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|  al kout industrial projects الكوت للمشاريع الصناعية | AL KOUT INDUSTRIAL PROJECTS | Document No: | C-SM-DS-D-004 |
| | | Issue No: | 1 |
| | Rev no: | 4 | |
| | Safety Data Sheet CAUSTIC SODA LYE-30% | Date revision | 21.11.2018 |
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| 1.0 Chemical Identity | | |
|---|--|--|
| 1.1 | Product Name | Caustic Soda Lye (30 %) |
| | Synonyms | Sodium Hydroxide |
| | Formula | NaOH |
| 1.2 | Recommended Use and Restrictions | |
| | Use of substance | For laboratory and manufacturing use |
| 1.3 | Company Information | |
| | | Name: Al Kout Industrial Projects , Kuwait Plant: Salt & Chlorine Plant, Shuaiba, Kuwait Company's Post Box No.: 10277, Shuaiba-65453, Kuwait Tel No.: 00-(965)-22283726 Intercom: 3726, 3725 Fax No.: 00-(965)- 22284043 Company's Emergency Phone No: 00-(965)-, 23261029, 97216020, 99794511 |
| 1.4 | Emergency Telephone Number | 00-(965)-, 23261029, 97216020 |
| 2.0 Hazards Identification | | |
| 2.1 | Classification of the Substance or Mixture | |
| GHS US Classification | | |
| | Skin corrosion / irritation | H314 Causes Skin Burns & Eye Damage |
| | Serious eye damage / eye irritation | H318 Causes Serious Eye Damage |
| 2.2 | Label Elements | |
| GHS US Labeling | | |
| Hazard Pictograms (GHS – US) | |  |
| Single Word (GHS-US) : Danger Hazard Statements (GHS-US) : H314 – Causes Skin Burns & Eye Damage Precautionary Statements (GHS – US) : P260 - Do not breathe mist, vapors, spray. P264 - Wash exposed skin thoroughly after handling. P280 - Wear protective gloves, protective clothing, eye protection, face protection. 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. 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 or doctor/physician. P363 - Wash contaminated clothing before reuse. P405 - Store locked up. P501 - Dispose of contents/container to comply with local, state and federal regulations. If inhaled: Remove person to fresh air and keep comfortable for breathing. | | |
| 2.3 | Other Hazards | |
| No additional information available | | |
| 2.4 | Unknown acute toxicity (GHS US) | |
| Not Applicable | | |

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| 3.0 Composition/ Information on ingredients | | |
|---|--|------------------------|
| 3.1 | Substances | |
| Not Applicable | | |
| 3.2 | Mixtures | |
| | Finished product specification | Caustic Soda Lye (30%) |
| Chemical Analysis | | |
| | Parameters | Specification |
| | Specific Gravity | 1.280 – 1.325 |
| | Temperature °C | 40 - 80 |
| | Sodium Hydroxide (at above temp) g/lit | 380 – 415 |
| | Sodium Hydroxide (at above temp) wt. % | 30.00 - 31.0 |

| 4.0 First Aid Measures | | |
|------------------------|------------|---|
| 4.1 | Inhalation | If a person breathes a large amount fumes/vapors of this chemical, move the exposed person to fresh air at once. Provide emergency airway support. Give 100% humidified supplemental oxygen with artificial respiration, if needed. Transport to emergency medical facility without delay. |
| 4/2 | Skin | If this chemical contacts the skin, immediately flush the contaminated skin thoroughly with water for at least 15 minutes. If this chemical penetrates the clothing, immediately remove the clothing and flush the skin thoroughly with water. Get medical attention promptly. |
| 4.3 | Eyes | If this chemical has been swallowed and the person is conscious, give water and/or milk immediately to dilute the caustic soda no more than 8 ounces in adults and 4 ounces in children is recommended to minimize the risk of vomiting. Do not attempt to make the person vomit. Get emergency medical attention immediately |
| 4.4 | Ingestion | If this chemical contacts the eyes, immediately flush the eyes with large amount of water at room temperature. Hold the eyelids apart during the flushing operation. Washing must be started within 10 seconds of contact and continued for 30 minutes to prevent permanent injury. Get medical attention immediately. Ophthalmology consultation is a must |

