

**SAFETY DATA SHEET**

PRODUCT

**NALCOOL® 2000**

EMERGENCY TELEPHONE NUMBER(S)

1800 205 506

**1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION**

PRODUCT NAME : **NALCOOL® 2000**

APPLICATION : CLOSED SYSTEM TREATMENT

COMPANY IDENTIFICATION : Nalco Australia Pty Ltd  
2 Anderson Street  
Botany N.S.W. 2019  
Australia  
A.B.N. 41 000 424 788  
TEL: +61 2 9392 3500  
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EMERGENCY TELEPHONE NUMBER(S) : 1800 205 506  
International: +65 6542 9595 Free call: +800 2537 8747

Date issued : 31.08.2011  
Version Number : 1.6

**2. HAZARDS IDENTIFICATION**

HAZARD CLASSIFICATION : HARMFUL, IRRITANT

This product is classified as hazardous according to the Australian Safety & Compensation Council (ASCC). This product is not classified as a dangerous good according to national or international regulations.

## RISK PHRASES

R22 - Harmful if swallowed.  
R36/38 - Irritating to eyes and skin.

## SAFETY PHRASES

S24/25 - Avoid contact with skin and eyes.  
S26 - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.  
S28 - After contact with skin, wash immediately with plenty of water.  
S37/39 - Wear suitable gloves and eye/face protection.  
S46 - If swallowed, seek medical advice immediately and show this container or label.

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

CHEMICAL NAME	CAS NO	% (w/w)
Sodium Metasilicate	6834-92-0	1 - 5
Sodium Tetraborate	1330-43-4	1 - 5
Sodium Nitrite	7632-00-0	1 - 5

The balance of the substances in this product are not classified as hazardous or are present below hazard cut-off limits

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## EYE CONTACT :

Immediately flush eye with water for at least 15 minutes while holding eyelids open. Get medical attention.

## SKIN CONTACT :

Immediately flush with plenty of water for at least 15 minutes. Get medical attention.

## INGESTION :

DO NOT INDUCE VOMITING. If conscious, washout mouth and give water to drink. Get medical attention. Contact the Poison's Information Centre (eg Australia 13 1126; New Zealand 0800 764 766).

## INHALATION :

Remove to fresh air, treat symptomatically. If symptoms develop, seek medical advice.

## NOTE TO PHYSICIAN :

Based on the individual reactions of the patient, the physician's judgement should be used to control symptoms and clinical condition. Measures against circulatory shock, respiratory depression and convulsions may be needed.

**5. FIRE FIGHTING MEASURES**

FLASH POINT : Not flammable

## EXTINGUISHING MEDIA :

Not expected to burn. Use extinguishing media appropriate for surrounding fire.

## FIRE AND EXPLOSION HAZARD :

May evolve oxides of carbon (COx) under fire conditions. May evolve oxides of nitrogen (NOx) under fire conditions. If product is allowed to dry, the sodium nitrite is an oxidizing agent and can initiate the combustion of other materials.

## SPECIAL PROTECTIVE EQUIPMENT FOR FIRE FIGHTING :

In case of fire, wear a full face positive-pressure self contained breathing apparatus and protective suit.

**6. ACCIDENTAL RELEASE MEASURES**

## PERSONAL PRECAUTIONS :

Restrict access to area as appropriate until clean-up operations are complete. Use personal protective equipment recommended in Section 8 (Exposure Controls/Personal Protection). Stop or reduce any leaks if it is safe to do so. Ventilate spill area if possible. Ensure clean-up is conducted by trained personnel only. Do not touch spilled material. Have emergency equipment (for fires, spills, leaks, etc.) readily available. Notify appropriate government, occupational health and safety and environmental authorities.

## METHODS FOR CLEANING UP :

SMALL SPILLS: Soak up spill with absorbent material. Place residues in a suitable, covered, properly labeled container. Wash affected area. LARGE SPILLS: Contain liquid using absorbent material, by digging trenches or by diking. Reclaim into recovery or salvage drums or tank truck for proper disposal. Wash site of spillage

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thoroughly with water. Contact an approved waste hauler for disposal of contaminated recovered material. Dispose of material in compliance with regulations indicated in Section 13 (Disposal Considerations).

