



**GRASIM INDUSTRIES LIMITED  
(CHEMICAL DIVISION)**

**SAFETY DATA SHEET**

**CAUSTIC SODA FLAKES**

**SODIUM HYDROXIDE, ANHYDROUS**

**Ref: SDS/GRCD/VLYT/CSF  
Revision Date: Rev-0/June 2019**

**1. IDENTIFICATION OF SUBSTANCE**

Trade Marks and Synonyms (if any)	Caustic Soda Flakes, Sodium Hydroxide Anhydrous
Chemical Names and Synonyms	Sodium Hydroxide Anhydrous
Physical Form	Solid, White flakes, odourless
Molecular weight	40.0
Manufacturer Name & Address	Grasim Industries Limited Chemical Division Garhwa Road, P.O Rehla District- Palamau Jharkhand 822124 India, <a href="http://www.grasim.com">www.grasim.com</a>
Information department	Marketing Department, Grasim Industries Limited, Chemical Division
Emergency Telephone number	Telephone:+91- 8347008059, 8347004619

**2. INFORMATION OF MAJOR INGREDIENTS**

Chemical Name	Sodium hydroxide , Anhydrous
CAS No	1310-73-2
Formula	NaOH
Percentage	Min. 96

<b>3.</b>	<b>HAZARD IDENTIFICATION</b>
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**3.1 Classification of the substance or mixture**

Classification:-

Corrosive to metals	Category 1
Skin Corrosion/irritation	Category 1 A
Serious Eye Damage/Eye Irritation	Category 1
Specific target organ toxicity (single exposure)	Category 3
Target Organs - Respiratory system.	

**3.2 Label Element**

Signal Word                      DANGER

Hazard Pictogram



GHS05



GHS07

Hazard Statements            H290- May be corrosive to metal  
    H312- Harmful in contact with Skin  
    H314-Cause severe skin burns and eye damage  
    H335- May cause respiratory irritation.

Precautionary Statements

Prevention    P260 - Do not breathe dust, vapours  
                          P264 - Wash exposed skin thoroughly after handling  
                          P273 - Avoid release to the environment  
                          P280 - Wear eye protection, face protection, protective clothing,  
                          protective gloves

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  
                          P304+P340 - IF INHALED: Remove person to fresh air and keep  
                          comfortable for breathing  
                          P305+P351+P338 - If in eyes: Rinse cautiously with water for several  
                          minutes. Remove contact lenses, if present and easy to do. Continue  
                          rinsing  
                          P310 - Immediately call a POISON CENTER/doctor/...  
                          P363 - Wash contaminated clothing before reuse

Storage	P405 - Store locked up P406 - Store in corrosive resistant container with a resistant inner liner.
Disposal	P501 - Dispose of contents/container to Comply with applicable regulations

**3.3 Other Hazards**

Reactions with the following materials may generate heat: Strong acids. Water

#### 4. PHYSICAL AND CHEMICAL PROPERTIES

Appearance and Odour	Solid, White flakes, odourless
pH	Not Applicable
Specific Gravity	0.7 – 0.8 gm/cc at 25 °C
Melting Point	318 °C
Boiling Point	1390 °C
Flash Point	Not pertinent
Auto ignition	Not pertinent
Flammable Limit	Not pertinent
Vapour Pressure (mm Hg)	Not pertinent
Solubility in Water	100 % soluble
Solubility in Organic Solvents	Soluble in alcohol, Methanol and Glycerol
Oxidizing /Explosive Properties	No

#### 5. STABILITY AND REACTIVITY

Stability	As supplied it is stable at normal temperature & pressure. When exposed to air, it absorbs moisture.
Conditions to avoid	Avoid contact with water. Direct contact with water may cause exothermic reaction. Carbon monoxide gas may form upon contact with reducing sugars, food and beverage products in enclosed spaces.
Material to avoid	Water, Acids, Halogenated compounds, prolonged contact with aluminium, brass, bronze, copper, lead, tin, zinc or other alkali sensitive metals or alloys, Nitro methane & Nitro compounds.
Reactivity	
Air	Reactive
Water	Highly hygroscopic
Acids	Reactive
Alkalis	Reactive
Hazardous Decomposition Products	Not Known

