SAFETY DATA SHEET
CAUSTIC SODA

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY:

PRODUCT NAME: CAUSTIC SODA
SYNONYMS, TRADE NAMES: CAUSTIC ALKALI, CAUSTIC FLAKE, LYE, SODA LYE, SODIUM HYDRATE, SODIUM HYDROXIDE, WHITE CAUSTIC
APPLICATIONS: ALKALINITY IN WATER BASED MUDS
EMERGENCY TELEPHONES: 44 (0)1224 720000 [24 hours]
SUPPLIER: BAKER HUGHES DRILLING FLUIDS
BAKER HUGHES BUILDING
STONEWOOD PARK NORTH
DYCE, ABERDEEN. AB21 7EA
TELEPHONE: 44 (0)1224-720000

2. COMPOSITION/INFORMATION ON INGREDIENTS:

INGREDIENT NAME: SODIUM HYDROXIDE
EINECS CAS No.: 215-185-5 1310-73-2
CONTENT SYMBOL RISK:
100 wt% C 35

The full text for all R-phrases are shown in section 16

3. HAZARDS IDENTIFICATION:

Causes severe burns.

4. FIRST AID MEASURES:

GENERAL: Get medical attention immediately.

INHALATION: Move the exposed person to fresh air at once. Perform artificial respiration if breathing has stopped. Keep the affected person warm and at rest. Get prompt medical attention.

INGESTION: DO NOT INDUCE VOMITING! Provided the patient is conscious, wash out mouth with water and give 200-300 ml (half a pint) of water to drink.

SKIN: Remove affected person from source of contamination. Promptly flush contaminated skin with water. Promptly remove clothing if soaked through and flush the skin with water. Continue to rinse for at least 15 minutes. Get medical attention immediately.

EYES: Promptly wash eyes with plenty of water while lifting the eyelids. Get medical attention immediately. Continue to rinse.

1/5
5. FIRE FIGHTING MEASURES:

EXTINGUISHING MEDIA:
This material is not combustible. Use extinguishing media appropriate for surrounding fire.

SPECIAL FIRE FIGHTING PROCEDURES:
Keep run-off water out of sewers and water sources. Dike for water control. Cool containers exposed to flames with water until well after the fire is out. Move container from fire area if it can be done without risk. If risk of water pollution occurs, notify appropriate authorities.

UNUSUAL FIRE & EXPLOSION HAZARDS:
May develop highly toxic or corrosive fumes if heated. In contact with some metals and water/humid air, hydrogen gas is formed, which may form explosive mixture with air. Contact with some organic chemicals can produce a violent or explosive reaction.

PROTECTIVE MEASURES IN FIRE:
Self contained breathing apparatus and suitable protective clothing must be worn in fire conditions.

6. ACCIDENTAL RELEASE MEASURES:

PERSONAL PRECAUTION IN SPILL:
Wear protective clothing and equipment. Keep unprotected persons away. For further information on suitable protective clothing see Section 8 of the safety data sheet “Exposure Controls and Personal Protection”.

PRECAUTIONS TO PROTECT ENVIRONMENT:
Spillages or uncontrolled discharges into watercourses must be alerted to the appropriate regulatory body.

SPILL CLEANUP METHODS:
DO NOT touch spilled material. Provide ventilation and confine spill. Do not allow runoff to sewer. Collect for reclamation or absorb in vermiculite, dry sand or similar material. Avoid generation and spreading of dust. Flush area with water. Recover the wash water for subsequent disposal. See Section 13, Disposal Considerations, for information regarding the disposal of contained spills.

7. HANDLING AND STORAGE:

USAGE PRECAUTIONS:
Avoid spilling, skin and eye contact. Avoid creating dust during use. Wear full protective clothing for prolonged exposure and/or high concentrations. Protective measures during handling are detailed in Section 8 of this Safety Data Sheet.

STORAGE PRECAUTIONS:
May attack some plastics, rubber and coatings. Keep in cool, dry, ventilated storage and closed containers. Keep containers tightly closed.

STORAGE CRITERIA:
Corrosive storage.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION:

INGREDIENT NAME: SODIUM HYDROXIDE
CAS No.: 1310-73-2
STANDARD: OES
LT EXP. 8 HRS: No std.
ST EXP. 15 MIN: 2 mg/m³

INGREDIENT COMMENTS:
OES = Occupational Exposure Standard.

PROTECTIVE EQUIPMENT:
VENTILATION: Provide adequate general and local exhaust ventilation.

RESPIRATORS: If ventilation is insufficient, suitable respiratory protection must be provided. HiEPF, High-efficiency particulate respirator with full facepiece. SAF, Supplied-air respirator with full facepiece, helmet or hood. SCBAF, Self-contained breathing apparatus with full facepiece.

PROTECTIVE GLOVES: Use protective gloves made of: Rubber (natural, latex), Neoprene, Nitrile, Polyethylene, Polyvinyl chloride (PVC).

EYE PROTECTION: Wear splash-proof eye goggles to prevent any possibility of eye contact.

OTHER PROTECTION: Use engineering controls to reduce air contamination to permissible exposure levels. Provide eyewash station and safety shower. Wear appropriate clothing to prevent any possibility of skin contact. Impervious clothing, gloves, and minimum 8 inches face shield.