ENVIRONMENTAL PRECAUTIONS :  
Do not contaminate surface water.

**7. HANDLING AND STORAGE**

**HANDLING :**

Avoid eye and skin contact. Do not take internally. Do not get in eyes, on skin, on clothing. Have emergency equipment (for fires, spills, leaks, etc.) readily available. Ensure all containers are labeled. Keep the containers closed when not in use. Use with adequate ventilation.

**STORAGE CONDITIONS :**

Store the containers tightly closed. Store in suitable labeled containers. Protect product from freezing. Store away from organic chemicals and other oxidizable materials, reducing agents, acids and alkalis.

**SUITABLE CONSTRUCTION MATERIAL :**

Hastelloy C-276, Natural rubber, Nylon, Polyethylene, HDPE (high density polyethylene), Polypropylene, Ethylene propylene, EPDM, PVC, Polyurethane, PTFE, Perfluoroelastomer

**UNSUITABLE CONSTRUCTION MATERIAL :**

Mild steel, Stainless Steel 304, Stainless Steel 316L, Aluminum, Copper, Brass, Buna-N, Neoprene, Plexiglass, Fluoroelastomer, Polytetrafluoroethylene/polypropylene copolymer

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

**OCCUPATIONAL EXPOSURE LIMITS**

The following component(s) have been assigned an exposure standard by ASCC (Australia) and/or other Agencies:

Country/Source	Substance(s)	Category:	ppm	mg/m3
AUSTRALIA	Borates, Tetra, Sodium Salts -- Anhydrous	TWA		1
		TWA		5
USA	Borates, Tetra, Sodium Salts -- Anhydrous (Inhalable fraction.)	ACGIH/TWA		2
		ACGIH/STEL		6

\* A skin notation refers to the potential significant contribution to overall exposure by the cutaneous route, including mucous membranes and the eyes.

**ENGINEERING MEASURES :**

The use of local exhaust ventilation is recommended to control emissions near the source. Laboratory samples should be handled in a fumehood. Provide mechanical ventilation of confined spaces.

**PERSONAL PROTECTION**

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Respiratory protection is not normally needed. If significant mists, vapours or aerosols are generated an approved respirator is recommended, selected and used in accordance with AS/NZS 1715 and AS/NZS 1716. An organic vapor cartridge with dust/mist prefilter may be used. In event of emergency or planned entry into unknown concentrations a positive pressure, full-facepiece SCBA should be used. If respiratory protection is required, institute a complete respiratory protection program including selection, fit testing, training, maintenance and inspection.

**HAND PROTECTION :**

Neoprene Nitrile PVC or Butyl gloves

**SKIN PROTECTION :**

Wear standard protective clothing.

**EYE PROTECTION :**

Wear chemical splash goggles.

**HYGIENE RECOMMENDATIONS :**

Use good work and personal hygiene practices to avoid exposure. Keep an eye wash fountain available. Keep a safety shower available. If clothing is contaminated, remove clothing and thoroughly wash the affected area. Launder contaminated clothing before reuse. Always wash thoroughly after handling chemicals. When handling this product never eat, drink or smoke.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

PHYSICAL STATE	Liquid
APPEARANCE	Red
ODOR	None
pH (100 %)	11.1 - 11.8 ASTM E-70
VAPOR PRESSURE	Same as water
VAPOR DENSITY	No data available.
SPECIFIC GRAVITY	1.14 (20 °C) 1.095 - 1.125 (25 °C) ASTM D-1298
DENSITY	No data available.
SOLUBILITY IN WATER	Complete
FREEZING POINT	-29 °C
BOILING POINT	100 °C
FLASH POINT	Not flammable
LOWER EXPLOSION LIMIT	No data available.
UPPER EXPLOSION LIMIT	No data available.
AUTOIGNITION TEMPERATURE	No data available.

Note: These physical properties are typical values for this product and are subject to change.

**10. STABILITY AND REACTIVITY****STABILITY :**

Stable under normal conditions.

**CONDITIONS TO AVOID :**

Extremes of temperature Do not allow product to evaporate to dryness. Dried product residue can act as an oxidizer.