**6 TOXICITY DATA****Short term effects when:-**

In contact with skin	Severe Irritation, burns
In contact with eyes	Severe Irritation, burns, eye damage , blindness
Inhalation	Severe Irritation, burns, pulmonary edema
Ingestion	Severe Irritation, burns , nausea , vomiting

**Long term effects when:-**

In contact with skin	Dermatitis
In contact with eyes	Visual disturbances
Inhalation	No effects are known.
Ingestion	No effects are known.
Acute Toxicity	LD <sub>50</sub> (Dermal - Rabbit) 1350 mg/ kg LD <sub>50</sub> (50 % solution Oral - Rat) 220 mg/ kg
Chronic Toxicity	Chronic effects are due to long – term irritation. Dermatitis on the skin or recurrent corneal ulceration and visual disturbances. In rare cases reports have noted long-term inhalation causes bronchial inflammatory reaction or obstructive airway dysfunction
Carcinogenic Toxicity	No Data available
Mutagenic Toxicity	No
Reproductive Toxicity	No information is available

**7 FIRST AID MEASURES**

Skin Contact	Remove affected person from source of contamination. Remove contaminated clothing. Wash skin thoroughly with soap and water. Get medical attention immediately. Continue to rinse for at least 15 minutes.
Eye Contact	Rinse immediately with plenty of water. Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes. Get medical attention immediately. Continue to rinse.
Inhalation	Remove the victim from exposure. Support respiration, gives oxygen if necessary. Get medical attention if any discomfort continues
Ingestion	Give water or milk followed by dilute vinegar or fruit juice. Never give anything by mouth to an unconscious person. Do not induce vomiting. Do not induce vomiting. Rinse mouth thoroughly with water. Give plenty of water to drink. Get medical attention immediately.

**8. FIRE FIGHTING MEASURES**

## Extinguishing media

Suitable extinguishing media: Regular dry chemical, carbon dioxide, fine water spray, regular foam

Unsuitable extinguishing media: High volume water jet.

## Special hazards arising from the substance or mixture

Not combustible, but contact with moisture or water may generate sufficient heat to ignite combustible materials. Forms flammable and explosive hydrogen through Corrosion of metals. Generates dense black smoke and may form toxic fumes of carbon monoxide (CO), carbon dioxide (CO<sub>2</sub>) and sodium oxide (Na<sub>2</sub>O).

## Special protective actions for firefighters:

Do not breathe fumes. Respirator with independent air-supply and airtight garment is required. Fight fire in early stages if safe to do so. Containers close to fire should be removed immediately or cooled with water. Do not allow contaminated extinguishing water to enter the soil, groundwater or surface waters.

**9. EXPOSURE CONTROLS AND PROTECTION**

## Control parameters

## Exposure limits

2 mg / m<sup>3</sup> OSHA TWA

2 mg / m<sup>3</sup> OSHA ceiling

2 mg / m<sup>3</sup> ACGIH ceiling

2 mg / m<sup>3</sup> MEXICO peak

**Exposure Controls**

## Appropriate engineering controls

Provide sufficient ventilation to keep airborne levels below the exposure limits

## Personal protective equipment

Maintain eye wash fountain and quick-drench facilities in work area. Final choice of appropriate protection will vary according to methods of handling, engineering controls and risk assessments undertaken

## Respiratory protection

Wear gas mask with filter type B if conc. in air > exposure limit. Wear appropriate mask

## Skin and body protection

Appropriate protective clothing to protect against possible skin contact. Corrosion-proof clothing.

## Eye protection

Chemical goggles or face shield. Face shield.

