

**PRODUCT**
**NALFLEET® 9-002**
**EMERGENCY TELEPHONE NUMBER(S)**

See section 16, for Emergency Telephone Numbers.

**1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION**

**PRODUCT NAME :** NALFLEET® 9-002  
**APPLICATION :** BOILER WATER OXYGEN SCAVENGER 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 :** 23.01.2007  
**Version Number :** 1.21  
**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)8-50074000	NALCO POLSKA Sp.z.o.o. (PL)	+48 (0)32-3262750
NALCO ANADOLU KIMYA (TR)	+90 216 5743464	NALCO PORTUGUESA LDA. (P)	+351 214130996
NALCO APPLIED SERVICES OF EUROPE BV	+31 (0)73 6456980	NTD S.r.l (IT)	+39 (0) 313351325
NALCO BELGIUM N.V./S.A. (B)	+32 (0)3-450 69 10	CHEMIA BRUGG AG (CH)	+41 (0)56 4606260
NALCO DANMARK A/S	+45-48195800	OEKOPHIL AG (CH)	+41 (0)41 760 2220
NALCO DEUTSCHLAND GmbH (D)	+49 (0)69-79340	WYSS WASSERTECHNIK AG (CH)	+41 (0)52 235 38 38
NALCO ESPAÑOLA S.A. (E)	+34 93-4095555	ZAO Nalco (RU)	+7 (0)495 980 72 80
NALCO FINLAND OY (FI)	+358 (0)9 2517 4700	NALCO ÖSTERREICH Ges.m.b.H. (A)	+ 43(0)1 27026350
NALCO FRANCE SAS	+33 (0)3 20 11 70 00	local support: Nalco Czechia s.r.o. (CZ)	+420 (0)2 679 123 50
NALCO HELLAS S.A. (GR)	+30 210 238 9620	Local Support: Nalco Hungary Kft. (HU)	+36 (0)1 471 91 81
NALCO ITALIANA S.R.L.(I)	+39 06-542971	Local Support: Nalco Österreich Ges.m.b.H., Representation Office Predstavnistvo Zagreb (HR)	+385 (0)1 377 95 21
NALCO LIMITED	+44 (0)1606 74488	Local Support: Nalco Österreich Ges.m.b.H. Representation Office ROMANIA (RO)	+40 (0) 21 224 17 93
NALCO NETHERLANDS B.V.	+31 (0)13-5952200		

**2. 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	SYMBOL	R-PHRASES / NOTAS	% (w/w)
Carbohydrazide	207-837-2	Xn	R22, R38, R43	5 - 10

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

**3. HAZARDS IDENTIFICATION**
**HAZARD CLASSIFICATION :**

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

May cause sensitization by skin contact.

PRODUCT

**NALFLEET® 9-002**

EMERGENCY TELEPHONE NUMBER(S)

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**HUMAN HEALTH HAZARDS - ACUTE :****INHALATION :**

May cause irritation of mucous membranes.

**SKIN CONTACT :**

May cause irritation with prolonged contact. May cause sensitization by skin contact.

**EYE CONTACT :**

May cause irritation with prolonged contact.

**INGESTION :**

There may be irritation to the gastro-intestinal tract with nausea and vomiting.

**HUMAN HEALTH HAZARDS - CHRONIC :**

No adverse effects expected other than those mentioned above.

**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. If symptoms develop, seek medical advice.

**EYE CONTACT :**

Immediately flush eye with water for at least 15 minutes while holding eyelids open. If symptoms develop, seek medical advice.

**INGESTION :**

Do not induce vomiting without medical advice. If conscious, washout mouth and give water to drink. Get 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.

**5. FIRE FIGHTING MEASURES****FLASH POINT :** Not applicable**EXTINGUISHING MEDIA :**

This product would not be expected to burn unless all the water is boiled away. The remaining organics may be ignitable. 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.

**SPECIAL PROTECTIVE EQUIPMENT FOR FIRE FIGHTING :**

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

PRODUCT

**NALFLEET® 9-002**

EMERGENCY TELEPHONE NUMBER(S)

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**6. ACCIDENTAL RELEASE MEASURES**

## PERSONAL PRECAUTIONS :

Restrict access to area as appropriate until clean-up operations are complete. Stop or reduce any leaks if it is safe to do so. Do not touch spilled material. Ventilate spill area if possible. Use personal protective equipment recommended in Section 8 (Exposure Controls/Personal Protection). Ensure clean-up is conducted by trained personnel only. 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. 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 :

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

## STORAGE CONDITIONS :

Store the containers tightly closed. Store in suitable labeled containers. Keep at temperatures above 4 °C

## SUITABLE CONSTRUCTION MATERIAL :

Compatibility with Plastic Materials can vary; we therefore recommend that compatibility is tested prior to use.

## SPECIFIC USE(S) :

BOILER WATER OXYGEN SCAVENGER TREATMENT

For specific dosages and customized applications please contact your representative.

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

## OCCUPATIONAL EXPOSURE LIMITS

This product does not contain any substance that has an established exposure limit.

## ENGINEERING MEASURES :

General ventilation is recommended.

## 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

PRODUCT

**NALFLEET® 9-002**

EMERGENCY TELEPHONE NUMBER(S)

See section 16, for Emergency Telephone Numbers.

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 :**

If significant mists, vapors or aerosols are generated an approved respirator is recommended. A suitable filter material depends on the amount and type of chemicals being handled. The applicable European standard can be found in EN 140, EN 137, EN 143 and EN 14387. Consider the use of filter type: A-P 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 gauntlets 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 Nitrile Viton 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 :**

Wear standard protective clothing. Wear a complete suit protecting against chemicals. (if skin contact is likely) The applicable European standard can be found in EN 14605 and EN ISO 20345.

