



SAFETY DATA SHEET

PRODUCT

NALCOOL® 2000

EMERGENCY TELEPHONE NUMBER(S)

See section 16, for Emergency Telephone Numbers.

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

PRODUCT NAME : **NALCOOL® 2000**

APPLICATION : COOLING WATER TREATMENT

COMPANY IDENTIFICATION : NALCO EUROPE B.V.
Postbus 627
2300 AP Leiden, The Netherlands

EMERGENCY TELEPHONE NUMBER(S) : See section 16, for Emergency Telephone Numbers.

Date issued : 27.08.2010
Version Number : 2.11

COMPANY CONTACT TELEPHONE NUMBERS.

NALCO EUROPE B.V.	+31 71 5241 100	NALCO NORGE AS (NO)	+47 51 96 36 00
NALCO AB (SE)	+46 (0)31-707 22 70	Distributor Nalco Mobotec Polska Sp. z o.o.	PRZEMYS ŁOWA 55 PL-43-110 TYCHY TEL: +48 (0)32-3262750 FAX: +48(0)32 329 13 11 e-mail: office@nalco.pl
NALCO ANADOLU KIMYA (TR)	+90 216 5743464	NALCO PORTUGUESA LDA. (P)	+351 214121852
NALCO APPLIED SERVICES OF EUROPE BV	+31 (0)73 6456980	NTD S.r.l (IT)	+39 (0) 313351325
NALCO BELGIUM BVBA	+32 (0)3-450 69 10	Nalco Switzerland AG (CH)	+41 (0)52 235 38 38
NALCO DANMARK ApS	+45-48195800	Nalco Company OOO	+7 (0)495 980 72 80
NALCO DEUTSCHLAND GmbH (D)	+49 (0)69-79340	NALCO ÖSTERREICH Ges.m.b.H. (A)	+ 43(0)1 27026350
NALCO ESPAÑOLA S.L. (E)	+34 93-4095555	First Distributor: Nalco Czechia s.r.o. (CZ)	Stankova 882/2,CZ-149 00 Praha 4,Czech Republic,+420 267 912 350 & +420 272 913 512
NALCO FINLAND OY (FI)	+358 (0)9 2519 5600	Local Support: Nalco Hungary Kft. (HU)	+36 1 8805610
NALCO FRANCE SAS	+33 (0)3 20 11 70 00	Local Support: Nalco Österreich Ges.m.b.H., Representation Office Predstavništvo Zagreb (HR)	+385 (0)1 377 95 21
NALCO HELLAS S.A. (GR)	+30 210 238 9620	Local Support: Nalco Österreich Ges.m.b.H. Representation Office ROMANIA (RO)	+40 (0) 21 224 17 93
NALCO ITALIANA S.R.L.(I)	+39 06-54565000	NALCO LIMITED	+44 (0)1606 74488
NALCO NETHERLANDS B.V.	+31 (0)13-5952200		

For Product Safety information please contact Jacqueline Dudley, e-mail EUProductSafety@nalco.com

2. HAZARDS IDENTIFICATION

HAZARD CLASSIFICATION :

This product is classified as dangerous in accordance with the Preparations Directive 1999/45/EC.

Harmful to aquatic organisms.

HUMAN HEALTH HAZARDS - ACUTE :

INHALATION :

NALCO EUROPE B.V. Postbus 627 ? 2300 AP Leiden ? The Netherlands ? 0031 71 5241100

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Not a likely route of exposure. Aerosols or product mist may irritate the upper respiratory tract.

SKIN CONTACT :

Can cause moderate irritation. May cause sensitization by skin contact.

EYE CONTACT :

Can cause moderate irritation.

INGESTION :

Not a likely route of exposure. Large exposures may be fatal. 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.

HUMAN HEALTH HAZARDS - CHRONIC :

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.

ENVIRONMENTAL HAZARDS :

Harmful to aquatic organisms.

3. COMPOSITION/INFORMATION ON INGREDIENTS

This product is classified as dangerous in accordance with the Preparations Directive 1999/45/EC.