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Contact with reducing agents (e.g. hydrazine, sulfites, sulfide, aluminum or magnesium dust) may generate heat, fires, explosions and toxic vapors. Do not mix with amines. Sodium nitrite can react with certain amines to produce N-nitrosamines, many of which are cancer-causing agents to laboratory animals. Contact with strong acids (e.g. sulfuric, phosphoric, nitric, hydrochloric, chromic, sulfonic) may generate heat, splattering or boiling and toxic vapors.

**HAZARDOUS DECOMPOSITION PRODUCTS :**

Under fire conditions: Oxides of carbon, Oxides of nitrogen

**HAZARDOUS REACTIONS :**

Hazardous polymerization will not occur.

**11. TOXICOLOGICAL INFORMATION****OVERVIEW OF HEALTH HAZARDS****ACUTE HAZARDS - EYE CONTACT**

Can cause moderate irritation.

**ACUTE HAZARDS - SKIN CONTACT**

Can cause moderate irritation.

**ACUTE HAZARDS - INGESTION**

Harmful if swallowed. There may be irritation to the gastro-intestinal tract with nausea and vomiting. Ingestion of sodium nitrite can cause methemoglobinemia which can lead to cyanosis and possible death. Pregnant women and their fetuses are particularly sensitive to the effects of methemoglobinemia. May cause a decrease in blood pressure and cyanosis.

**ACUTE HAZARDS - INHALATION**

Not a likely route of exposure. May cause irritation of mucous membranes.

**CHRONIC HAZARDS :**

Repeated ingestion of small amounts of sodium nitrite causes drops in blood pressure, rapid pulse, headaches and visual disturbances. It may also react with organic amines in the body to form carcinogenic nitrosamines.

**SUMMARY OF TOXICITY INFORMATION****ACUTE TOXICITY DATA :**

The following results are for the product.

**ACUTE ORAL TOXICITY :**

Species: Rat  
LD50: > 2,000 mg/kg  
Test Descriptor: Product

**SENSITIZATION :**

Repeated or prolonged contact may cause skin sensitization.

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**CARCINOGENICITY :**

None of the substances in this product are listed as carcinogens by the International Agency for Research on Cancer (IARC), the National Toxicology Program (NTP) or the American Conference of Governmental Industrial Hygienists (ACGIH).

**TERATOGENICITY AND EMBRYOTOXICITY :**

Experimental animal studies with sodium nitrite have shown reproductive effects in the offspring of treated parents. These effects are not transmissible.

For additional information on the hazard of the preparation, please consult section 2 and 12.

**HUMAN HAZARD CHARACTERIZATION**

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

**12. ECOLOGICAL INFORMATION**

**ECOTOXICOLOGICAL EFFECTS :**

The following results are for the product.

**Acute Fish Results :**

Species	Exposure	Test Type	Value	Test Descriptor
Turbot	96 hrs	LC50	> 2,000 mg/l	Product
Rainbow Trout	96 hrs	LC50	57 mg/l	Product

**ACUTE INVERTEBRATE RESULTS :**

Species	Exposure	Test Type	Value	Test Descriptor
Daphnia magna	48 hrs	LC50	670 mg/l	Product

**MOBILITY AND BIOACCUMULATION POTENTIAL :**

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	Water	Soil/Sediment
<5%	30 - 50%	50 - 70%

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

This preparation or material is not expected to bioaccumulate.

**PERSISTENCY AND DEGRADATION :**

Total Organic Carbon (TOC) : 37,000 mg/l

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Chemical Oxygen Demand (COD) : 23,300 mg/l

Biological Oxygen Demand (BOD) :

Incubation Period	Value	Test Descriptor
	703 mg/l	

The organic portion of this preparation is expected to be readily biodegradable.

**ENVIRONMENTAL HAZARD AND EXPOSURE CHARACTERIZATION**

Based on our hazard characterization, the potential environmental hazard is: Moderate

**13. DISPOSAL CONSIDERATIONS**

Dispose of wastes in an approved waste treatment / disposal site, in accordance with all applicable regulations. Do not dispose of wastes in local sewer or with normal garbage.

Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or other procedures approved by state and local authorities.