**EYE PROTECTION :**

Wear chemical splash goggles. 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	Colorless
ODOR	None
FLASH POINT :	Not applicable
SPECIFIC GRAVITY	1.02 (20 °C)
SOLUBILITY IN WATER	Complete
pH (1 %)	6.7 ASTM E-70
VISCOSITY	3.0 cps (15.6 °C)
FREEZING POINT	-2 °C

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

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

Stable if kept under conditions specified in Section 7, HANDLING AND STORAGE.

PRODUCT

**NALFLEET® 9-002**

EMERGENCY TELEPHONE NUMBER(S)

See section 16, for Emergency Telephone Numbers.

**HAZARDOUS POLYMERIZATION :**

Hazardous polymerization will not occur.

**CONDITIONS TO AVOID :**

At temperatures below 4 °C (40 °F), this product loses its stability and forms precipitates. Once formed, the precipitate cannot be resolubilized and loss of product activity will occur.

**MATERIALS TO AVOID :**

Contact with strong oxidizers (e.g. chlorine, peroxides, chromates, nitric acid, perchlorate, concentrated oxygen, permanganate) may generate heat, fires, explosions and/or toxic vapors., Contact with strong acids (e.g. sulfuric, phosphoric, nitric, hydrochloric, chromic, sulfonic) may generate heat, splattering or boiling and toxic vapors., Nitrites

**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	LD50	Test Descriptor
Rat	> 5,000 mg/kg	Product

**ACUTE DERMAL TOXICITY :**

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

**PRIMARY SKIN IRRITATION :**

Draize Score	Test Descriptor
0.2 / 8.0	Product

**PRIMARY EYE IRRITATION :**

Draize Score	Test Descriptor
0.3 / 110.0	Product

**SENSITIZATION :**

May cause sensitization by skin contact.

**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).

**MUTAGENICITY :**

Negative in the Ames Test. Negative in the Ames Test.

For additional information on the hazard of the preparation, please consult section 3 and 12.

**PRODUCT**
**NALFLEET® 9-002**
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**12. ECOLOGICAL INFORMATION**
**ECOTOXICOLOGICAL EFFECTS :**

The following results are for the product.

**ACUTE FISH RESULTS :**

Species	Exposure	LC50	NOEC	Method	Test Descriptor
Rainbow Trout	96 hrs	360 mg/l			Product
Bluegill Sunfish	96 hrs	190 mg/l			Product
Fathead Minnow	96 hrs	400 mg/l	100 mg/l		Product
Scophthalmus maximus	96 hrs	156 mg/l		OSPAR 1995	Product

**ACUTE INVERTEBRATE RESULTS :**

Species	Exposure	LC50	EC50	Method	Test Descriptor
Acartia tonsa	48 hrs	70 mg/l		ISO TC147SC5WG2	Product
Corophium volutator	240 hrs	> 10,000 mg/l			Product

**AQUATIC PLANT RESULTS :**

Species	Exposure	EC50/LC50	Method	Test Descriptor
Marine Algae (Skeletonema costatum)	72 hrs	45 mg/l (EC50)	ISO 10253	Product

**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 :**

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

PRODUCT

**NALFLEET® 9-002**

EMERGENCY TELEPHONE NUMBER(S)

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**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 is suitable for disposal in an approved landfill or by controlled incineration. This product is ashless and 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 :55352

**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**

CLASSIFICATION AND LABELLING :

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

HAZARD SYMBOLS

PRODUCT

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IRRITANT

Contains...Carbohydrazide

## RISK PHRASES

R43 - May cause sensitization by skin contact.

## 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.

S36/37/39 - Wear suitable protective clothing, gloves and eye/face protection.

## NATIONAL REGULATIONS GERMANY

WGK 1 (Annex 4)

## NATIONAL REGULATIONS HOLLAND

## ABM RESULT

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

## PRODUCT REGISTRATION NUMBER

Denmark 1678834

Norway 053566

## INTERNATIONAL CHEMICAL CONTROL LAWS

## EUROPE

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

## UNITED STATES

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

## CANADA :

The substance(s) in this preparation are included in or exempted from the Domestic Substance List (DSL).

## JAPAN

All substances in this product comply with the Law Regulating the Manufacture and Importation Of Chemical Substances and are listed on the Ministry of International Trade &amp; industry List (MITI).



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**16. OTHER INFORMATION**

## LIST OF RELEVANT R-PHRASES AND NOTAS IN SECTION 2

- R22 - Harmful if swallowed.
- R38 - Irritating to skin.
- R43 - May cause sensitization by skin contact.
- REVISED INFORMATION: section(s):
- 7
- 10

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)

<b>Trans-European</b>	<b>+32-(0)3-575-5555</b>
Belgium / Luxembourg	+32-(0)3-575-0330
Czech Republic	+420-602-669421
Denmark	+47-22-33-69-99
Finland	+358-(0)9-4711
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
The Netherlands	+32-(0)3-575-0330
Norway	+47-22-33-69-99
Poland	+48-(0)601-66-2626
Portugal	+351-91-911-1399
Russia / Belarus	+7-812-449-0474
Saudi Arabia	+966-(3)847-1515
Slovak Republic	+421-(0)905-585-938
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
Nalfleet 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
Slovak Republic	+421 (0)2 5477 4166

Prepared By : SHE Department  
 Date issued : 23.01.2007  
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## MATERIAL SAFETY DATA SHEET

PRODUCT

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Numbers quoted in the MSDS are given in the format: 1,000,000 = 1 million and 1,000 = 1 thousand. 0.1 = 1 tenth and 0.001 = 1 thousandth