| 5.0 Fire Fighting Measures | | |
|----------------------------|---|---|
| 5.1 | Suitable Extinguishing Media | Foam. Dry powder. Carbon dioxide. Water spray. Sand |
| | Unsuitable Extinguishing Media | Solid water jet ineffective as extinguishing medium. |
| 5.2 | Specific hazards arising from the chemical | Fire Hazard : Not Flammable Explosion hazard : Not available Reactivity : Violent exothermic reaction with water (moisture): (increased) risk of fire. On heating: release of corrosive gases/vapours. Absorbs the atmospheric CO2. Violent exothermic reaction with (some) acids. May be corrosive to metals. Reacts with (some) metals: release of highly flammable gases/vapours (hydrogen). |
| 5.3 | Special protective equipment and precaution for fire –fighter | Fire hazard : DIRECT FIRE HAZARD. Non combustible. INDIRECT FIRE HAZARD. Reactions involving a |

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|--|--|---|
| | | Explosion hazard : fire hazard: see "Reactivity Hazard". INDIRECT EXPLOSION HAZARD. Reactions with explosion hazards: see "Reactivity Hazard". Reactivity : Violent exothermic reaction with water (moisture): (increased) risk of fire. On heating: release of corrosive gases/vapors. Absorbs the atmospheric CO2. Violent exothermic reaction with (some) acids. May be corrosive to metals. Reacts with (some) metals: release of highly flammable gases/vapors (hydrogen). |
|--|--|---|


6.0 Accidental Release Measures

| | | |
|-----|----------------------|--|
| 6.1 | Personal Precautions | Evacuate area. Clear non-emergency personnel from the area. Ventilate area of spill or leak. Allow only trained personnel wearing appropriate protective gear, to be in the spill response. |
| 6.2 | Clean Up Methods | <ul style="list-style-type: none"> • If possible, dam large quantities of liquid with sand or earth. • Collect the product with suitable means. • Place everything into a closed, labelled container compatible with the product. • Store the product in a safe and isolated place |

7.0 Handling and Storage


| | | |
|-----|--------------------|--|
| 7.1 | Handling & Storage | <p>Precautions for Safe Handling: Do not get in eyes, on skin, or on clothing. Do not breathe vapors, mist, or spray. Wear proper personal protection equipment. This product may be added slowly to water or acids with dilution and constant stirring to avoid a violent exothermic reaction. Full protective clothing should be worn. Avoid contact with aluminum, tin, zinc, and alloys containing these metals. Do not mix with strong acids without dilution and agitation to prevent violent or explosive reaction (boiling and spattering)</p> <p>Do not remove or deface label or tags from the containers. Always empty and clean containers of all residues before adding product to avoid potential explosive reaction caused by product and unknown residue. Returnable containers should be shipped in accordance with supplier's recommendations</p> <p>Storage Conditions, Including Any Incompatibilities: Store in a dry, cool and well-ventilated place. Keep container closed when not in use. Keep/Store away from extremely high or low temperatures and incompatible materials.</p> <p>Incompatible Materials: Strong acids. Strong oxidizers. Metals.</p> |
|-----|--------------------|--|

8.0 Exposure Controls/Personal Protection

| | | |
|-----|---------------------|---|
| 8.1 | Exposure Control | Avoid contact of lye with any part of the body, as it is corrosive. Avoid splashes on to the body and eyes. Avoid breathing vapors of the lye, which may be evolved in small amounts at high temperatures. |
| 8.2 | Personal Protection | Use rubber or PVC gloves to protect your hands, Face shield to protect your face, Chemical goggles to protect your eyes from fumes and vapors, PVC suit to protect your body and gum boots or rubber safety shoes to protect your feet  |

9.0 Physical and Chemical Properties

| | | |
|-----|--------------------|----------------------------|
| 9.1 | Appearance/ Colour | Clear to hazy liquid |
| 9.2 | Odour | No distinct odour |
| 9.3 | Molecular Weight | 40 |
| 9.4 | Melting Point | Not Applicable |
| 9.5 | Boiling Point | Approximately 115°C -143°C |
| 9.6 | Specific gravity | 1.326@ 20°C |

