

تاریخ: \_\_\_\_\_  
شماره: \_\_\_\_\_  
پیوست: \_\_\_\_\_

## Material Safety Data Sheet (MSDS)

Product Name: Caustic Soda Flake

### Section 1: Manufacturer and Substance Identification:

Shegerf Fidar Shimi Sava Co.

IRAN

### Product Identifier: CAUSTIC SODA FLAKES (98-99%)

Caustic soda Flake  
Sodium hydroxide Flakes  
Caustic Soda Flake

CAS #: 1310-73-2

UN # : 1823

Sodium Carbonate

CAS #497-19-8,

< 1.0%

Formula: NaOH

Molecular mass: 40.0 g/mol

### SECTION 1-1: Product company identification

Shop Center: +9825-33354788

+989125698324

Email: Shegerfchemsava@gmail.com

Website: WWW.Shegerfshimi.com

Address: no 216,3<sup>rd</sup> East, imam Ali blvd,2<sup>nd</sup> Phase, Mahmoud Abad Industrial Park, Qom, Iran

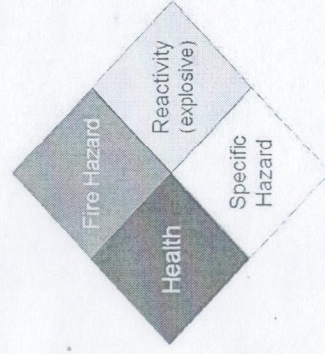


## SECTION 2: Composition/Information on ingredients

| Component        | Percent[%] | CAS Number |
|------------------|------------|------------|
| Sodium Hydroxide | 98-99 %    | 1310-73-2  |

MSDS Name: Sodium hydroxide, solid.

Synonyms: Lye, sodium hydrate, white caustic, caustic soda, soda lye, soda ash, ascarite.



## SECTION 3: Hazard identification

### Emergency Overview:

**Appearance:** White solid.

**Danger!** Causes eye and skin burns. Causes digestive and respiratory tract burns.

Hygroscopic (absorbs moisture from the air).

**Target Organs:** Eyes, skin, mucous membranes.

### Potential Health Effects:

**Eye:** Causes eye burns. May cause blindness. May cause chemical conjunctivitis and corneal damage.

**Skin:** Causes skin burns. May cause deep, penetrating ulcers of the skin.

**Ingestion:** May cause severe and permanent damage to the digestive tract. Causes gastrointestinal tract burns. May cause perforation of the digestive tract. Causes severe pain, nausea, vomiting, diarrhea, and shock.

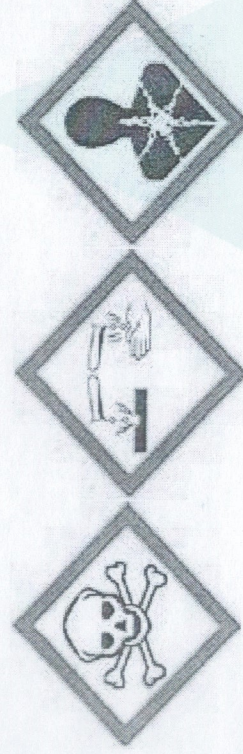


**Inhalation:** Irritation may lead to chemical pneumonitis and pulmonary edema. Causes severe irritation of upper respiratory tract with coughing, burns, breathing difficulty, and possible coma. Causes chemical burns to the respiratory tract.

**Chronic:** Prolonged or repeated skin contact may cause dermatitis. Effects may be delayed.

HazChem No : 1310-73-2

UN No : 1823



#### • SECTION 4: First Aid Measures

**INHALATION:** If adverse effects occur, remove to uncontaminated area. Give artificial respiration if not breathing. If breathing is difficult, oxygen should be administered by qualified personnel. Get immediate medical attention.

**SKIN CONTACT:** Wash skin with soap and water for at least 15 minutes while removing contaminated clothing and shoes. Get immediate medical attention. Thoroughly clean and dry contaminated clothing and shoes-before reuse. Destroy contaminated shoes

**EYE CONTACT:** Immediately flush eyes with plenty of water for at least 15 minutes. Then get immediate medical attention.