**SPECIAL PRECAUTIONS FOR LANDFILL OR INCINERATION :**

No additional special precautions have been identified.

**14. TRANSPORT INFORMATION**

The information in this section is for reference only and should not take the place of a shipping paper (bill of lading) specific to an order. Please note that the proper Shipping Name / Hazard Class may vary by packaging, properties, and mode of transportation. Typical Proper Shipping Names for this product are as follows.

**LAND TRANSPORT**

Proper Shipping Name :

PRODUCT IS NOT REGULATED DURING TRANSPORTATION

**AIR TRANSPORT (ICAO/IATA)**

Proper Shipping Name :

PRODUCT IS NOT REGULATED DURING TRANSPORTATION

**MARINE TRANSPORT (IMDG/IMO)**

Proper Shipping Name :

PRODUCT IS NOT REGULATED DURING TRANSPORTATION

**15. REGULATORY INFORMATION****AUSTRALIA :****NICNAS**

All substances in this product comply with the National Industrial Chemicals Notification &amp; Assessment Scheme (NICNAS).

SUSDP SCHEDULE :

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**1800 205 506****INTERNATIONAL CHEMICAL CONTROL LAWS****UNITED STATES :**

The substances in this preparation are included on or exempted from the TSCA 8(b) Inventory (40 CFR 710)

**CANADA :**

This product contains substance(s) which are found on the Non-Domestic Substances List (NDSL).

**EUROPE**

The substances in this preparation have been reviewed for compliance with the EINECS or ELINCS inventories.

**JAPAN**

This product and/or component(s) are exempt or excluded from the list of Existing and New Chemical Substances (ENCS) under the Law Regulating the Manufacture and Importation Of Chemical Substances.

**CHINA**

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

**KOREA**

All substances in this product comply with the Toxic Chemical Control Law (TCCL) and are listed on the Existing Chemicals List (ECL)

**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.

**PHILIPPINES**

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).

**TAIWAN**

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

**16. OTHER INFORMATION**

This product material safety data sheet provides health and safety information. The product is to be used in applications consistent with our product literature. Individuals handling this product should be informed of the recommended safety precautions and should have access to this information. For any other uses, exposures should be evaluated so that appropriate handling practices and training programs can be established to insure safe workplace operations. Please consult your local sales representative for any further information.

**REFERENCES**

Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices, American Conference of Governmental Industrial Hygienists, OH., (Ariel Insight™ CD-ROM Version), Ariel Research Corp., Bethesda, MD.





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Hazardous Substances Data Bank, National Library of Medicine, Bethesda, Maryland (TOMES CPS™ CD-ROM Version), Micromedex, Inc., Englewood, CO.

IARC Monographs on the Evaluation of the Carcinogenic Risk of Chemicals to Man, Geneva: World Health Organization, International Agency for Research on Cancer.

Integrated Risk Information System, U.S. Environmental Protection Agency, Washington, D.C. (TOMES CPS™ CD-ROM Version),  
Micromedex, Inc., Englewood, CO.

Annual Report on Carcinogens, National Toxicology Program, U.S. Department of Health and Human Services, Public Health Service.

Title 29 Code of Federal Regulations, Part 1910, Subpart Z, Toxic and Hazardous Substances, Occupational Safety and Health Administration (OSHA), (Ariel Insight™ CD-ROM Version), Ariel Research Corp., Bethesda, MD.

Registry of Toxic Effects of Chemical Substances, National Institute for Occupational Safety and Health, Cincinnati, OH,  
(TOMES CPS™ CD-ROM Version), Micromedex, Inc., Englewood, CO.

Ariel Insight™ (An integrated guide to industrial chemicals covered under major regulatory and advisory programs), North American Module, Western European Module, Chemical Inventories Module and the Generics Module (Ariel Insight™ CD-ROM Version), Ariel Research Corp., Bethesda, MD.

The Teratogen Information System, University of Washington, Seattle, WA (TOMES CPS™ CD-ROM Version), Micromedex, Inc., Englewood, CO.

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.

Prepared By: Nalco Asia Pacific, Safety, Health and Environment (SHE) Specialist, (02) 9392 3566