## Hand protection

Wear protective gloves. Nitrile, butyl rubber, polyvinyl chloride (PVC), or neoprene gloves with long sleeves.

**10 HANDLING AND STORAGE**

## Handling

Store in a cool, dry and well-ventilated place. Keep containers closed. Keep away from heat, sparks and flames. Use only with adequate ventilation. Avoid contact with eyes, skin or clothing.

Storage	Store and handle in accordance with all current regulations and standards. Keep container tightly closed and properly labeled. Do not store in Aluminium container or use Aluminium fittings or transfer lines, as flammable hydrogen gas may be generated. Keep separated from incompatible substances. The filled container is kept on wooden pallets.
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### 11 SPILLAGE/ACCIDENTAL RELEASE

Spillage	Do not touch spilled material. Prevent it entering sewers. Dry manual lifting of the spilled material is suggested without making dust Wash the surface with plenty of water and soap.
Personal Precautions	Avoid generation of dust. Avoid eyes & skin contact. Avoid inhalation. Avoid ingestion. Wear appropriate personal protective equipment's.
Environmental Precautions	Prevent contamination of soil and water.

### 12 WASTE DISPOSAL

Waste Disposal	Seal all waste in airtight plastic bags for eventual disposal as per the guidelines of National/Regional Regulations. Packing materials gets contaminated. Before disposal wash thoroughly with water and then dispose of by appropriate methods in accordance with National/ Regional requirement.
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### 13. ENVIRONMENTAL INFORMATION

Bio - Accumulation	No bio-accumulation
Biodegradability	This material is inorganic and not subject to biodegradation.
Persistence	This material will exist in the dissociated state
Toxicity	This material has exhibited slight toxicity to terrestrial organisms and moderate toxicity to aquatic flora & fauna.
Mobility	If released in water the product is highly soluble and contaminates the water resources.

### 14. REGULATORY INFORMATION

#### 14.1 Safety, Health And Environmental Regulations / Legislation Specific For The Substance:-

Substance is found on the following regulatory lists;;

- European Union - European Inventory of Existing Commercial Chemical Substances (EINECS) (English)"
- OSHA Regulatory Status:-This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200)
- TSCA (TOXIC SUBSTANCE CONTROL ACT) -TSCA INVENTORY STATUS (40 CFR 710):- All components are listed or exempt
- WHMIS (Workplace Hazardous Materials Information System):- This product has been classified in accordance with the hazard criteria of the Controlled Product Regulations

**14.2 Chemical Safety Assessment**

No data available

## 14.2.1 Hazards:-

CLP classification according to Annex VI of CLP (Regulation (EC) No 1272/2008)

- May be corrosive to metals
- Causes serious eye damage

## 14.2.2 Risks

- Risk of serious damage to eyes & burn

**15. TRANSPORT INFORMATION***UN Number*

UN 1823

*Label***Land Transport (ADR/RID)**

UN Number

UN 1823

UN proper shipping Name

SODIUM HYDROXIDE, SOLID

Hazard class:

8

Hazard label:

8

Packaging group

II

Environmental Hazard

None

**Inland Waterway Transport (ADNR)**

UN Number

UN 1823

UN proper shipping Name

SODIUM HYDROXIDE, SOLID

Hazard class:

8

Hazard label:

8

Packaging group

II

Environmental Hazard

None

**Sea Transport (IMDG)**

UN Number

UN 1823

UN proper shipping Name

SODIUM HYDROXIDE, SOLID

Hazard class:

8

Hazard label:

8

Packaging group	II
Environmental Hazard	None
Marine Pollutant	None
EmS No.	F-A, S-B
Limited Quantities	1 kg
Expected Quantities	E2

**Air transport (ICAO/IATA)**

UN Number	UN 1823
UN proper shipping Name	SODIUM HYDROXIDE, SOLID
Hazard class:	8
Hazard label:	8
Packaging group	II
Environmental Hazard	None

**16 OTHER INFORMATION****Disclaimer:**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process unless specified in the text.

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