**INGESTION:** If swallowed, drink plenty of water, do NOT induce vomiting. Get immediate medical attention.

**NOTE TO PHYSICIAN:** For inhalation, consider oxygen. Avoid gastric lavage or emesis .

#### • SECTION 5: Fire Fighting Measures

**Fire Hazard:** **SUITABLE EXTINGUISHING MEDIA:** regular dry chemical, carbon dioxide, water, regular foam  
**Large fires:** Use regular foam or flood with fine water spray.

**FIRE AND EXPLOSION HAZARDS:** Negligible fire hazard.



**FIRE FIGHTING:** Move container from fire area if it can be done without risk.

Cool containers with water spray until well after the fire is out. Stay away from the ends of tanks.

## • SECTION 6: Accidental Release Measures

**General Information:** Use proper personal protective equipment as indicated in Section 8.

**Spills/Leaks:** Vacuum or sweep up material and place into a suitable disposal container. Avoid runoff into storm sewers and ditches that lead to waterways. Clean up spills immediately, observing precautions in the Protective Equipment section. Avoid generating dusty conditions. Provide ventilation. Do not get water on spilled substances or inside containers

## • SECTION 7: Handling and Storage

**Handling:** Wash thoroughly after handling. Do not allow water to get into the container because of violent reaction. Minimize dust generation and accumulation. Do not get in eyes, on skin, or on clothing. Keep container tightly closed. Avoid

ingestion and inhalation. Discard contaminated shoes. Use only with adequate ventilation.

**Storage:** Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances. Keep away from metals. Keep away from acids. Store protected from moisture. Containers must be tightly closed to prevent the conversion of NaOH to sodium carbonate by the CO<sub>2</sub> in air.

## • SECTION 8: Exposure Controls/Personal Protection

**Engineering Controls:** Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.

**Exposure Limits Chemical Name, ACGIH (TLV), NIOSH (REL), OSHA (PEL):**

Sodium hydroxide, 2 mg/m<sup>3</sup> Ceiling, 10 mg/m<sup>3</sup> Ceiling (15 minutes), 2 mg/m<sup>3</sup> TWA. Sodium carbonate, none listed, none listed, none listed.

**NIOSH IDLH Concentration:** 10 mg/m<sup>3</sup>.

**OSHA Vacated PEL:** None of these chemicals have an OSHA Vacated PEL.

### PERSONAL PROTECTIVE EQUIPMENT:

Maintain eye wash fountain and quick-drench facilities in work area. Detailed requirements for personal protective equipment should be established on a site-specific basis.



**EYE PROTECTION:** Wear full face-shield and chemical safety goggles when there is potential for contact.

**Skin Protection:** Wear appropriate personal protective clothing to prevent skin contact. Chemical protective clothing composed of natural rubber, neoprene, nitrile, or styrene/butadiene (SBR) coated fabric is highly recommended, having break through times greater than one hour. Butyl rubber, polyethylene, chlorinated polyurethane, or polyvinyl alcohol may be used but data suggests breakthrough times of approximately an hour or more.

**Eye Protection:** Wear chemical safety goggles with a face-shield to protect against eye and skin contact when appropriate. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.

**Skin and Body Protection:** Wear protective clothing to minimize skin contact. Wear chemical resistant clothing and rubber boots when potential for contact with the material exists. Always place pants legs over boots. Contaminated clothing should be removed, then discarded or laundered. Discard contaminated leather goods.

**Hand Protection:** Wear appropriate chemical resistant gloves. Consult a glove supplier for assistance in selecting an appropriate chemical resistant glove.

**Protective Material Types:** Natural rubber, Neoprene, Nitrile, Polyvinyl chloride (PVC),  
RESPIRATORY PROTECTION Up to 10 mg/m

Supplied Air Respirator (SAR) operated in a continuous-flow mode, eye protection needed; or full-face piece respirator with high-efficiency particulate filter(s); or powered air-purifying respirator with dust and mist filter(s), eye protection needed; or full-face mask Self-Contained Breathing Apparatus (SCBA); or full face mask.

| Component                  | Immediately Dangerous to Life/ Health (IDLH) |
|----------------------------|----------------------------------------------|
| Sodium Hydroxide 1310-73-2 | 10 mg/m <sup>3</sup> IDLH                    |

**HYGIENE MEASURES:** Handle in accordance with good industrial hygiene and safety practices. Wash hands and affected skin immediately after handling, before breaks, and at the end of the workday.

