NALCO Water
An Ecolab Company

SAFETY DATA SHEET

NALCO® 7346 TAB

Section: 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : NALCO® 7346 TAB

Other means of identification : Not applicable

Recommended use : BIOCIDE

Restrictions on use : Refer to available product literature or ask your local Sales Representative for restrictions on use and dose limits.

Company : ECOLAB PTE LTD
21 Gul Lane, Singapore 629416
TEL: 65- 6505-6868
FAX: 65-6862 0850

Emergency telephone number : +65 6542 9595

Issuing date : 27.12.2017

Section: 2. HAZARDS IDENTIFICATION

GHS Classification

Oxidizing solids : Category 1
Acute toxicity (Oral) : Category 4
Skin corrosion/irritation : Category 1
Serious eye damage/eye irritation : Category 1
Skin sensitization : Category 1
Acute aquatic toxicity : Category 1
Chronic aquatic toxicity : Category 2

GHS Label element

Hazard pictograms :

Signal Word : Danger

Hazard Statements : May cause fire or explosion; strong oxidiser.
Harmful if swallowed.
Causes severe skin burns and eye damage.
May cause an allergic skin reaction.
Very toxic to aquatic life.
Toxic to aquatic life with long lasting effects.

Precautionary Statements : **Prevention:**
Keep away from heat. Keep/Store away from clothing and other combustible materials. Do not breathe dusts or mists. Avoid release to the environment. Wear protective gloves/ protective clothing/ eye protection/ face protection.
Response:
IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell. Rinse mouth.IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor.IF IN EYES: Rinse cautiously with water for several

minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/ physician.
IF ON CLOTHING: rinse immediately contaminated clothing and skin with plenty of water before removing clothes.
Disposal:
Dispose of contents/ container to an approved waste disposal plant.

Other hazards : Contact with acids liberates toxic gas.

Section: 3. COMPOSITION/INFORMATION ON INGREDIENTS

Pure substance/mixture : Mixture

Chemical Name	CAS-No.	Concentration: (%)
3-Bromo-1-Chloro-5,5-Dimethyl-Hydantoin	126-06-7	30 - 60
1-Bromo-3-Chloro-5,5-Dimethyl-Hydantoin	16079-88-2	30 - 60
1,3-Dichloro-5,5-Dimethylhydantoin	118-52-5	10 - 30
1,3-Dichloro-5-Ethyl-5-Methylhydantoin	89415-87-2	10 - 30

Section: 4. FIRST AID MEASURES

In case of eye contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention immediately.
In case of skin contact	Wash off immediately with plenty of water for at least 15 minutes. Use a mild soap if available. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention immediately.
If swallowed	Rinse mouth with water. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Get medical attention immediately.
If inhaled	Remove to fresh air. Treat symptomatically. Get medical attention.
Protection of first-aiders	In event of emergency assess the danger before taking action. Do not put yourself at risk of injury. If in doubt, contact emergency responders. Use personal protective equipment as required.
Notes to physician	Treat symptomatically.
Most important symptoms and effects, both acute and delayed	See Section 11 for more detailed information on health effects and symptoms.

Section: 5. FIREFIGHTING MEASURES

Suitable extinguishing media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Unsuitable extinguishing media	None known.
Specific hazards during firefighting	Oxidizer. Contact with other material may cause fire.
Hazardous combustion products	Decomposition products may include the following materials: Carbon oxides nitrogen oxides (NOx) May evolve chlorine under fire conditions. Bromine
Special protective equipment	Use personal protective equipment.

for firefighters		
Specific extinguishing methods	:	Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. In the event of fire and/or explosion do not breathe fumes.

Section: 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	:	Ensure adequate ventilation. Keep people away from and upwind of spill/leak. Avoid inhalation, ingestion and contact with skin and eyes. When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. Ensure clean-up is conducted by trained personnel only. Refer to protective measures listed in sections 7 and 8.
Environmental precautions	:	Do not allow contact with soil, surface or ground water.
Methods and materials for containment and cleaning up	:	Sweep up and shovel into suitable containers for disposal.