Hazardous Substance(s)	EINECS / ELINCS NO	CAS NO	SYMBOL	R-PHRASES / NOTAS	% (w/w)
Sodium Nitrite	231-555-9	7632-00-0	O, T, N	R08, R25, R50	1 - < 5
Sodium Tetraborate	215-540-4	1330-43-4	T	R60, R61	2 - 3
Sodium Metasilicate	229-912-9	6834-92-0	C	R34, R37	1 - < 5
Sodium Mercaptobenzo-thiazole	219-660-8	2492-26-4	C	R34, R43	0.1 - 1

Refer to Section 16 for descriptions of relevant risk phrases and Notas.

4. FIRST AID MEASURES

INHALATION :

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

SKIN CONTACT :

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

EYE CONTACT :

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

INGESTION :

Induce vomiting if the patient is fully conscious. If conscious, washout mouth and give water to drink. Get immediate medical attention.

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

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FLASH POINT : Not applicable

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 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. Store separately from acids.

SUITABLE CONSTRUCTION MATERIAL :

Stainless Steel 304, Stainless Steel 316L, Natural rubber, HDPE (high density polyethylene), Polypropylene, Viton, Kalrez, PTFE, Compatibility with Plastic Materials can vary; we therefore recommend that compatibility is tested prior to use.

UNSUITABLE CONSTRUCTION MATERIAL :

Carbon Steel C1018, Epoxyresin coating

SPECIFIC USE(S) :

COOLING WATER TREATMENT



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For specific dosages and customized applications please contact your representative.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

OCCUPATIONAL EXPOSURE LIMITS

Exposure guidelines have not been established for this product. Available exposure limits for the substance(s) are shown below.

Country/Source	Substance(s)	Category:	ppm	mg/m ³
BELGIUM	Sodium Tetraborate	TWA		2
		STEL		6
DENMARK	Sodium Tetraborate	GV		1
FRANCE	Sodium Tetraborate	VME		1
GERMANY	Sodium Tetraborate as B	AGW		0.5
IRELAND	Sodium Tetraborate	TWA		1
ITALY	Sodium Tetraborate (Inhalable fraction.)	TWA		2
		STEL		6
NORWAY	Sodium Tetraborate	ADM. NORM		1
SPAIN	Sodium Tetraborate	VLA-ED		1
SWITZERLAND	Sodium Tetraborate (Inhalable dust)	TWA		1
UNITED KINGDOM	Sodium Tetraborate	TWA		1
CROATIA	Sodium Tetraborate	GVI		1
RUSSIAN FEDERATION	Sodium Tetraborate (Aerosol.)	CEIL		2
SERBIA	Sodium Tetraborate	MAC		1

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

MONITORING MEASURES :

A small volume of air is drawn through an absorbant or barrier to trap the substance(s) which can then be desorbed or removed and analyzed as referenced below:

Substance(s)	Method	Analysis	Absorbant
Sodium Tetraborate	US OSHA: 125	Ion chromatography	PVC Filter

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

GENERAL ADVICE :

The use and choice of personal protection equipment is related to the hazard of the product, the workplace and the way the product is handled. In general, we recommend as a minimum precaution that safety glasses with side-shields and workclothes protecting arms, legs and body be used. In addition any person visiting an area



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where this product is handled should at least wear safety glasses with side-shields. The applicable European standard can be found in EN 166.

RESPIRATORY PROTECTION :

Where concentrations in air may exceed the limits given in this section, the use of a half face filter mask or air supplied breathing apparatus is recommended. A suitable filter material depends on the amount and type of chemicals being handled. Consider the use of filter type: B-P The applicable European standard can be found in EN 140, EN 137, EN 143 and EN 14387. 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 :

When handling this product, the use of chemical gloves is recommended. The choice of work glove depends on work conditions and what chemicals are handled, but we have positive experience under light handling conditions using gloves made from PVC. Gloves should be replaced immediately if signs of degradation are observed. Breakthrough time not determined as preparation, consult PPE manufacturers. The applicable European standard can be found in EN 374.

SKIN PROTECTION :

When handling this product, the use of overalls, a chemical resistant apron and rubber boots is recommended. The applicable European standard can be found in EN ISO 20345.

