Material Safety Data Sheet

XLW-10A

1 . Identification of the material and supplier

Names

Product name : XLW-10A

Product code : 488507

ADG : SODIUM HYDROXIDE SOLUTION

Supplier : Baker Hughes, Australia
108 Poole Street,
Welshpool,
Western Australia 6106,
Australia

Tel: +618 9350 3800
Fax: +618 9350 5453

Emergency telephone number : CHEMTREC Emergency Telephone Numbers (Australasia Geomarket):
- Australia: (02) 9037 2994
- New Zealand: 9801 0034
- PNG: +(61) 2 9037 2994

- UK: +(44) 870-820-0418
- USA: +(1) 703-527-3887 (CHEMTREC International 24 hour)

Uses

Material uses : Cross-linking agent.

2 . Hazards identification

Classification : Repr. Cat. 2; R60, R61
Xn; R22
C; R35

Risk phrases : R60- May impair fertility.
R61- May cause harm to the unborn child.
R22- Also harmful if swallowed.
R35- Causes severe burns.

Safety phrases : S53- Avoid exposure - obtain special instructions before use.
S26- In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S36/37/39- Wear suitable protective clothing, gloves and eye/face protection.
S45- In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

Statement of hazardous/ dangerous nature : HAZARDOUS SUBSTANCE. DANGEROUS GOODS.

3 . Composition/information on ingredients

Ingredient name	CAS number	Concentration
ethanediol	107-21-1	10 - 30
disodium tetraborate, anhydrous	1330-43-4	10 - 30
sodium hydroxide	1310-73-2	5 - 10

Other ingredients, determined not to be hazardous according to Safe Work Australia criteria, and not dangerous according to the ADG Code, make up the product concentration to 100%.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

4 . First-aid measures

Inhalation : Get medical attention immediately. Move exposed person to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway.

Ingestion : Get medical attention immediately. Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Chemical burns must be treated promptly by a physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway.

Skin contact : Obtain immediate medical attention after the following First Aid measures have been administered. Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 15 minutes. Chemical burns must be treated promptly by a physician. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Eye contact : Obtain immediate medical attention after the following First Aid measures have been administered. Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 15 minutes. Chemical burns must be treated promptly by a physician.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

Advice to doctor : No specific treatment. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

5 . Fire-fighting measures

Suitable : Use an extinguishing agent suitable for the surrounding fire.

Not suitable : None known.

Special exposure hazards : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
metal oxide/oxides

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Hazchem code : 2R

6 . Accidental release measures

Personal precautions : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Do not breathe vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see Section 8).

Environmental precautions : Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Small spill : Stop leak if without risk. Move containers from spill area. Dispose of via a licensed waste disposal contractor. Absorb with an inert dry material and place in an appropriate waste disposal container.

6 . Accidental release measures

Large spill : Stop leak if without risk. Move containers from spill area. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilt product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

7 . Handling and storage

Storage : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Separate from acids. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination.

8 . Exposure controls/personal protection

Occupational exposure limits

Ingredient name	Exposure limits
ethanediol	**Safe Work Australia (Australia, 4/2013). Absorbed through skin.** TWA: 10 mg/m³, 0 times per shift, 8 hours. Form: Particulate STEL: 104 mg/m³, 0 times per shift, 15 minutes. Form: Vapor STEL: 40 ppm, 0 times per shift, 15 minutes. Form: Vapor TWA: 52 mg/m³, 0 times per shift, 8 hours. Form: Vapor TWA: 20 ppm, 0 times per shift, 8 hours. Form: Vapor
disodium tetraborate, anhydrous	**Safe Work Australia (Australia, 4/2013).** TWA: 1 mg/m³, 0 times per shift, 8 hours.
sodium hydroxide	**Safe Work Australia (Australia, 4/2013).** TWA: 2 mg/m³, 0 times per shift, 8 hours.

Recommended monitoring procedures : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.

Engineering measures : If user operations generate dust, fumes, gas, vapour or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eyes : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts.

Hands : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

Respiratory : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Skin : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

8 . Exposure controls/personal protection

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

9 . Physical and chemical properties

Physical state : Liquid. [Clear.]

Colour : Colourless.

Odour : Mild.

Relative density : 1.261

Flash point : Closed cup: >93.34°C (>200°F)

pH : 12 to 14

Solubility : Easily soluble in the following materials: cold water and hot water.

10 . Stability and reactivity

Chemical stability : The product is stable.

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid : Avoid exposure - obtain special instructions before use.

Materials to avoid : Reactive or incompatible with the following materials:
acids
oxidising agents

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

11 . Toxicological information

Potential acute health effects

Inhalation : May give off gas, vapor or dust that is very irritating or corrosive to the respiratory system.

Ingestion : Harmful if swallowed. May cause burns to mouth, throat and stomach.

Skin contact : Severely corrosive to the skin. Causes severe burns.

Eye contact : Severely corrosive to the eyes. Causes severe burns.