Section: 7. HANDLING AND STORAGE

Advice on safe handling	:	Do not ingest. Do not breathe dust/fume/gas/mist/vapours/spray. Do not get in eyes, on skin, or on clothing. Wash hands thoroughly after handling. Use only with adequate ventilation.
Conditions for safe storage	:	Keep in a cool, well-ventilated place. Keep away from reducing agents. Keep away from combustible material. Keep out of reach of children. Keep container tightly closed. Store in suitable labelled containers.
Suitable material	:	Keep in properly labelled containers.
Unsuitable material	:	not determined

Section: 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Form of exposure	Permissible concentration	Basis
1,3-Dichloro-5,5-Dimethylhydantoin	118-52-5	PEL (long term)	0.2 mg/m3	SG PEL
		PEL (short term)	0.4 mg/m3	SG PEL
1,3-Dichloro-5,5-Dimethylhydantoin	118-52-5	TWA	0.2 mg/m3	ACGIH
		STEL	0.4 mg/m3	ACGIH
		TWA	0.2 mg/m3	NIOSH REL
		STEL	0.4 mg/m3	NIOSH REL
		TWA	0.2 mg/m3	OSHA Z1

Engineering measures	:	Effective exhaust ventilation system. Maintain air concentrations below occupational exposure standards.

Personal protective equipment

Eye protection	:	Safety goggles Face-shield

Hand protection	: Wear protective gloves. Neoprene gloves Nitrile gloves Butyl gloves Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.
Skin protection	: Flame retardant protective clothing
Respiratory protection	: When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.
Hygiene measures	: Handle in accordance with good industrial hygiene and safety practice. Remove and wash contaminated clothing before re-use. Wash face, hands and any exposed skin thoroughly after handling. Provide suitable facilities for quick drenching or flushing of the eyes and body in case of contact or splash hazard.

Section: 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	: Tablet
Colour	: off-white
Odour	: Pungent
Flash point	: 142 °C, Method: ASTM D 92, Cleveland open cup
pH	: 3.6,(1 %), Method: ASTM E 70
Odour Threshold	: no data available
Melting point/freezing point	: MELTING POINT: 120 - 148 °C
Initial boiling point and boiling range	: no data available
Evaporation rate	: < 1
Flammability (solid, gas)	: no data available
Upper explosion limit	: no data available
Lower explosion limit	: no data available
Vapour pressure	: no data available
Relative vapour density	: no data available
Relative density	: no data available
Density	: no data available
Water solubility	: 5.4 g/l (25 °C)
Solubility in other solvents	: no data available
Partition coefficient: n-octanol/water	: no data available
Auto-ignition temperature	: no data available
Thermal decomposition	: no data available
Viscosity, dynamic	: no data available
Viscosity, kinematic	: no data available
Molecular weight	: no data available
VOC	: no data available

Section: 10. STABILITY AND REACTIVITY

Chemical stability : Stable under normal conditions.

Possibility of hazardous reactions : No dangerous reaction known under conditions of normal use.

Conditions to avoid : None known.

Incompatible materials : None known.

Hazardous decomposition products : Decomposition products may include the following materials:
Carbon oxides
nitrogen oxides (NOx)
Chlorine gas
Bromine

Section: 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure : Eye contact, Skin contact

Potential Health Effects

Eyes : Causes serious eye damage.

Skin : Causes severe skin burns. May cause allergic skin reaction.

Ingestion : Harmful if swallowed. Causes digestive tract burns.

Inhalation : May cause nose, throat, and lung irritation.

Chronic Exposure : Health injuries are not known or expected under normal use.

Experience with human exposure

Eye contact : Redness, Pain, Corrosion

Skin contact : Redness, Pain, Irritation, Corrosion, Allergic reactions

Ingestion : Corrosion, Abdominal pain

Inhalation : Respiratory irritation, Cough

Toxicity

Product

Acute oral toxicity : LD50 rat: 468 - 477 mg/kg
Test substance: Product

Acute inhalation toxicity : Acute toxicity estimate: 2.72 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist

Acute dermal toxicity : LD50 rabbit: > 2,000 mg/kg
Test substance: Active Substance