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|-----|--------------------------|----------------|
| 9.7 | Vapour Density (Air = 1) | Not Applicable |
| 9.8 | Vapour Pressure @ 60°F | 13 mm Hg |
| 9.9 | Solubility in water | 100% |

| 10.0 Stability and Reactivity | | |
|-------------------------------|----------------------------------|--|
| 10.1 | Hazardous decomposition Products | None known |
| 10.2 | Incompatibilities | Heat is generated when mixed with water. Spattering and boiling can occur. Flammable hydrogen may be generated from contact with metals such as: aluminum, brass, tin, zinc and alloys of these metals. Avoid contact with acids, halogenated organics, organic nitro compounds and glycols. Caustic Soda solution reacts readily with various reducing sugars (i.e., fructose, galactose, maltose, dry whey solids) to produce carbon monoxide. |

| 11.0 Toxicological Information | |
|--------------------------------|--|
| 11.1 | Irritation data: skin, rabbit: 500 mg/24H severe; eye rabbit: 50 ug/24H severe; investigated as a mutagen. No carcinogenic data. |


| 12.0 Ecological Information | |
|-----------------------------|---|
| 12.1 | Environmental Toxicity: Toxicity to fish. |

| 13.0 Disposal Considerations | |
|------------------------------|--|
| 13.1 | Do not dump into any sewers, on the ground, or into any body of water. Any disposal practice must be in compliance with local, state and federal laws and regulations. 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. |

| 14.0 Transport Information | | | |
|----------------------------|-----------------------------|--------------|---|
| 14.1 | UN No | 1824 | |
| 14.2 | IMCO Class | 8, Corrosive |  |
| 14.3 | Packaging | II | |
| 14.4 | ADR/RID classification code | 8 | |

| 15.0 Regulatory Information | |
|-----------------------------|---|
| 15.1 | OSHA Regulatory status: This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR. 1910.1200) (US) CERCLA Sections 102a/103 Hazardous Substances (40 CFR 302.4) CERLA Reportable Quantity RQ : 1000 lbs (Pure NaOH) |

16.0 Other Information

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| | | |
|------|------------|--|
| 16.1 | Packing | Intermediate Bulk Containers (IBC's) and Rubber Lined /Epoxy (Vinyl Ester) coated Tankers |
| 16.2 | Disclaimer | Although reasonable care has been taken in the preparation of the document, we extend no warranties and make no representations as to the accuracy or completeness of the information contained herein, and assume no responsibility regarding the suitability of this information for the user's intended purposes or for the consequences of its use. Each individual should make a determination as to the suitability of the information for their particular purpose(s) |

Full text of H-Phrases

| | |
|------|---|
| H314 | Causes severe skin burns and eye damage |
| H318 | Causes serious eye damage |
| H402 | Harmful to aquatic life |

NFPA health hazard : 3 - Materials that, under emergency conditions, can cause serious or permanent injury.

NFPA fire hazard : 0 - Materials that will not burn under typical fire conditions, including intrinsically noncombustible materials such as concrete, stone, and sand.

NFPA reactivity : 1 - Materials that in themselves are normally stable but can become unstable at elevated temperatures and pressures.

Hazard Rating

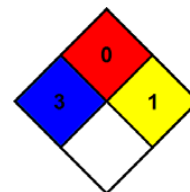
Health treatment is given : 3 Serious Hazard - Major injury likely unless prompt action is taken and medical

Flammability : 0 Minimal Hazard - Materials that will not burn


Physical : 1 Slight Hazard - Materials that are normally stable but can become unstable (self-react) at high temperatures and pressures. Materials may react non-violently with water or undergo hazardous polymerization in the absence of inhibitors.


