Material Safety Data Sheet

Caustic soda flakes

Ref:TCC/MSDS/CAUSTIC SODA FLAKES/2015	Revised on 01.03.2015

Section -1 product , manufacturer identification

Product name. Caustic soda flakes	Contact information
CAS. Mixture	**The Travancore Cochin Chemicals Ltd**
Synonym. SODIUM HYDROXIDE, SOLID	PB.No.4 Udyogmandal,Aluva
Chemical formula.Naoh	24 hr help line no.0484-2545011
DOT Shipping Name : UN1823	fax:0484 2546564

Hazard	Value	Description
Health (blue)	3	Can cause serious or permanent injury.
Flammability(red)	0	Will not burn under typical fire conditions.
Instability(yellow)	1	Normally stable but can become unstable at elevated temperatures and pressures.
Special(white)	cor	Classification- corrosive

section -2 composition and information on ingredients

NaOH, Sodium hydroxide Flakes

section -3 Hazard identification

Emergency Overview

POISON! DANGER! CORROSIVE. MAY BE FATAL IF SWALLOWED. HARMFUL IFINHALED. CAUSES BURNS TO ANY AREA OF CONTACT. REACTS WITH WATER, ACIDS AND OTHER MATERIALS.

Potential Health Effects

Inhalation: Severe irritant. Effects from inhalation of dust or mist vary from mild irritation to serious damage of the upper respiratory tract, depending on severity of exposure. Symptoms may include sneezing, sore throat or runny nose. Severe pneumonitis may occur.

Ingestion: Corrosive! Swallowing may cause severe burns of mouth, throat, and stomach.
Severe scarring of tissue and death may result. Symptoms may include bleeding, vomiting, diarrhoea, fall in blood pressure. Damage may appears days after exposure.

Skin Contact: Corrosive! Contact with skin can cause irritation or severe burns and scarring with greater exposures.

Eye Contact: Corrosive! Causes irritation of eyes, and with greater exposures it can cause burns that may result in permanent impairment of vision, even blindness.

Chronic Exposure: Prolonged contact with dilute solutions or dust has a destructive effect upon tissue.

Aggravation of Pre-existing Conditions: Persons with pre-existing skin disorders or eye problems or impaired respiratory function may be more susceptible to the effects of the substance.

Section 4 First aid measures

Eye Contact:

Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention immediately.

Skin Contact:

In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Cover the irritated skin with an emollient. Cold water may be used.Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention immediately.

Serious Skin Contact:

Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek immediate medical attention.

Inhalation:

If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

Serious Inhalation:

Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation.
WARNING: It may be hazardous to the person providing aid to give mouth-to-mouth resuscitation when the inhaled material is toxic, infectious or corrosive. Seek immediate medical attention.

Ingestion:

If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, belt or waistband. Get medical attention immediately.

Section 5: Fire and Explosion Data

Fire: Not considered to be a fire hazard. Hot or molten material can react violently with water.
Can react with certain metals, such as aluminium, to generate flammable hydrogen gas.
Explosion: Not considered to be an explosion hazard. Fire Extinguishing Media: Use any means suitable for extinguishing surrounding fire. Adding water to caustic solution generates large amounts of heat.

Section 6: Accidental Release Measures

Ventilate area of leak or spill. Keep unnecessary and unprotected people away from area of spill. Wear appropriate personal protective equipment as specified in Section 8. Spills: Pick up and place in a suitable container for reclamation or disposal, using a method that does not generate dust. Do not flush caustic residues to the sewer. Residues from spills can be diluted with water, neutralized with dilute acid such as acetic, hydrochloric or sulfuric. Absorb neutralized caustic residue on clay, vermiculite or other inert substance and package in a suitable container for disposal.

Section 7: Handling and Storage

Keep in a tightly closed container. Protect from physical damage. Store in a cool, dry, ventilated area away from sources of heat, moisture and incompatibilities.
Always add the caustic to water while stirring; never the reverse. Containers of this material may be hazardous when empty since they retain product residues (dust, solids); observe all warnings and precautions listed for the product. Do not store with aluminum or magnesium. Do not mix with acids or organic materials.