Skin corrosion/irritation : no data available

Serious eye damage/eye : no data available irritation

Respiratory or skin sensitization : no data available

Carcinogenicity : No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

Reproductive effects : No toxicity to reproduction

Germ cell mutagenicity : Contains no ingredient listed as a mutagen

Teratogenicity : no data available

STOT - single exposure : no data available

STOT - repeated exposure : no data available

Aspiration toxicity : No aspiration toxicity classification

Human Hazard Characterization

Based on our hazard characterization, the potential human hazard is: High

Section: 12. ECOLOGICAL INFORMATION

Ecotoxicity

Environmental Effects : Very toxic to aquatic life.
Toxic to aquatic life with long lasting effects.

Product

Toxicity to fish	LC50 Oncorhynchus mykiss (rainbow trout): 0.5 mg/l Exposure time: 96 hrs Test substance: Product
	LC50 Lepomis macrochirus (Bluegill sunfish): 1.2 mg/l Exposure time: 96 hrs Test substance: Product
	LC50 Pimephales promelas (fathead minnow): 0.71 mg/l Exposure time: 96 hrs Test substance: Product
Toxicity to daphnia and other aquatic invertebrates	LC50 Mysid Shrimp (Mysidopsis bahia): 0.93 mg/l Exposure time: 96 hrs Test substance: Product
	EC50 Daphnia magna (Water flea): 1.1 mg/l Exposure time: 48 hrs Test substance: Product
	LC50 Daphnia magna (Water flea): 1.1 mg/l Exposure time: 48 hrs Test substance: Product
	NOEC Daphnia magna (Water flea): 0.63 mg/l Exposure time: 48 hrs Test substance: Product
Toxicity to algae	no data available
Toxicity to fish (Chronic	EC25 / IC25: 0.60 mg/l

toxicity)

Exposure time: 7 d
Species: Fathead Minnow
Test substance: Product

LOEC: 1.0 mg/l
Exposure time: 7 d
Species: Fathead Minnow
Test substance: Product

NOEC: 0.50 mg/l
Exposure time: 7 d
Species: Fathead Minnow
Test substance: Product

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : EC25 / IC25: 0.45 mg/l
Exposure time: 7 d
Species: Ceriodaphnia dubia
Test substance: Product

LOEC: 0.50 mg/l
Exposure time: 7 d
Species: Ceriodaphnia dubia
Test substance: Product

NOEC: 0.25 mg/l
Exposure time: 7 d
Species: Ceriodaphnia dubia
Test substance: Product

Persistence and degradability

Chemical Oxygen Demand (COD): 140,000 mg/l

Biochemical Oxygen Demand (BOD):

Incubation Period	Value	Test Descriptor
	150 mg/l	

Mobility

The environmental fate was estimated using a level III fugacity model embedded in the EPI (estimation program interface) Suite TM, provided by the US EPA. The model assumes a steady state condition between the total input and output. The level III model does not require equilibrium between the defined media. The information provided is intended to give the user a general estimate of the environmental fate of this product under the defined conditions of the models.
If released into the environment this material is expected to distribute to the air, water and soil/sediment in the approximate respective percentages;

Air : <5%
Water : 50 - 70%
Soil : 30 - 50%

The portion in water is expected to be soluble or dispersible.

Bioaccumulative potential

This preparation or material is not expected to bioaccumulate.

Other information

no data available

ENVIRONMENTAL HAZARD AND EXPOSURE CHARACTERIZATION
Based on our hazard characterization, the potential environmental hazard is: High

Section: 13. DISPOSAL CONSIDERATIONS

Disposal methods	:	The product should not be allowed to enter drains, water courses or the soil. Where possible recycling is preferred to disposal or incineration. If recycling is not practicable, dispose of in compliance with local regulations. Dispose of wastes in an approved waste disposal facility.
Disposal considerations	:	Dispose of as unused product. Empty containers should be taken to an approved waste handling site for recycling or disposal. Do not re-use empty containers.

Section: 14. TRANSPORT INFORMATION

The shipper/consignor/sender is responsible to ensure that the packaging, labeling, and markings are in compliance with the selected mode of transport.