Personal protection : D


D - Face shield and eye protection, Gloves, Synthetic apron



This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

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| 1.0 Chemical Identity | | |
|----------------------------|--|---|
| 1.1 | Product Name | Caustic Soda Lye (50 %) |
| | Synonyms | Sodium Hydroxide |
| | Formula | NaOH |
| 1.2 | Recommended Use and Restrictions | |
| | Use of substance | For laboratory and manufacturing use |
| 1.3 | Company Information | |
| | | Name: Al Kout Industrial Projects , Kuwait Plant: Salt & Chlorine Plant, Shuaiba, Kuwait Company's Post Box No.: 10277, Shuaiba-65453, Kuwait Tel No.: 00-(965)-22283726 Intercom: 3726, 3725 Fax No.: 00-(965)- 22284043 Company's Emergency Phone No: 00-(965)-, 23261029, 97216020, 99794511 |
| 1.4 | Emergency Telephone Number | 00-(965)-, 23261029, 97216020 |
| 2.0 Hazards Identification | | |
| 2.1 | Classification of the Substance or Mixture | |
| GHS US Classification | | |
| | Skin corrosion / irritation | H314 Causes Skin Burns & Eye Damage |
| | Serious eye damage / eye irritation | H318 Causes Serious Eye Damage |
| | Hazardous to the aquatic environment | H402 Harmful to aquatic life |
| | Full text of H statements : see section 16 | |
| 2.2 | Label Elements | |
| GHS US Labeling | | |
| | Hazard Pictograms (GHS – US) |  |
| | Single Word (GHS-US) | : Danger |
| | Hazard Statements (GHS-US) | : H314 – Causes Skin Burns & Eye Damage : H402 – Harmful to aquatic life |
| | Precautionary Statements (GHS – US) | : P260 - Do not breathe mist, vapors, spray. P264 - Wash exposed skin thoroughly after handling. P273 - Avoid release to the environment. P280 - Wear protective gloves, protective clothing, eye protection, face protection. 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. 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 or doctor/physician. P363 - Wash contaminated clothing before reuse. P405 - Store locked up. |
| 2.3 | Other Hazards | |
| | No additional information available | |
| 2.4 | Unknown acute toxicity (GHS US) | |
| | Not Applicable | |

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| 3.0 Composition/ Information on ingredients | | |
|---|---|--------------------------|
| 3.1 | Substances | |
| Not Applicable | | |
| 3.2 | Mixtures | |
| | Finished product specification | Caustic Soda Lye (50 %) |
| Chemical Analysis | | |
| | PARAMETERS | Specification |
| | Specific Gravity | 1.487 – 1.515 |
| | Temperature °C | 40 - 60 |
| | Sodium Hydroxide (at above temp) g/lit | 728 - 800 |
| | Sodium Hydroxide (at above temp) wt.% | 50.0 ± 1 |
| | Carbonate as Na ₂ CO ₃ wt. %. | ≤ 0.2 |
| | Chlorate as NaClO ₃ ppm | ≤ 10 |
| | Sulphate as Na ₂ SO ₄ ppm | ≤ 100 |
| | Chloride as NaCl ppm | ≤ 100 |
| | Iron as Fe +3 ppm | ≤ 5.0 |
| | Nickel as Ni ppm | ≤ 1.0 |
| | Copper as Cu+2 ppm by wt | ≤ 2.0 |
| | Manganese as Mn+2 ppm by wt | ≤ 2.0 |
| | Silicate as SiO ₂ ppm by wt | ≤ 10.0 |

| 4.0 First Aid Measures | | |
|------------------------|------------|---|
| 4.1 | Inhalation | If a person breathes a large amount fumes/vapors of this chemical, move the exposed person to fresh air at once. Provide emergency airway support. Give 100% humidified supplemental oxygen with artificial respiration, if needed. Transport to emergency medical facility without delay. |
| 4/2 | Skin | If this chemical contacts the skin, immediately flush the contaminated skin thoroughly with water for at least 15 minutes. If this chemical penetrates the clothing, immediately remove the clothing and flush the skin thoroughly with water. Get medical attention promptly. |
| 4.3 | Eyes | If this chemical has been swallowed and the person is conscious, give water and/or milk immediately to dilute the caustic soda no more than 8 ounces in adults and 4 ounces in children is recommended to minimize the risk of vomiting. Do not attempt to make the person vomit. Get emergency medical attention immediately |
| 4.4 | Ingestion | If this chemical contacts the eyes, immediately flush the eyes with large amount of water at room temperature. Hold the eyelids apart during the flushing operation. Washing must be started within 10 seconds of contact and continued for 30 minutes to prevent permanent injury. Get medical attention immediately. Ophthalmology consultation is a must |

| 5.0 Fire Fighting Measures | | |
|----------------------------|--|--|
| 5.1 | Suitable Extinguishing Media | Foam. Dry powder. Carbon dioxide. Water spray. Sand |
| | Unsuitable Extinguishing Media | Solid water jet ineffective as extinguishing medium. |
| 5.2 | Specific hazards arising from the chemical | Fire Hazard : Not Flammable Explosion hazard : Not available Reactivity : Violent exothermic reaction with water (moisture): (increased) risk of fire. On heating: release of corrosive gases/vapours. Absorbs the |