HYGIENIC WORK PRACTICES: Wash at the end of each work shift and before eating, smoking, and using the toilet. Wash promptly if skin becomes contaminated. Change work clothing daily if contamination is reasonably probable. Promptly remove non-impervious clothing that becomes contaminated. Contaminated clothing to be placed in closed container until disposal or decontamination. Warn cleaning personnel of chemical's hazardous properties. Eating, smoking, and water fountains prohibited in immediate work area.

9. PHYSICAL AND CHEMICAL PROPERTIES:

COLOUR: White.
ODOUR/TASTE: Odourless or no characteristic odour.
SOLUBILITY DESCRIPTION: Aqueous solutions are basic. Soluble in: Alcohol.
SOLUBILITY VALUE (g/100g H2O 20°C): 50.00
MOL. WEIGHT: 40.01
BOILING POINT (°C, interval): 1390
PRESSURE: 760 mmHg
MELT./FREEZ. POINT (°C, interval): 318
DENSITY/SPECIFIC GRAVITY (g/ml): 2.13
TEMPERATURE (°C): 25
BULK DENSITY: 1.175 kg/l
FLASH POINT (°C): Not applicable
pH-VALUE, DILUTED SOLUTION: 14
CONCENTRATION: 5% aq. soln.

10. STABILITY AND REACTIVITY:


MATERIALS TO AVOID: Acetaldehyde, Acetic Acid, Acetic Anhydride, 1,2-Dichloroethylen,l, Acrolein, Acrylonitrile, Allyl Alcoholic, 3-Chloropene, Aluminium, Chlorine Trifluoride, Trichloronitromethane, Chlorosulfonic Acid, Diborane, Hydrochloric Acid, Hydrocyanic Acid, Maleic Anhydride, Nitric Acid, Nitroethane, Nitromethane, Oleum, Hydrogen Peroxide, 3-Propanolide, Sulphuric Acid, Tetrahydrofuran, Tin, Trichloroethylene.

HAZARDOUS DECOMP. PRODUCTS: Contact with some organic chemicals can produce violent or explosive reactions.

11. TOXICOLOGICAL INFORMATION:

TOXIC DOSE - LD 50: 500 mg/kg (oral-rbt)
INHALATION: Irritation of nose due to vapour or dust contact. High concentrations may cause severe lung damage.
INGESTION: Corrosive. Causes severe irritation or burns to the mouth and digestive tract. Lethal dose to man is 5g.
SKIN: Causes severe burns. May cause burns resulting in permanent skin damage.
EYES: May cause chemical eye burns. Risk of serious damage to eye.

HEALTH WARNINGS: Repeated exposure may cause chronic eye irritation. Contact with concentrated chemical may very rapidly cause severe eye damage, possibly loss of sight. May cause chemical eye burns. Burning pain and severe corrosive skin damage. Acute eczematous dermatitis, contact type erythema, oedema, papules, vesicles, bullae, crusts, desquamation. Hair damage or loss of hair. Swallowing concentrated chemical may cause severe internal injury. Unconsciousness, death.


MEDICAL CONSIDERATIONS: Skin disorders and allergies.

12. ECOLOGICAL INFORMATION:

MOBILITY: This product will disperse readily in bodies of water or in wet soil.

BIO ACCUMULATION: Does not bioaccumulate.

DEGRADABILITY: This material is inorganic and therefore is not subject to biodegradation.

ACUTE FISH TOXICITY: Concentrations greater than 10 ppm or a pH greater than 10.5 may be toxic to fish and other aquatic organisms.

WATER HAZARD CLASSIFICATION: UK OCNS group E.

13. DISPOSAL CONSIDERATIONS:

DISPOSAL METHODS: Dispose of unused material as Special (Hazardous) Waste. Dispose of using licenced waste hauliers and disposal contractors.

14. TRANSPORT INFORMATION:

LABEL FOR CONVEYANCE:

ROAD TRANSPORT:
UN No. ROAD: 1823
ADR CLASS No.: Class 8: Corrosive substances.

ADR LABEL No.: 8
HAZCHEM CODE: 2R
PROPER SHIPPING NAME II: SODIUM HYDROXIDE, SOLID
RAIL TRANSPORT:
RID CLASS No.: 8
RID ITEM No.: 41(b)

SEA TRANSPORT:
IMDG CLASS: 8
IMDG PACK GR.: II
MARINE POLLUTANT: No.

AIR TRANSPORT:
ICAO CLASS: 8
AIR PACK GR.: II

15. REGULATORY INFORMATION:

LABEL FOR SUPPLY:

RISK PHRASES: R-35 Causes severe burns.

SAFETY PHRASES: S-26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S-27 Take off immediately all contaminated clothing.
S-37/39 Wear suitable gloves and eye/face protection.
S-45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
S-60 This material and its container must be disposed of as hazardous waste.

EU DIRECTIVES: European Union (EINECS): All ingredient substances listed or exempt.

16. OTHER INFORMATION:

REVISION COMMENTS: Sections changed since last update 4, 5, 6, 9, 10, 11, 14.

ISSUED BY: Melanie Thatcher (Tel 44-(0)1224-408173)

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R-PHRASES (Full Text) R-35 Causes severe burns.

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