Land transport

UN/ID No.	:	UN 3085
Proper shipping name	:	OXIDIZING SOLID, CORROSIVE, N.O.S.
Technical name(s)	:	Bromochloro-5,5-dimethylimidazolidine-2,4-dione, 1,3-Dichloro-5,5-dimethylimidazolidine-2,4-dione
Transport hazard class(es)	:	5.1, 8
Packing group	:	II

Air transport (IATA)

UN/ID No.	:	UN 3085
Proper shipping name	:	OXIDIZING SOLID, CORROSIVE, N.O.S.
Technical name(s)	:	Bromochloro-5,5-dimethylimidazolidine-2,4-dione, 1,3-Dichloro-5,5-dimethylimidazolidine-2,4-dione
Transport hazard class(es)	:	5.1 , 8
Packing group	:	II

Sea transport (IMDG/IMO)

UN/ID No.	:	UN 3085
Proper shipping name	:	OXIDIZING SOLID, CORROSIVE, N.O.S.
Technical name(s)	:	Bromochloro-5,5-dimethylimidazolidine-2,4-dione, 1,3-Dichloro-5,5-dimethylimidazolidine-2,4-dione
Transport hazard class(es)	:	5.1 , 8
Packing group	:	II
Marine pollutant	:	1-Bromo-3-Chloro-5,5-Dimethyl-Hydantoin

Special precautions for user	:	No special precautions required.

Section: 15. REGULATORY INFORMATION

APPLICABLE REGULATIONS, SINGAPORE

Chemical Weapons Prohibition Act

Environmental Protection and Management Act
Hazardous Waste Act
Misuse of Drugs Act
Strategic Goods Act

Fire Safety (Petroleum and Flammable Materials) Regulations
Not applicable

FOOD AND DRUG ADMINISTRATION (FDA) Federal Food, Drug and Cosmetic Act :
When use situations necessitate compliance with FDA regulations, this product is acceptable under : 21 CFR 176.300 Slimicides

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

NSF NON-FOOD COMPOUNDS REGISTRATION PROGRAM (former USDA List of Proprietary Substances & Non-Food Compounds) :
NSF Registration number for this product is : 141570
This product is acceptable for treatment of cooling and retort water (G5) in and around food processing areas.

INTERNATIONAL CHEMICAL CONTROL LAWS :

United States TSCA Inventory
This product is exempted under TSCA and regulated under FIFRA. The inerts are on the Inventory List.

Australia. Industrial Chemical (Notification and Assessment) Act
All substances in this product comply with the National Industrial Chemicals Notification & Assessment Scheme (NICNAS).

Canadian Domestic Substances List (DSL)
Substances regulated under the Pest Control Products Act are exempt from CEPA New Substance Notification requirements.

Japan. ENCS - Existing and New Chemical Substances Inventory
All substances in this product comply with the Law Regulating the Manufacture and Importation Of Chemical Substances and are listed on the Existing and New Chemical Substances list (ENCS).

Korea. Korean Existing Chemicals Inventory (KECI)
All substances in this product comply with the Chemical Control Act (CCA) and are listed on the Existing Chemicals List (ECL)

Philippines Inventory of Chemicals and Chemical Substances (PICCS)
All substances in this product comply with the Republic Act 6969 (RA 6969) and are listed on the Philippines Inventory of Chemicals & Chemical Substances (PICCS).

China Inventory of Existing Chemical Substances
All substances in this product comply with the Provisions on the Environmental Administration of New Chemical Substances and are listed on or exempt from the Inventory of Existing Chemical Substances China (IECSC).

New Zealand. Inventory of Chemicals (NZIoC), as published by ERMA New Zealand
All substances in this product comply with the Hazardous Substances and New Organisms (HSNO) Act 1996,and are listed on or are exempt from the New Zealand Inventory of Chemicals.

Taiwan Chemical Substance Inventory
All substances in this product comply with the Taiwan Existing Chemical Substances Inventory (ECSI).

Section: 16. OTHER INFORMATION

Revision Date : 27.12.2017

Version Number : 1.1
Prepared By : Regulatory Affairs

REVISED INFORMATION: Significant changes to regulatory or health information for this revision is indicated by a bar in the left-hand margin of the SDS.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.