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|-----|---|--|
| | | atmospheric CO ₂ . Violent exothermic reaction with (some) acids. May be corrosive to metals. Reacts with (some) metals: release of highly flammable gases/vapours (hydrogen). |
| 5.3 | Special protective equipment and precaution for fire – fighters | <p>Fire hazard : DIRECT FIRE HAZARD. Non combustible. INDIRECT FIRE HAZARD. Reactions involving a fire hazard: see "Reactivity Hazard".</p> <p>Explosion hazard : INDIRECT EXPLOSION HAZARD. Reactions with explosion hazards: see "Reactivity Hazard".</p> <p>Reactivity : Violent exothermic reaction with water (moisture): (increased) risk of fire. On heating: release of corrosive gases/vapors. Absorbs the atmospheric CO₂. Violent exothermic reaction with (some) acids. May be corrosive to metals. Reacts with (some) metals: release of highly flammable gases/vapors (hydrogen).</p> |


6.0 Accidental Release Measures


| | | |
|-----|---------------------|--|
| 6.1 | Personal Precaution | Evacuate area. Clear non-emergency personnel from the area. Ventilate area of spill or leak. Allow only trained personnel wearing appropriate protective gear, to be in the spill response. |
| 6.2 | Clean Up Methods | <ul style="list-style-type: none"> • If possible, dam large quantities of liquid with sand or earth. • Collect the product with suitable means. • Place everything into a closed, labelled container compatible with the product. • Store the product in a safe and isolated place |

7.0 Handling and Storage

| | | |
|-----|--------------------|---|
| 7.1 | Handling & Storage | <p><u>Precautions for Safe Handling</u> Do not get in eyes, on skin, or on clothing. Do not breathe vapors, mist, or spray. Wear proper personal protection equipment. This product may be added slowly to water or acids with dilution and constant stirring to avoid a violent exothermic reaction. Full protective clothing should be worn. Avoid contact with aluminum, tin, zinc, and alloys containing these metals. Do not mix with strong acids without dilution and agitation to prevent violent or explosive reaction (boiling and spattering)</p> <p>Do not remove or deface label or tags from the containers. Always empty and clean containers of all residues before adding product to avoid potential explosive reaction caused by product and unknown residue. Returnable containers should be shipped in accordance with supplier's recommendations</p> <p><u>Storage Conditions, Including Any Incompatibilities:</u> Store in a dry, cool and well-ventilated place. Keep container closed when not in use. Keep/Store away from extremely high or low temperatures and incompatible materials.</p> <p><u>Incompatible Materials:</u> Strong acids. Strong oxidizers. Metals.</p> |
|-----|--------------------|---|

8.0 Exposure Controls/Personal Protection

| | | |
|-----|---------------------|--|
| 8.1 | Exposure Control | Avoid contact of lye with any part of the body, as it is corrosive. Avoid splashes on to the body and eyes. Avoid breathing vapors of the lye, which may be evolved in small amounts at high temperatures. |
| 8.2 | Personal Protection | Use rubber or PVC gloves to protect your hands, Face shield to protect your face, Chemical goggles to protect your eyes from fumes and vapors, PVC suit to protect your body and gum boots or rubber safety shoes to protect your feet  |