## SECTION 9: Physical and Chemical Properties

Physical State: Solid.

Appearance: White pellets.



**Odor:** Odorless.

**pH:** 14 (5% aq soln).

**Vapor Pressure:** 1 mm Hg @ 739 deg C.

**Vapor Density:** Not available.

**Evaporation Rate:** Not available.

**Viscosity:** Not available.

**Boiling Point:** 1390 deg C @ 760 mmHg Freezing/Melting Point: 318 deg C.

**Decomposition Temperature:** Not available. Solubility in water @ 20 Deg C: 420 g/l.

**Specific Gravity/Density:** 2.13 g/cm<sup>3</sup>.

**Molecular Formula:** NaOH.

**Molecular Weight:** 40.00.

#### • SECTION 10: Stability and Reactivity

**Chemical Stability:** Stable at room temperature in closed containers under normal storage and handling conditions.

**Conditions to Avoid:** Moisture, contact with water, exposure to moist air or water, prolonged exposure to air.

**Incompatibilities with Other Materials:** Water, metals, acids, aluminum, zinc, tin, nitromethane, leather, flammable liquids, organic halogens, wool.

**Hazardous Decomposition Products:** Toxic fumes of sodium oxide.

**Hazardous Polymerization:** Will not occur

#### • SECTION 11: Toxicological Information

##### IRRITATION DATA:

1 percent/24 hour(s) eyes-monkey severe; 500 mg/24 hour(s) skin-rabbit severe; 400 ug eyes-rabbit mild; 1 percent eyes-rabbit severe; 50 ug/24hour(s) eyes-rabbit severe; 1 mg/24 hour(s) eyes-rabbit severe; 1mg/30second(s) rinsed eyes-rabbit severe

**TOXICITY DATA:** 1350 mg/kg skin-rabbit LD50; 104-340 mg/kg oral-rat LD50; 40 mg/kg intra peritoneal-mouse LD50; 500 mg/kg oral-rabbit LD

**LOCAL EFFECTS:** Corrosive: inhalation, skin, eye, ingestion ACUTE



تاریخ: \_\_\_\_\_  
شماره: \_\_\_\_\_  
پوسته: \_\_\_\_\_

#### TOXICITY LEVEL:

Toxic: ingestion

Moderately Toxic: dermal absorption

#### MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE:

eye disorders, skin disorders and allergies

#### SECTION 12: ECOTOXICITY

Aquatic Toxicity: 240 ug/L 96 hour(s) LC50 (Mortality)

#### SECTION 13: Disposal Consideration

Review federal, state and local government requirements prior to disposal. Do not dispose of waste with normal garbage, or to sewer systems. Whatever cannot be saved for recovery or recycling, including containers, should be managed in an appropriate and approved waste disposal facility. Processing, use or contamination of this product may change the waste management options.

#### SECTION 14: Transport Information: GHS Classification

Signal: Danger

Harmful if swallowed

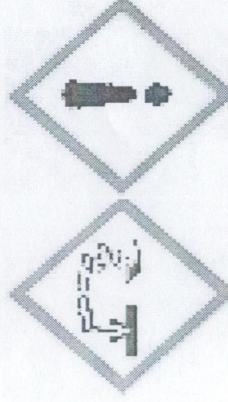
Causes severe skin burns and eye damage

May cause respiratory irritation

Shipping Name: Sodium hydroxide, solid; Sodium hydroxide, solid.

Hazard Class: 8, 8.

UN Number: UN1823, UN1823





• SECTION 15: Regulatory Information: Occupational exposure limits

TLV: 2mg/m<sup>3</sup> (ceiling value)

Danger/Hazard Symbol: C Corrosive.

OHSA Process Safety: Not Regulated

Chemical Test Rules: None of these chemicals have a Chemical Test Rule.

Health & Safety Reporting List: None of these chemicals are on the Health & Safety Reporting List.

• SECTION 16: Other Information

The Information provided in this MSDS is given in good faith and is correct to the best of our knowledge and information at the date of Publication. It is designed only a guidance of safe handling, transportation, use and disposal. No Warranty is expressed or implied.