SODIUM HYDROXIDE

1. Chemical Product and Company Identification:

PRODUCT IDENTIFICATION

Product Name	Sodium hydroxide, 5.0N Standardized Solution
Synonyms	No information available
Recommended Use	Laboratory chemicals.
Uses advised against	Food, drug, pesticide or biocidal product use.

Details of the supplier of the safety data sheet

ENTAJ FEED & RAW MATERIALS MANUFACTURING CO.
ADDRESS: AMMAN – BUILDING 2477, OFFICE 118210
LICENSE NO.: 202618787

2. Hazard(s) identification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

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

Label Elements

Signal Word Danger
Hazard Statements
Causes severe skin burns and eye damage
May cause respiratory irritation

Prevention
Do not breathe dust/fume/gas/mist/vapors/spray
Wash face, hands and any exposed skin thoroughly after handling
Wear protective gloves/protective clothing/eye protection/face protection Use only outdoors or in a well-ventilated area

Response
Immediately call a POISON CENTER or doctor/physician

Inhalation
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing

Skin
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower Wash contaminated clothing before reuse

Eyes
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Ingestion
IF SWALLOWED: Rinse mouth. DO NOT induce vomiting
Storage
Store locked up
Store in a well-ventilated place. Keep container tightly closed
Disposal
Dispose of contents/container to an approved waste disposal plant
Hazards not otherwise classified (HNOC)
None identified

3- Composition/Information on Ingredients

Component	CAS-No	Weight %
Water	7732-18-5	80.00
Sodium hydroxide	1310-73-2	20.00

4. First aid measures

General Advice Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.

Eye Contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Immediate medical attention is required.

Skin Contact Wash off immediately with plenty of water for at least 15 minutes. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Call a physician immediately.

Inhalation If not breathing, give artificial respiration. Remove from exposure, lie down. Do not **use** mouth-to-mouth method if victim ingested or inhaled the substance;give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Call a physician immediately.

Ingestion Do NOT induce vomiting. Clean mouth with water. Never give anything by mouth to an unconscious person. Call a physician immediately.
Most important symptoms and Causes burns by all exposure routes. Product is a corrosive material. Use of gastric effects
lavage or emesis is contraindicated.Possible perforation of stomach or esophagus should be investigated: Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation

Notes to Physician Treat symptomaticallyand gloves, including the inside, before re-use. Call a physician immediately.

5. Fire Fighting Measures

Suitable Extinguishing Media Not combustible. CO 2, dry chemical, dry sand, alcohol-resistant foam.
Unsuitable
Extinguishing Media No information available
Flash Point No information available
Method No information available
Autoignition Temperature No information available
Explosion Limits
Upper No data available
Lower No data available
Sensitivity to Mechanical Impact No information available
Sensitivity to Static Discharge No information available
Specific Hazards Arising from the Chemical

Thermal decomposition can lead to release of irritating gases and vapors. The product causes burn of eyes, skin and mucous membranes.

Hazardous Combustion Products
Sodium oxides.

Protective Equipment and Precautions for Firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full
protective gear. Thermal decomposition can lead to release of irritating gases and vapors.

NFPA

Health	Flammability	Instability	Physical hazards
4	0	0	-

6. Accidental release measures

Personal Precautions Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.
Environmental Precautions Should not be released into the environment. See Section 12 for additional Ecological
Information.
Methods for Containment and Clean Soak up with inert absorbent material. Keep in suitable, closed containers for disposal.

7. Handling and storage

Handling Wear personal protective equipment/face protection. Do not get in eyes, on skin, or on clothing. Use only
under a chemical fume hood. Do not breathe mist/vapors/spray. Do not ingest. If
swallowed then seek immediate medical assistance.
Storage Corrosives area. Keep containers tightly closed in a dry, cool and well-ventilated place.

8. Exposure controls/personal protection

Exposure Guidelines

Component	ACGIH TLV	OSHA PEL	NIOSH IDLH	Mexico OEL (TWA)
Sodium hydroxide	Ceiling: 2 mg/m³	(Vacated) Ceiling: 2 mg/m³ TWA: 2 mg/m³	IDLH: 10 mg/m³ Ceiling: 2 mg/m³	Ceiling: 2 mg/m³

Legend

ACGIH - American Conference of Governmental Industrial Hygienists
OSHA - Occupational Safety and Health Administration
NIOSH IDLH: NIOSH - National Institute for Occupational Safety and Health

Engineering Measures Ensure that eyewash stations and safety showers are close to the workstation location.

