

Substance name	Synonym	CAS No.	EC No.	Molecular formula	Concentration
Sodium Hydroxide	Caustic Soda	1310-73-2	215-185-5	NaOH	99%

Remark: The rest unspecified ingredients are impurities, and they are not hazard.

## Section 3: Hazards identification

### 3.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008[CLP]

Classification	Classification procedure
Skin irritation 2	H315
Eye Irritation 2	H319

Classification according to EU Directive 67/548/EEC or 1999/45/EC

Additional information

Full text of R-phrases(s) and H-statement(s): see section 16.

### 3.2 Label elements

Labelling according to Regulation (EC) No 1272/2008 [CLP]

Hazard pictogram(s):



GHS05

Signal word: Danger.

Hazard statements: H314 Causes severe skin burns and eye damage.

Precautionary statements:

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

P264 Wash thoroughly after handling.

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

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

P303 + P361 + P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

P363 Wash contaminated clothing before reuse.

P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P310 Immediately call a POISON CENTER or doctor/physician.

P305 + P351 + P338 IF IN EYES: Rinse cautiously 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.

Supplemental Hazard information (EUH):

No information available.

### 3.3 Other hazards

No information available.

## Section 4: First aid measures

### 4.1 Description of first aid measures

General notes: In all cases of doubt, or when symptoms persist, seek medical attention.

Following inhalation:

Fresh air, rest. Half-upright position. Artificial respiration may be needed. Refer for medical attention.

Following skin contact:

Remove contaminated clothes. Rinse skin with plenty of water or shower. Refer for medical attention.

Following eye contact:

First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then take to a doctor.

Following ingestion:

Rinse mouth. Do NOT induce vomiting. Give plenty of water to drink. Refer for medical attention.

Notes for the doctor:

Treat symptomatically and supportively.

Treatment may vary with condition of victim and specifics of incident.

### 4.2 Most important symptoms and effects, both acute and delayed

Inhalation: Corrosive. Burning sensation. Sore throat. Cough. Laboured breathing. Shortness of breath. Symptoms may be delayed

Skin contact: Corrosive. Redness. Pain. Serious skin burns. Blisters.

Eyes contact: Corrosive. Redness. Pain. Blurred vision. Severe deep burns.

Ingestion: Corrosive. Burning sensation. Abdominal pain. Shock or collapse.

### 4.3 Indication of the immediate medical attention and special treatment needed

Persons with pre-existing skin, eye, or respiratory disease may be at increased risk from the irritant or allergic properties of this material.

Attending physician should treat exposed patients symptomatically.

## Section 5: Fire-fighting measures

### 5.1 Extinguishing media

Suitable extinguishing media: Powder, alcohol-resistant foam, water spray, carbon dioxide.

Unsuitable extinguishing media: Not available.

### 5.2 Special hazards arising from the substance or mixture

Not combustible

### 5.3 Advice for fire-fighters

Do not stay in dangerous zone without self-contained breathing apparatus.

In order to avoid contact with skin, keep a safety distance and wear suitable protective clothing.

## Section 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

Wear protective equipment. Keep unprotected persons away.

Ensure adequate ventilation

Avoid generation of dusts; do not inhale dusts. Avoid substance contact

### 6.2 Environmental precautions

Do not empty into drains.

Do not allow material to be released to the environment without proper governmental permits.

### 6.3 Methods and material for containment and cleaning up

Use neutralizing agent.

Dispose of contaminated material as waste according to section 13.

Ensure adequate ventilation.

### 6.4 Reference to other sections

See Section 7 for information on safe handling.

See section 8 for information on personal protection equipment.

See Section 13 for information on disposal.

## Section 7: Handling and storage

### 7.1 Precautions for safe handling

Keep containers tightly sealed.

Store in cool, dry place in tightly closed containers.

Ensure good ventilation/exhaustion at the workplace.

### 7.2 Conditions for safe storage, including any incompatibilities

Separated from strong acids, metals, food and feedstuffs. Dry. Well closed. Store in an area having corrosion resistant concrete floor.

No aluminium, tin, or zinc containers.

Do not store above 23°C (73.4°F).

### 7.3 Specific end use(s)

Not available.