EYE PROTECTION :

When handling this product, the use of safety glasses with side shields is recommended. The applicable European standard can be found in EN 166.

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
FLASH POINT :	Not applicable
SPECIFIC GRAVITY	1.095 - 1.125 (25 °C) ASTM D-1298
SOLUBILITY IN WATER	Complete
pH (100 %)	11.1 - 11.8 ASTM E-70
FREEZING POINT	-29 °C
BOILING POINT	100 °C
VAPOR PRESSURE	Same as water

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

10. STABILITY AND REACTIVITY



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See section 16, for Emergency Telephone Numbers.

STABILITY :

Stable under normal conditions.

HAZARDOUS POLYMERIZATION :

Hazardous polymerization will not occur.

CONDITIONS TO AVOID :

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

MATERIALS TO AVOID :

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

11. TOXICOLOGICAL INFORMATION

The following results are for the product.

ACUTE ORAL TOXICITY :

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

SENSITIZATION :

The following substance present at very low concentrations, may precipitate an allergic reaction in sensitive individuals: Sodium Mercaptobenzothiazole

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

12. ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL EFFECTS :

The following results are for the product.

ACUTE FISH RESULTS :

Species	Exposure	LC50	NOEC	Method	Test Descriptor
Turbot	96 hrs	> 2,000 mg/l	2,000 mg/l		Product
Rainbow Trout	96 hrs	57 mg/l	< 40 mg/l		Product

ACUTE INVERTEBRATE RESULTS :

Species	Exposure	LC50	EC50	Method	Test Descriptor
Daphnia magna	48 hrs	670 mg/l			Product



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

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

PERSISTENCY AND DEGRADATION :

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

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

Biological Oxygen Demand (BOD) :

Incubation Period	Value	Method	Test Descriptor
	703 mg/l		

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

BIOACCUMULATION POTENTIAL

This preparation or material is not expected to bioaccumulate.

13. DISPOSAL CONSIDERATIONS

If this preparation becomes a waste, the final user must define and assign the appropriate European Waste Catalogue code. Use only authorized contractors. Ensure compliance with EC, national and local regulations.

This product will generate an ash if burned. It can be burned directly in appropriate equipment. Any chemical waste is a potential environmental pollutant and is NOT suitable for disposal via ground, municipal sewers, drains, natural streams or rivers.

Empty drums should be taken for recycling, recovery, or disposal through a suitably qualified or licensed contractor.

EUROPE WASTE CODE :

16 03 03* - OFF SPECIFICATION BATCHES AND UNUSED PRODUCTS - Inorganic wastes containing dangerous substances. If this product is used in any further processes, the final user must redefine and assign the most appropriate European Waste Catalogue Code.

NATIONAL REGULATIONS AUSTRIA :

Waste Code :59305

14. TRANSPORT INFORMATION



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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

CLASSIFICATION AND LABELLING :

GOVERNING DIRECTIVE(S): Dangerous Substances Directive 67/548/EEC and Dangerous Preparations Directive 1999/45/EC.

Contains:..Sodium Nitrite

RISK PHRASES

R52 - Harmful to aquatic organisms.

The following substance present at very low concentrations, may precipitate an allergic reaction in sensitive individuals: Sodium Mercaptobenzothiazole

SAFETY PHRASES

S24/25 - Avoid contact with skin and eyes.

S37/39 - Wear suitable gloves and eye/face protection.

S46 - If swallowed, seek medical advice immediately and show this container or label.

S61 - Avoid release to the environment. Refer to special instructions/Safety Data sheets.

NATIONAL REGULATIONS GERMANY

WGK 2 (Annex 4)

NATIONAL REGULATIONS HOLLAND

ABM RESULT

ABM RESULT	Substance(s)	% (w/w)
7 B		

NATIONAL REGULATIONS HUNGARY

Relevant and applicable Hungarian legislation on protection of human health and the environment:



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Decree 44/2000. (XII.27.) EüM (Minister of Health Affairs) and its amendments: Decree 33/2004. (IV.26.) ESzCsM (Minister of Health, Social and Family Affairs) and Decree 26/2007. (VI.7.) EüM (1907/2006/EK - REACH) on detailed rules of certain procedures and activities related to dangerous substances and preparations.
Joint Ministerial Decree: 25/2000. (IX.30.) EüM-ESzCsM on chemical safety at work.