Personal Protective Equipment

Eye/face Protection Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.
Skin and body protection Wear appropriate protective gloves and clothing to prevent skin exposure.
Respiratory Protection Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirators if exposure limits are exceeded or if irritation or other symptoms are experienced.

Hygiene Measures Handle in accordance with good industrial hygiene and safety practice

9. Physical and chemical properties

Physical State	Liquid
Appearance	No information available
Odor	Odorless
Odor Threshold	No information available pH No information available
Melting Point/Range	No data available
Boiling Point/Range	No information available
Flash Point	No information available
Evaporation Rate	No information available
Flammability (solid,gas)	Not applicable
Flammability or explosive limits	
Upper	No data available
Lower	No data available
Vapor Pressure	No information available Vapor Density No information
available	
Specific Gravity	No information available
Solubility	No information available
Partition coefficient; n-octanol/water	No data available
Autoignition Temperature	No information available
Decomposition Temperature	No information available
Viscosity	No information available
Molecular Formula	Na OH
Molecular Weight	40.00

10. Stability and reactivity

Reactive Hazard	**None known, based on information available**
Stability Stable	**under normal conditions.**
Conditions to Avoid	**Incompatible products.**
Incompatible Materials	**Acids**
Hazardous Decomposition Products	**Sodium oxides**
Hazardous Polymerization	**Hazardous polymerization does not occur.**
Hazardous Reactions	**None under normal processing.**

11. Toxicological information

Acute Toxicity

Product Information

Oral LD50 Based on ATE data, the classification criteria are not met. ATE > 2000 mg/kg.
Dermal LD50 Based on ATE data, the classification criteria are not met. ATE > 2000 mg/kg. Vapor LC50 Based on ATE data, the classification criteria are not met. ATE > 20 mg/l.

Component Information

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Water	-	-	-
Sodium hydroxide	LD50 = 325 mg/kg (Rat)	LD50 = 1350 mg/kg (Rabbit)	Not listed

Toxicologically Synergistic No information available Products
Delayed and immediate effects as well as chronic effects from short and long-term
Irritation No information available
Sensitization No information available

Carcinogenicity
The table below indicates whether each agency has listed any ingredient as a carcinogen.

Component	CAS-No	IARC	NTP	ACGIH	OSHA
Water	7732-18-5	Not listed	Not listed	Not listed	Not listed
Sodium hydroxide	1310-73-2	Not listed	Not listed	Not listed	Not listed

Mutagenic Effects No information available
Reproductive Effects No information available.
Developmental Effects No information available.
Teratogenicity No information available.
STOT - single exposure Respiratory system STOT -
repeated exposure None known
Aspiration hazard No information available

Symptoms / effects, both acute and Product is a corrosive material. Use of gastric lavage or emesis is contraindicating delayed

Possible perforation of stomach or esophagus should be investigated: Ingestion c
severe swelling, severe damage to the delicate tissue and danger of perforation

Endocrine Disruptor Information No information available
Other Adverse Effects The toxicological properties have not been fully investigated

12. Ecological information

Ecotoxicity

Component	Freshwater Algae	Freshwater Fish	Microtox	Water Flea
Sodium hydroxide	-	LC50: = 45.4 mg/L, 96h static (Oncorhynchus mykiss)	-	-

Persistence and Degradability Miscible with water Persistence is unlikely based on information available.
Bioaccumulation/ Accumulation No information available.
Mobility Will likely be mobile in the environment due to its water solubility.

13. Transport information

DOT
UN-No UN1824
Proper Shipping Name SODIUM HYDROXIDE SOLUTION
Hazard Class 8
Packing Group II

TDG
UN-No UN1824
Proper Shipping Name SODIUM HYDROXIDE SOLUTION
Hazard Class 8
Packing Group II

IATA
UN-No UN1824
Proper Shipping Name SODIUM HYDROXIDE SOLUTION
Hazard Class 8
Packing Group II

IMDG/IMO
UN-No UN1824
Proper Shipping Name SODIUM HYDROXIDE SOLUTION
Hazard Class 8 Packing Group II

14. Other information

this Material Safety Data Sheet (MSDS) has been prepared in accordance with internationally recognized standards and is based on the best information available at the time of issue. It provides a summary of the health and safety hazards of the material and general guidance for its safe handling in the workplace. As the actual conditions of use are beyond our control, each user is responsible for assessing the risks associated with their specific application and implementing appropriate control measures.

END OF MSDS