## Section 8 : Exposure controls/personal protection

### 8.1 Control parameters

Occupational exposure limit values:

CAS # 1310-73-2 Country of origin	Occupational exposure limit values			
	Long term/ Eight hours		Short term	
Austria	-	2 mg/m <sup>3</sup> inhalable aerosol	-	4 mg/m <sup>3</sup> inhalable aerosol
Belgium	-	2 mg/m <sup>3</sup>	-	-
Canada	-	-	-	2 mg/m <sup>3</sup>
Denmark	-	2 mg/m <sup>3</sup>	-	-
European Union	-	-	-	-
France	-	2 mg/m <sup>3</sup>	-	-
Germany (AGS)	-	-	-	-
Germany (DFG)	-	-	-	-
Hungary	-	2 mg/m <sup>3</sup>	-	2 mg/m <sup>3</sup>
Italy	-	-	-	-
Japan	-	-	-	-
Poland	-	0.5 mg/m <sup>3</sup>	-	1 mg/m <sup>3</sup>
Spain	-	2 mg/m <sup>3</sup>	-	-
Sweden	-	1 mg/m <sup>3</sup>	-	-
Switzerland	-	2 mg/m <sup>3</sup> inhalable aerosol	-	2 mg/m <sup>3</sup> inhalable aerosol
The Netherlands	-	-	-	-
USA – NIOSH	-	-	-	2 mg/m <sup>3</sup>
USA – OSHA	-	2 mg/m <sup>3</sup>	-	-
United Kingdom	-	-	-	2 mg/m <sup>3</sup> -

### 8.2 Exposure controls

Appropriate engineering controls:

Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.

Personal protective equipment:

Eye and face protection: Safety goggles or eye protection in combination with breathing protection.

Skin protection: full contact:  
Glove material: Nitrile rubber  
Glove thickness: 0,11 mm  
Break through time: > 480 min  
splash contact:  
Glove material: Nitrile rubber  
Glove thickness: 0,11 mm  
Break through time: > 480 min

Respiratory protection: Use Ventilation, local exhaust, or breathing protection.

Thermal hazards: Not available.

Environmental exposure controls:  
Do not allow material to be released to the environment without the proper governmental permits.

Industrial hygiene:  
Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.

## Section 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

Appearance:	Flakes
Colour:	White
Odour:	Odourless
pH:	ca. 13.5 at 50 g/l 20 °C (Merck)
Melting point:	323 °C
Boiling point:	1388 °c at 1.013 hPa
Density:	2.13 g/cm <sup>3</sup> at 20 °C
Vapour pressure:	No data available
Partition coefficient (n -octanol/water):	No data available
Solubility(ies):	1.090 g/l at 20°C
Flash point:	Not applicable
Auto-ignition temperature:	Not applicable
Flammability:	No data available.
Decomposition temperature:	Not determined
Explosive properties:	Lower explosion limit : not applicable Upper explosion limit : not applicable
Oxidising properties:	No data available.
Evaporation rate :	No data available.
Viscosity:	No data available.

### 9.2 Other information

No data available.

## Section 10: Stability and reactivity

### 10.1 Reactivity

Much heat is evolved when solid material is dissolved in water.

### 10.2 Chemical stability

No decomposition if used and stored according to specifications.

### 10.3 Possibility of hazardous reactions

The substance is a strong base; it reacts violently with acid and is corrosive in moist air to metals like zinc, aluminium, tin and lead forming a combustible/explosive gas.

Reacts with ammonium salts to produce ammonia, causing fire hazard. Attacks some forms of plastics, rubber or coatings.

### 10.4 Conditions to avoid

Moisture.

### 10.5 Incompatible materials

Highly reactive with metals. Reactive with oxidizing agents, reducing agents, acids, alkalis, moisture.

### 10.6 Hazardous decomposition products

Sodium oxide.

## Section 11: Toxicological information

### 11.1 Toxicokinetics, metabolism and distribution

Not available.

### 11.2 Information on toxicological effects

Acute toxicity:

Acute Oral toxicity:	LDLo = 500 mg/kg (rat) (IUCLID);
Acute Inhalation toxicity:	No data available;
Acute Dermal toxicity:	LD <sub>50</sub> = 1350 mg/kg (rabbit) (IUCLID);
Skin corrosion/irritation:	
Skin, rabbit: highly irritating.	
Serious eye damage/irritation:	
Eyes, rabbit: highly irritating.	
Respiratory or skin sensitization:	

No sensitizing effect known

CMR effects (Carcinogenicity, Mutagenicity and Toxicity for Reproduction):

No data available.