NATIONAL REGULATIONS RUSSIAN FEDERATION

The law of Russian Federation "About the sanitary-epidemiological safety of the population", 30 March 1999 N 52-FZ.

The law of Russian Federation "About the safety of the dangerous industrial objects", 21 July 1997 No. 116-FZ.

The law of Russian Federation "About protection of the rights of the consumers", 07 February 1992 N 2300-1.

The law of Russian Federation "Basics of the legislation of

The law of Russian Federation "About the industrial regulation", 27 December 2002 N 184-FZ.

The law of Russian Federation "On Environmental Protection", 10 January 2002, N 7-FZ.

GOST 30333-2007: Chemical production safety passport. General requirements.

GOST 19433-88: Dangerous goods. Classification and marking.

GOST 12.1.007-76 (Occupational safety standards system. Noxious substances. Classification and general safety requirements).

PRODUCT REGISTRATION NUMBER

Norway 001232

INTERNATIONAL CHEMICAL CONTROL LAWS

EUROPE

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

Safety Data Sheet according to Regulation (EC) No 1907/2006.

Nalco is committed to and fully supports the Registration, Evaluation, Authorization and restriction of Chemicals (REACH) regulation. It is our intention to pre-register all chemical substances that we manufacture or import into European Union and to work with our suppliers to ensure a smooth transition to this new regulatory environment. Should you require any further information on Nalco's REACH programme please contact us at reach@nalco.com or visit our website.

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).

16. OTHER INFORMATION

LIST OF RELEVANT R-PHRASES AND NOTAS IN SECTION 3

R08 - Contact with combustible material may cause fire.

R25 - Toxic if swallowed.

R34 - Causes burns.

R37 - Irritating to respiratory system.

R43 - May cause sensitization by skin contact.

R50 - Very toxic to aquatic organisms.



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R60 - May impair fertility.
R61 - May cause harm to the unborn child.
- REVISED INFORMATION: section(s):
- 14

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.

EMERGENCY TELEPHONE NUMBER(S)

Trans-European	+32-(0)3-575-5555
Belgium / Luxembourg	+32-(0)3-575-0330
Bulgaria	+32-(0)3-575-5555
Croatia	+385 (0)91-1-25-75-23
Czech Republic	+420-602-669421
Denmark	+47-22-33-69-99
Finland	+358-(0)9-471 977
France / French Switzerland	+33-(0)6-11-07-32-81
Germany / Austria / German Switzerland	+49-(0)6232-130128
Hungary	+36-30-9-506-447
Italy / Italian Switzerland	+39-333-210-7947
Latvia	+32-(0)3-575-5555 & Local emergency telephone number 112
The Netherlands	+32-(0)3-575-0330
Norway	+47-22-33-69-99
Poland	+48-(0)601-66-2626 (SGS) / +48(0)14 637 40 81 (SPOT)
Portugal	+351-91-911-1399
Romania	+40-744 -34-14-53
Russia / Belarus	+7-812-449-0474
Saudi Arabia	+966-(3)847-1515
Serbia	+32-(0)3-575-5555
Slovak Republic	+421-(0)905-585-938
Slovenia	+386-41-634-916
Spain	+34-977-551577
Sweden	+47-22-33-69-99
UAE	+44-(0)7071-223-738
UK and Republic of Ireland	+44-(0)7071-223-738
Nalflleet International	+32-(0)3-575-5555

POISON CONTROL CENTER TELEPHONE NUMBERS

Belgium	+32-70-245245
Czech Republic	+420 224 91 92 93
France	+33-(0)145-42-59-59 ORFILA
Hungary	+36-80-201-199 (ETTSZ, 1096 Budapest, Nagyvárad tér 2)
Latvia	+ 371 67042473
Slovak Republic	+421 (0)2 5477 4166

Prepared By : SHE Department



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