Material Safety Data Sheet

Revision Date: 10.11.2018

CAUSTIC SODA FLAKES

1. IDENTIFICATION OF THE SUBSTANCE AND OF THE COMPANY

Product Name: Caustic soda flakes

Other name(s): Sodium hydroxide - Flakes

Recommended Use of the Chemical: Reagent, pH-regulating agent, Ion exchange resins regenerating agent, Catalyst, Etching agent, Cleaning agent, Chemical intermediate

Supplier Address:
NOVICHEM CO.
No.30, Magnolia Str, Qaem Maqam Farahani Ave.
Tehran 15886/13941 IRAN

Contact telephone number: (Product information) +98-21-88329799 (Hunting)

2. HAZARDS IDENTIFICATION

Classification

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200)

Skin corrosion/irritation		Category 1 Sub-category A
Serious eye damage/eye irritation		Category 1
Acute aquatic toxicity		Category 3
Physical Hazards	Corrosive to Metals	Category 1

Label Elements

EMERGENCY OVERVIEW

DANGER

Hazard statements Causes severe skin burns and eye damage
Harmful to aquatic life

Physical Hazards May be corrosive to metals

Appearance white flakes **Physical State** solid **Odor** Odorless

Precautionary Statements - Prevention
Keep only in original container
Do not breathe dusts or mists
Wash face, hands and any exposed skin thoroughly after handling
Wear protective gloves/protective clothing/eye protection/face protection
Avoid release to the environment

Precautionary Statements - Response
Absorb spillage to prevent material damage
IF SWALLOWED: rinse mouth. Do NOT induce vomiting
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
Wash contaminated clothing before reuse
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
Immediately call a POISON CENTER or doctor/physician
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

Precautionary Statements - Storage
Store in corrosive resistant container with a resistant inner liner
Store locked up

Precautionary Statements - Disposal
Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)
Not applicable

Other Information
Other Hazards Hygroscopic

3. COMPOSITION AND INFORMATION ON INGREDIENTS

Components	CAS Number	Proportion	Hazard Codes
Sodium hydroxide	1310-73-2	100%	H290 H314 H318 H335

4. FIRST AID MEASURES

For advice, contact a Poisons Information Centre (e.g. phone Australia 131 126; New Zealand 0800 764 766) or a doctor.

Inhalation:
Remove victim from area of exposure - avoid becoming a casualty. Remove contaminated clothing and loosen remaining clothing. Allow patient to assume most comfortable position and keep warm. Keep at rest until fully recovered. If patient finds breathing difficult and develops a bluish discolouration of the skin (which suggests a lack of oxygen in the blood - cyanosis), ensure airways are clear of any obstruction and have a qualified person give oxygen through a face mask. Apply artificial respiration if patient is not breathing. Seek immediate medical advice.

Skin Contact:
If spilt on large areas of skin or hair, immediately drench with running water and remove clothing. Continue to wash skin and hair with plenty of water (and soap if material is insoluble) until advised to stop by the Poisons Information Centre or a doctor.

Eye Contact:
Immediately wash in and around the eye area with large amounts of water for at least 15 minutes. Eyelids to be held apart. Remove clothing if contaminated and wash skin. Urgently seek medical assistance. Transport promptly to hospital or medical centre.

Ingestion:
Immediately rinse mouth with water. If swallowed, do NOT induce vomiting. Give a glass of water. Never give anything by the mouth to an unconscious patient. Seek immediate medical assistance.

5. FIRE FIGHTING MEASURES

Suitable Extinguishing Media:
Not combustible, however, if material is involved in a fire use: Fine water spray, normal foam, dry agent (carbon dioxide, dry chemical powder).

Unsuitable Extinguishing Media:
Water jet.

Hazchem or Emergency Action Code: 2R

Specific hazards arising from the chemical:
Non-combustible material. Corrosive chemical.

Special protective equipment and precautions for fire-fighters:
Not combustible, however following evaporation of aqueous component residual material can decompose if involved in a fire, emitting toxic fumes. Contact with metals may liberate hydrogen gas which is extremely flammable. Fire fighters to wear self-contained breathing apparatus and suitable protective clothing if risk of exposure to products of decomposition.

6. ACCIDENTAL RELEASE MEASURES

Emergency procedures/Environmental precautions:
Clear area of all unprotected personnel. Work up wind or increase ventilation. Do not allow container or product to get into drains, sewers, streams or ponds. If contamination of sewers or waterways has occurred advise local emergency services.

Personal precautions/Protective equipment/Methods and materials for containment and cleaning up:
Slippery when spilt. Avoid accidents, clean up immediately. Wear protective equipment to prevent skin and eye contact and breathing in vapours. Work up wind or increase ventilation. Contain - prevent run off into drains and waterways. Use absorbent (soil, sand or other inert material). Collect and seal in properly labelled containers or drums for disposal. Caution - heat may be evolved on contact with water.

7. HANDLING AND STORAGE

This material is a Scheduled Poison S6 and must be stored, maintained and used in accordance with the relevant regulations.

Precautions for safe handling:
Avoid skin and eye contact and breathing in vapour, mists and aerosols. When using do not eat, drink or smoke. Wash hands thoroughly after handling. Keep out of reach of children.