Section 8: Exposure Controls/Personal Protection

Airborne Exposure Limits: OSHA Permissible Exposure Limit (PEL): 2 mg/m3 Ceiling - ACGIH Threshold Limit Value (TLV): 2 mg/m3 Ceiling
Ventilation System: A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source,preventing dispersion of it into the general work area.

Personal Respirators : If the exposure limit is exceeded, a half-face dust/mist respirator may be worn for up to ten times the exposure limit or the maximum use concentration specified by the appropriate regulatory agency or respirator supplier, whichever is lowest.

A full-face piece dust/mist respirator may be worn up to 50 times the exposure limit, or the maximum use concentration specified by the appropriate regulatory agency, or respirator supplier, whichever is lowest. For emergencies or instances where the exposure levels are not known, use a full-face piece positive-pressure, air-supplied respirator. WARNING: Air-purifying respirators do not protect workers in oxygen-deficient atmospheres.

Skin Protection: Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.
Eye Protection: Use chemical safety goggles and/or a full face shield where splashing is possible. Maintain eye wash fountain and quick-drench facilities in work area.

Section 9: Physical and Chemical Properties

Appearance: White, deliquescent pellets.
Odor: Odorless.
Solubility: 111 g/100 g of water.
Specific Gravity: 2.13
pH: 13 - 14 (0.5% soln.)

% Volatiles by volume @ 21C (70F): 0
Boiling Point: 1390C (2534F)
Melting Point: 318C (604F)
Vapor Density (Air=1): > 1.0
Vapor Pressure (mm Hg): Negligible.
Evaporation Rate (BuAc=1): No information found

Section 10: Stability and Reactivity Data

Stability: Stable under ordinary conditions of use and storage. Very hygroscopic. Can slowly pick up moisture from air and react with carbon dioxide from air to form sodium carbonate.
Hazardous Decomposition Products: Sodium Hydroxide. Decomposition by reaction with certain metals releases flammable and explosive hydrogen gas.
Hazardous Polymerization: Will not occur.
Incompatibilities: Contact with water, acids, flammable liquids, and organic halogen compounds, especially trichloroethylene, may cause fire or explosion. Contact with nitromethane and other similar nitro compounds causes formation of shock-sensitive salts. Contact with metals such as aluminum, tin, and zinc causes formation of flammable hydrogen gas.
Conditions to Avoid: Moisture, dusting and incompatible chemicals

Section 11: Toxicological Information

Routes of Entry: Absorbed through skin. Dermal contact. Eye contact. Inhalation.
Toxicity to Animals:
Toxicological Information
Irritation data: skin, rabbit: 500 mg/24H severe; eye rabbit: 50 ug/24H severe; investigated as a mutagen
Chronic Effects on Humans:
CARCINOGENIC EFFECTS: Classified 3 (Not classifiable for human.) by IARC [Hydrochloric acid]. May cause damage to the following organs: kidneys, liver, mucous membranes, upper respiratory tract, skin, eyes, Circulatory System, teeth.
Other Toxic Effects on Humans:
Very hazardous in case of skin contact (corrosive, irritant, permeator), of ingestion, . Hazardous in case of eye contact (corrosive), of inhalation (lung corrosive).

Section 12: Ecological Information

Ecotoxicity: Not available.

Section 13: Disposal Considerations

Whatever cannot be saved for recovery or recycling should be handled as hazardous waste and sent to a RCRA approved waste facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

Section 14: Transport Information

Proper Shipping Name: SODIUM HYDROXIDE, SOLID
Hazard Class: 8
UN/NA: UN1823
Packing Group: II
CAS No. 1310-73-2

Section 15:
Regulatory and other Informations

EEC labeling – Sodium Hydroxide
Symbol – C - Corrosive,
Phruses- R 35 – Causes server burns