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
ethanediol	LD50 Oral	Rat	4700 mg/kg	-
disodium tetraborate, anhydrous	LD50 Oral	Rat	1200 mg/kg	-

Conclusion/Summary : Not available.

Potential chronic health effects

Chronic toxicity

Conclusion/Summary : Not available.

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
ethanediol	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Eyes - Mild irritant	Rabbit	-	1 hours 100 milligrams	-
	Skin - Mild irritant	Rabbit	-	555 milligrams	-
sodium hydroxide	Eyes - Severe irritant	Monkey	-	24 hours 1 Percent	-
	Eyes - Mild irritant	Rabbit	-	400	-

11 . Toxicological information

			Micrograms	
Eyes - Severe irritant	Rabbit	-	24 hours 50 Micrograms	-
Eyes - Severe irritant	Rabbit	-	1 Percent	-
Eyes - Severe irritant	Rabbit	-	0.5 minutes 1 milligrams	-
Skin - Mild irritant	Human	-	24 hours 2 Percent	-
Skin - Severe irritant	Rabbit	-	24 hours 500 milligrams	-

Conclusion/Summary : Not available.

Sensitiser

Conclusion/Summary : Not available.

Carcinogenicity

Conclusion/Summary : Not available.

Mutagenicity

Conclusion/Summary : Not available.

Teratogenicity

Conclusion/Summary : Not available.

Reproductive toxicity

Conclusion/Summary : Not available.

Product name	Carcinogenic effects	Mutagenic effects	Developmental effects	Fertility effects
disodium tetraborate, anhydrous	-	-	Repr. Cat. 2; R61	Repr. Cat. 2; R60

Chronic effects : No known significant effects or critical hazards.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : May cause birth defects.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : May impair fertility.

Inhalation : No specific data.

Ingestion : Adverse symptoms may include the following: stomach pains Irritation to digestive system

Skin : Adverse symptoms may include the following:
pain or irritation
redness
blistering may occur

Eyes : Adverse symptoms may include the following:
pain
watering
redness

Target organs : Contains material which may cause damage to the following organs: kidneys, lungs, the nervous system, mucous membranes, upper respiratory tract, skin, central nervous system (CNS), eye, lens or cornea, nose/sinuses.

12 . Ecological information

Ecotoxicity : No known significant effects or critical hazards.

Aquatic ecotoxicity

Product/ingredient name	Result	Species	Exposure
ethanediol	Acute LC50 100000 µg/l Marine water	Crustaceans - Crangon crangon	48 hours
	Acute LC50 10000000 µg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 8050000 µg/l Fresh water	Fish - Pimephales promelas	96 hours
disodium tetraborate, anhydrous	Acute EC50 15.4 mg/l Fresh water	Algae - Pseudokirchneriella subcapitata	96 hours
	Acute LC50 141000 to 159000 µg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute LC50 3600 ppm Fresh water	Fish - Gambusia affinis - Adult	96 hours
sodium hydroxide	Acute EC50 40.38 mg/l Fresh water	Crustaceans - Ceriodaphnia dubia - Neonate	48 hours
	Acute LC50 125 ppm Fresh water	Fish - Gambusia affinis - Adult	96 hours

Conclusion/Summary : Not available.

Other ecological information

Persistence/degradability

Conclusion/Summary : Not available.

Bioaccumulative potential

Product/ingredient name	$LogP_{ow}$	BCF	Potential
ethanediol	-1.36	-	low
disodium tetraborate, anhydrous	-1.53	-	low

Other adverse effects : No known significant effects or critical hazards.

13 . Disposal considerations

Methods of disposal : This material and its container must be disposed of in a safe way. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

14 . Transport information

Regulation	UN number	Proper shipping name	Classes	PG*	Label	Additional information
ADG	UN1824	SODIUM HYDROXIDE SOLUTION	8	III		**Hazchem code** 2R
ADR	UN1824	SODIUM HYDROXIDE SOLUTION	8	III		**UK Hazchem:** 2R
IMDG	UN1824	SODIUM HYDROXIDE SOLUTION	8	III		**Emergency schedules (EmS)** F-A S-B
IATA	UN1824	SODIUM HYDROXIDE SOLUTION	8	III		-

PG* : Packing group

15 . Regulatory information

Standard Uniform Schedule of Medicine and Poisons

6

Sector of Use : Industrial

Control of Scheduled Carcinogenic Substances

Ingredient name	Schedule
No listed substance	

Australia inventory (AICS) : All components are listed or exempted.

EU Classification : Repr. Cat. 2; R60, R61
Xn; R22
C; R35

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National regulations : **National Code of Practice for the Control of Workplace Hazardous Substances. National Code of Practice for the Labelling of Workplace Substances. National Code of Practice for the Preparation of Material Safety Data Sheets. Approved Criteria for Classifying Hazardous Substances.**

16 . Other information

Date of printing : 1 July 2014.

Date of issue/ Date of revision : 1 July 2014

Date of previous issue : No previous validation

Version : 2

Indicates information that has changed from previously issued version.

Disclaimer

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.
Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.