Conditions for safe storage, including any incompatibilities:
Store in a cool, dry, well ventilated place. Store away from foodstuffs. Do not store in aluminium or galvanised containers nor use die-cast zinc or aluminium bungs; plastic bungs should be used. At temperatures greater than 40°C, tanks must be stress relieved. Do not store in zinc containers. Do not store in tin containers. Do not store in copper, copper alloys, brass, bronze. Store away from incompatible materials described in Section 10. Keep containers closed when not in use - check regularly for leaks.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Chemical name	ACGIH TLV	OSHA PEL	NIOSH
Sodium hydroxide 1310-73-2	Ceiling: 2 mg/m³	TWA: 2 mg/m³ (vacated) Ceiling: 2 mg/m³	IDLH: 10 mg/m³ Ceiling: 2 mg/m³

Appropriate engineering controls

Engineering controls Ensure adequate ventilation, especially in confined areas

Individual protection measures, such as personal protective equipment

Eye/face Protection Wear safety glasses with side shields (or goggles). Face protection shield. Contact lenses should not be worn.

Skin and Body Protection Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact. Ensure that the breakthrough time of the glove material is not exceeded. Refer to glove supplier for information on breakthrough time for specific gloves.

Respiratory protection If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

General hygiene considerations Handle in accordance with good industrial hygiene and safety practice. Wash hands thoroughly after handling.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State Solid
Odor Odorless

Appearance White flakes
Odor threshold No information available

Property	Values	Remarks • Method
pH	13-14	solution (0.5 %)
Melting point/freezing point	318 °C / 604 °F	Melting point / melting range
Boiling point / boiling range	1390 °C / 2534 °F	-
Flash Point		Not applicable
Evaporation Rate		Not applicable
Flammability (solid, gas)		Not applicable
Flammability Limit in Air		

Vapor pressure		Negligible
Vapor Density	>1.0	@ Air = 1
Specific gravity	2.13	-
Flammable properties	Not flammable	
Explosive properties	Not an explosive.	
Oxidizing properties	None known	
Other Information		
VOC content (%)	None	

10. STABILITY AND REACTIVITY

Reactivity: Reacts violently with acids. Reacts exothermically on dilution with water.

Chemical stability: Stable under normal ambient and anticipated storage and handling conditions of temperature and pressure. Absorbs carbon dioxide from the air.

Possibility of hazardous reactions: Reacts with ammonium salts, evolving ammonia gas. Reacts readily with various reducing sugars (i.e. fructose, galactose, maltose, dry whey solids) to produce carbon monoxide. Take precautions including monitoring the tank atmosphere for carbon monoxide to ensure safety of personnel before vessel entry.

Conditions to avoid: Avoid exposure to moisture. Avoid exposure to direct sunlight.

Incompatible materials: Incompatible with acids , ammonium salts , aluminium , tin , zinc, brass .

Hazardous decomposition

11. TOXICOLOGICAL INFORMATION

No adverse health effects expected if the product is handled in accordance with this Safety Data Sheet and the product label. Symptoms or effects that may arise if the product is mishandled and overexposure occurs are:

Ingestion: Swallowing can result in nausea, vomiting, diarrhoea, abdominal pain and chemical burns to the gastrointestinal tract.

Eye contact: A severe eye irritant. Corrosive to eyes; contact can cause corneal burns. Contamination of eyes can result in permanent injury. May cause blindness.

Skin contact: Contact with skin will result in severe irritation. Corrosive to skin - may cause skin burns.

Inhalation: Breathing in mists or aerosols may produce respiratory irritation.

Acute toxicity: No LD50 data available for the product. For the constituent Sodium hydroxide :

Skin corrosion/irritation:	Severe irritant (rabbit).
Serious eye damage/irritation:	Severe irritant (rabbit).
Respiratory or skin sensitisation:	No information available.
Chronic effects:	
Mutagenicity:	Negative (In vitro chromosomal aberration test)

Carcinogenicity:	Not listed as carcinogenic according to the International Agency for Research on Cancer (IARC).
Reproductive toxicity:	No information available.
Specific Target Organ Toxicity (STOT) - single exposure:	May cause respiratory irritation.

12. ECOLOGICAL INFORMATION

Ecotoxicity	Avoid contaminating waterways.
Persistence/degradability:	Biodegradation is not an applicable endpoint since the product is an inorganic chemical.

13. DISPOSAL CONSIDERATIONS

Disposal methods:
Refer to Waste Management Authority. Dispose of contents and container in accordance with local, regional, national, international regulations.

14. TRANSPORT INFORMATION

Road and Rail Transport
Classified as Dangerous Goods by the criteria of the Australian Dangerous Goods Code (ADG Code) for Transport by Road and Rail; DANGEROUS GOODS.

UN No:	1824
Transport Hazard Class:	8 Corrosive
Packing Group:	II
Proper Shipping Name or Technical Name:	SODIUM HYDROXIDE FLAKES
Hazchem or Emergency Action Code:	2R

Marine Transport
Classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea; DANGEROUS GOODS.

UN No:	1824
Transport Hazard Class:	8 Corrosive
Packing Group:	II
Proper Shipping Name or Technical Name:	SODIUM HYDROXIDE FLAKES
IMDG EMS Fire:	F-A
IMDG EMS Spill:	S-B

Marine Pollutant No

Air Transport

Classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air; DANGEROUS GOODS.

UN No:	1824
Transport Hazard Class:	8 Corrosive
Packing Group:	II
Proper Shipping Name or Technical Name:	SODIUM HYDROXIDE SOLUTION

15. REGULATORY INFORMATION

Classification:
This material is hazardous according to Safe Work ; HAZARDOUS CHEMICAL.

Classification of the chemical:
Corrosive to Metals - Category 1
Skin Corrosion - Sub-category 1A
Eye Damage - Category 1
Specific target organ toxicity (single exposure) - Category 3

Hazard Statement(s):
H290 May be corrosive to metals.
H314 Causes severe skin burns and eye damage.
H335 May cause respiratory irritation.

16. OTHER INFORMATION

Information contained herein is provided in good faith but makes no representation as to its comprehensiveness or accuracy. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product. Individuals receiving the information must exercise their independent judgment in determining its appropriateness for a particular purpose.