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| 9.0 Physical and Chemical Properties | | |
|--------------------------------------|--------------------------|----------------------------|
| 9.1 | Appearance/ Colour | Clear to hazy liquid |
| 9.2 | Odour | No distinct odour |
| 9.3 | Molecular Weight | 40 |
| 9.4 | Melting Point | Not Applicable |
| 9.5 | Boiling Point | Approximately 115°C -143°C |
| 9.6 | Specific gravity | 1.526@ 20°C |
| 9.7 | Vapour Density (Air = 1) | Not Applicable |
| 9.8 | Vapour Pressure @ 60°F | 13 mm Hg |
| 9.9 | Solubility in water | 100% |


| 10.0 Stability and Reactivity | | |
|-------------------------------|----------------------------------|--|
| 10.1 | Hazardous decomposition Products | None known |
| 10.2 | Incompatibilities | Heat is generated when mixed with water. Spattering and boiling can occur. Flammable hydrogen may be generated from contact with metals such as: aluminum, brass, tin, zinc and alloys of these metals. Avoid contact with acids, halogenated organics, organic nitro compounds and glycols. Caustic Soda solution reacts readily with various reducing sugars (i.e., fructose, galactose, maltose, dry whey solids) to produce carbon monoxide. |

| 11.0 Toxicological Information | |
|--------------------------------|--|
| 11.1 | Extremely corrosive. Inhalation of vapour can cause serious injury. Ingestion may be fatal. Liquid can cause severe damage to skin and eyes. TLV 5 ppm. Toxicity data ORL-RBT LD50 900 mg kg-1 IPR-MUS LD50 40 mg kg-1 IHL-RAT LC50 3124 ppm/1h. IHL-HMN LCLO 1300 ppm 30min |

| 12.0 Ecological Information | |
|-----------------------------|---|
| 12.1 | Environmental Toxicity: Toxicity to fish, Toxicity to daphnia and other aquatic invertebrates Forms corrosive mixtures with water even if diluted. Discharge into the environment must be avoided |

| 13.0 Disposal Considerations | |
|------------------------------|--|
| 13.1 | Do not dump into any sewers, on the ground, or into any body of water. Any disposal practice must be in compliance with local, state and federal laws and regulations. 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. |

| 14.0 Transport Information | | |
|----------------------------|------------|--|
| 14.1 | UN No | 1824 |
| 14.2 | IMCO Class | 8, Corrosive  |
| 14.3 | Packaging | II |

| | | | |
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|------|-----------------------------|---|
| 14.4 | ADR/RID classification code | 8 |
|------|-----------------------------|---|

| 15.0 Regulatory Information | |
|-----------------------------|--|
| 15.1 | OSHA Regulatory status: This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR. 1910.1200) (US) CERCLA Sections 102a/103 Hazardous Substances (40 CFR 302.4) CERLA Reportable Quantity RQ : 1000 lbs (Pure NaOH) |

| 16.0 Other Information | | |
|------------------------|------------|--|
| 16.1 | Packing | Intermediate Bulk Containers (IBC's) and Rubber Lined /Epoxy (Vinyl Ester) coated Tankers |
| 16.2 | Disclaimer | Although reasonable care has been taken in the preparation of the document, we extend no warranties and make no representations as to the accuracy or completeness of the information contained herein, and assume no responsibility regarding the suitability of this information for the user's intended purposes or for the consequences of its use. Each individual should make a determination as to the suitability of the information for their particular purpose(s) |

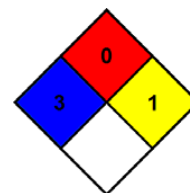
Full text of H-Phrases

| | |
|------|---|
| H312 | Harmful in contact with skin |
| H314 | Causes severe skin burns and eye damage |
| H318 | Causes serious eye damage |
| H402 | Harmful to aquatic life |

NFPA health hazard : 3 - Materials that, under emergency conditions, can cause serious or permanent injury.

NFPA fire hazard : 0 - Materials that will not burn under typical fire conditions, including intrinsically noncombustible materials such as concrete, stone, and sand.

NFPA reactivity : 1 - Materials that in themselves are normally stable but can become unstable at elevated temperatures and pressures.
Hazard Rating



Health given : 3 Serious Hazard - Major injury likely unless prompt action is taken and medical treatment is given

Flammability : 0 Minimal Hazard - Materials that will not burn

Physical : 1 Slight Hazard - Materials that are normally stable but can become unstable (self-react) at high temperatures and pressures. Materials may react non-violently with water or undergo hazardous polymerization in the absence of inhibitors.

Personal protection : H
H - Splash goggles, Gloves, Synthetic apron, Vapor respirator

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.