STOT-single exposure and repeated exposure:

No data available.

Additional information:

RTECS #: WB4900000

## Section 12: Ecological information

### 12.1 Toxicity

Acute fish toxicity:	LC <sub>50</sub> = 45.5 mg/l/96h ( <i>Oncorhynchus mykiss</i> )(IUCLD);
Acute daphnia toxicity:	EC <sub>50</sub> = 76 mg/l/24h ( <i>Daphnia magna</i> )( External MSDS);
Acute bacteria toxicity:	No data available;

### 12.2 Persistence and degradability

The methods for determining biodegradability are not applicable to inorganic substances.

### 12.3 Bioaccumulative potential

No data available.

### 12.4 Mobility in soil

No data available.

### 12.5 Results of PBT and vPvB assessment

No data available.

### 12.6 Other adverse effects

Harmful effect due to pH shift.

Neutralization possible in waste water treatment plants.

## Section 13: Disposal considerations

### 13.1 Waste treatment methods

Consult state, local or national regulations for proper disposal.

Hand over to disposers of hazardous waste.

Must be specially treated under adherence to official regulations.



## Section 14: Transport information

### 14.1 Land transport (ADR/RID/GGVSE)

UN-No.:	1823
Official transport designation:	SODIUM HYDROXIDE, SOLID
Class:	8
Classification Code:	C6
Packing group:	II
Hazard label:	8
Tunnel restriction code:	E

### 14.2 Sea transport (IMDG-Code/GGVSee)

Proper Shipping Name:	SODIUM HYDROXIDE, SOLID
Class:	8
UN-No.:	1823
Packing group:	II
EmS No.:	F-A, S-B
Marine pollutant:	No

### 14.3 Air transport (ICAO-TI/IATA-DGR)

Proper Shipping Name:	SODIUM HYDROXIDE, SOLID
Class:	8
UN-No.:	1823
Packing group:	II

### 14.4 Additional information

No data available.

## Section 15: Regulatory information

### 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

EU regulation:	
Authorisations:	No information available.
Restrictions on use:	No information available.
EINECS:	This substance is listed in the inventory.
DSD (67/548/EEC):	This substance is listed in the Annex I.
Other chemical regulation:	
USA - TSCA:	This substance is listed in the inventory.

Canada - DSL:	This substance is listed in the inventory.
Australia - AICS:	This substance is listed in the inventory.
Korea - ECL:	This substance is listed in the inventory.
Japan - ENCS:	This substance is listed in the inventory.
Philippiens-PICCS	This substance is listed in the inventory.
New Zealand:	This substance is listed in the inventory.
Israel	This substance is listed in the inventory.

## 15.2 Chemical Safety Assessment

No Chemical Safety Assessment has been carried out for this substance.

## Section 16: Other information

### 16.1 Revision Information:

Date of the previous revision: Not applicable.

Date of this revision: 1/1/2023

Revision summary: The first new SDS

### 16.2 Abbreviations and acronyms

CLP:	EU regulation (EC) No 1272/2008 on classification, labelling and packaging of chemical substances and mixtures.
CAS:	Chemical Abstracts Service (division of the American Chemical Society).
EINECS:	European Inventory of Existing Commercial Chemical Substances.
RID:	European Rail Transport.
IMDG:	International Maritime Code for Dangerous Goods.
IATA:	International Air Transport Association.
OSHA:	The United States Occupational Safety and Health Administration.
TSCA:	Toxic Substances Control Act, The American chemical inventory.
DSD:	Dangerous Substance Directive (67/548/EEC).
DSL:	Domestic Substances List, The Canadian chemical inventory.
AICS:	The Australian Inventory of Chemical Substances.
ECL:	Existing Chemicals List, the Korean chemical inventory.
ENCS:	Japanese Existing and New Chemical Substances.
PICCS	Philippine Inventory of Chemicals and Chemical Substances

### 16.3 Key literature references and sources for data

ESIS IUCLID Dataset: European chemical Substances Information System.

HSDB: Hazardous Substances Data Bank.

ICSC: International Chemical Safety Cards.

## 16.4 Relevant R-phrases and H-statements

R-phrases (code and full text):

R35 Causes severe burns.

H-statements (code and full text):

H314 Causes severe skin burns and eye damage.

## 16.5 Training advice

No data available.

## 16.6 Declare to reader

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