



MATERIAL SAFETY DATA SHEET

NALCO
2354

Date issued: 18-06-2004
Replaces: 02-06-2004

1. IDENTIFICATION OF THE PREPARATION AND OF THE COMPANY

PRODUCT NAME: NALCO
2354

COMPANY IDENTIFICATION: NALCO EUROPE B.V.
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NALCO AB (SE)	+46 (0)8-50074000	NALCO FINLAND OY (FI)	+358 (0)207 490 200
NALCO APPLIED SERVICES OF EUROPE B.V.	+31 (0)73 6456980	NALFLEET LIMITED (GB)	+44 (0)1606 74488
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EMERGENCY TELEPHONE NUMBER: See section 16, for Emergency Telephone Numbers.

2. COMPOSITION/INFORMATION ON INGREDIENTS

CHEMICAL DESCRIPTION:

Water, Amorphous silica.

HAZARDOUS INGREDIENTS:

CAS NO.	EINECS NO.	CHEMICAL NAME	WT %	SYMBOL	R-PHRASES
110-85-0	2038083	Piperazine	1 - 10	C	34, 42/43, 52/53

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

3. HAZARDS IDENTIFICATION

This product is classified as dangerous (European Directive 1999/45/EC).



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HUMAN HEALTH HAZARDS - ACUTE:

INHALATION:

May cause irritation of mucous membranes.
May cause sensitization by inhalation.

SKIN CONTACT:

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

EYE CONTACT:

Can cause severe irritation.

INGESTION:

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

HUMAN HEALTH HAZARDS - CHRONIC:

Prolonged exposure to amorphous silica aerosols/mists/dusts may cause respiratory disease.

4. FIRST-AID MEASURES

INHALATION:

Obtain medical attention immediately. Remove to fresh air, rest, treat symptomatically. Artificial respiration and/or oxygen may be necessary.

SKIN CONTACT:

Obtain medical attention immediately. Remove contaminated clothing. Wash off affected area immediately with plenty of water.

EYE CONTACT:

Obtain medical attention immediately. Immediately gently irrigate with clean water for at least 15 minutes. Move eyeball and keep eyelids wide open and apart whilst irrigating.

INGESTION:

Seek medical advice immediately, showing the label and/or SDS. **Do not induce vomiting without medical advice.** If conscious washout mouth and give one glass of water to drink.

5. FIRE-FIGHTING MEASURES

EXTINGUISHING MEDIA:

Use extinguishing media appropriate for surrounding fire.

FIRE AND EXPLOSION HAZARD

Oxides of carbon, Oxides of nitrogen.

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:

Evacuate personnel to safe areas. Prevent contact with skin, eyes and clothing. Keep people away from and upwind of spill/leak. Ensure adequate ventilation. Avoid generating aerosols and mists. Do not breathe vapour. Use personal protective equipment recommended in Section 8.

ENVIRONMENTAL PRECAUTIONS:

Do not allow to enter sewers or water courses. If spillage does enter sewers or water courses, immediately inform the appropriate water authorities.

METHODS FOR CLEANING UP:

Contain and absorb with sand or vermiculite and mix well. Collect up and remove to a safe place until disposal. Wash site of spillage thoroughly with water. Assistance can be obtained from waste disposal companies.

Dispose of material in compliance with regulations indicated in Section 13 (Disposal Considerations).

7. HANDLING AND STORAGE

HANDLING:

Do not breathe vapour. Prevent contact with skin, eyes and clothing. Avoid generating aerosols and mists. Use personal protective equipment recommended in Section 8, Self-contained breathing apparatus.

STORAGE CONDITIONS:

Protect from freezing. Keep container tightly closed and in a well-ventilated place.

For specific dosages and customized applications please contact your Nalco representative.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

OCCUPATIONAL EXPOSURE LIMITS

NATIONAL REGULATIONS GERMANY

Amorphous silica: MAK 4 mg/m³ (total dust).

Piperazine: TRGS 900 0.1 mg/m³.

NATIONAL REGULATIONS UK

Amorphous silica: OES Total inhalable dust 6 mg/m³ (TWA, respirable dust 4 mg/m³ (STEL).

NATIONAL REGULATIONS AUSTRIA

Amorphous silica: MAK 4 mg/m³ (total dust)

ENGINEERING MEASURES

Use a closed dosing system.

Use general ventilation with local exhaust ventilation.



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RESPIRATORY PROTECTION:

Wear a cartridge respirator, filter-type: ABEK/P.
Self-contained breathing apparatus (when required by use conditions).

HAND PROTECTION:

Neoprene gloves, Nitrile gloves, Butyl gloves.
Most glove materials are of low chemical resistance. Replace gloves regularly.

SKIN PROTECTION:

Complete suit protecting against chemicals.

EYE PROTECTION:

Chemical splash goggles, face shield.

HYGIENE RECOMMENDATIONS:

Keep an eye wash fountain available. Keep a safety shower available. Wash hands at breaks and at the end of the shift. If clothing is contaminated, remove clothing and thoroughly wash the affected area. Launder contaminated clothing before reuse. Discard contaminated shoes, belts and other articles made of leather.

9. PHYSICAL AND CHEMICAL PROPERTIES

NOTE: These physical properties are typical values for this product

FORM:	Liquid		
COLOUR:	Colourless		
ODOUR:	None		
	VALUE	UNIT	TEST METHOD
VAPOUR PRESSURE	same as water		
SOLUBILITY IN WATER:	Complete		

Abbreviation: NE = not evaluated, NA = not applicable, NR = not relevant

10. STABILITY AND REACTIVITY

STABILITY:

Stable under ambient conditions.

CONDITIONS TO AVOID:

Freezing temperatures.

MATERIALS TO AVOID:

Oxidizing agents.

HAZARDOUS DECOMPOSITION PRODUCTS:

Oxides of nitrogen, Oxides of carbon (under fire conditions).

11. TOXICOLOGICAL INFORMATION

Please refer to section 3 for hazards identification.

ACUTE TOXICITY DATA: The following results are for a similar product.

ACUTE LETHALITY VALUES:

Dermal (rabbit) LD₅₀ = > 10.0 g/kg.

Oral (rat) LD₅₀ = > 34.0 g/kg.

SENSITIZATION:

May cause sensitization by inhalation and skin contact.

12. ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL EFFECTS:

The following results are for a similar product:

LC₅₀/96H/Lepomis macrochirus (Bluegill Sunfish)= > 1000 mg/l.

LC₅₀/96H/Oncorhynchus Mykiss (Rainbow Trout)= > 1000 mg/l.

13. DISPOSAL CONSIDERATIONS

Via authorized contractor. If this product becomes a waste, the final user must define and assign the appropriate European Waste Catalogue code. Ensure compliance with EC, national and local regulations.

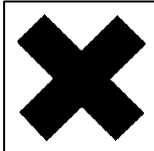
14. TRANSPORT INFORMATION

Class: Not regulated

15. REGULATORY INFORMATION

CLASSIFICATION:

HAZARD SYMBOL: HARMFUL



Xn, HARMFUL

Contains: Piperazine

RISK PHRASES:

R42/43 May cause sensitization by inhalation and skin contact.

SAFETY PHRASES:

S23 Do not breathe vapour.

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.

S45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

16. OTHER INFORMATION

RELEVANT RISK PHRASES:

R34 Causes burns. R42/43 May cause sensitization by inhalation and skin contact. R52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

REVISED INFORMATION:

Section(s):

2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 15, 16

EMERGENCY TELEPHONE NUMBER

Austria:	+32 (0)3 5750330
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