

# FENOC

FirstEnergy Nuclear Operating Company

Perry Nuclear Power Plant  
10 Center Road  
Perry, Ohio 44081

John K. Wood  
Vice President, Nuclear

440-280-5224  
Fax: 440-280-8029

August 10, 1999  
PY-CEL/OEPA-0316L

Ohio Environmental Protection Agency  
122 South Front Street  
Columbus, Ohio 43216

Ladies and Gentlemen:

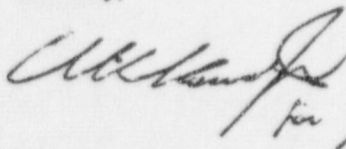
The Perry Nuclear Power Plant (PNPP) has recently experienced an increase in the algae population in the plant's circulating water system. Specifically, the cooling tower basin has become infested with algae of various types. This infestation has caused some flow blockage, and has resulted in several episodes where mechanical removal by divers was necessary. Algae is very persistent and does not respond to the normal oxidant treatment levels which are achieved daily. Therefore, permission is requested to chemically treat the circulating water system for algae.

A mechanical cleaning of all visible basin floors, walls, intake flume and screens will first be completed. Following the mechanical cleaning, a biodispersant (Nalco 7348), will be fed to achieve a 20 ppm concentration and maintained for a period of up to 6 hours. Since the success of the mechanical cleaning cannot be predicted, the position of the cooling tower blowdown valves cannot be predicted. If it is determined that excessive algae still populates the circulating water system after the mechanical cleaning then the treatment will be performed with the blowdown valves open allowing immediate discharge. If, however, the mechanical cleaning is successful, then the treatment will be completed with the blowdown valves closed to minimize the total volume of chemical fed. In either case, following the biodispersant treatment, the blowdown valves will be positioned fully open to allow the system to purge. The normal oxidation treatment will then be performed for the maximum allowable timeframe. The biodispersant/oxidation process may be repeated up to three more times over the following several days, after which PNPP will return to the normal biocide treatment. The maximum concentration of biodispersant present at the plant outfall will not exceed <3.0 ppm.

The biodispersant treatment may be applied once per month during the winter and once per week during the summer months, as necessary to maintain a clean system. An anti-foaming agent may be applied if necessary. The available agent will be Nalco 7468.

Additional information is attached per Ohio Administrative Code, Section 3745-33-01. If you have questions or require additional information, please call Ms. Donna Tizzano at (440) 280-5514.

Sincerely,

  
for John Wood

cc: NRC Document Control Desk  
NRC Project Manager  
NRC Resident Inspector  
NRC Region III

9908160066 990810  
PDR ADOCK 05000440  
P PDR

0001/1

## Product Information for the Ohio EPA

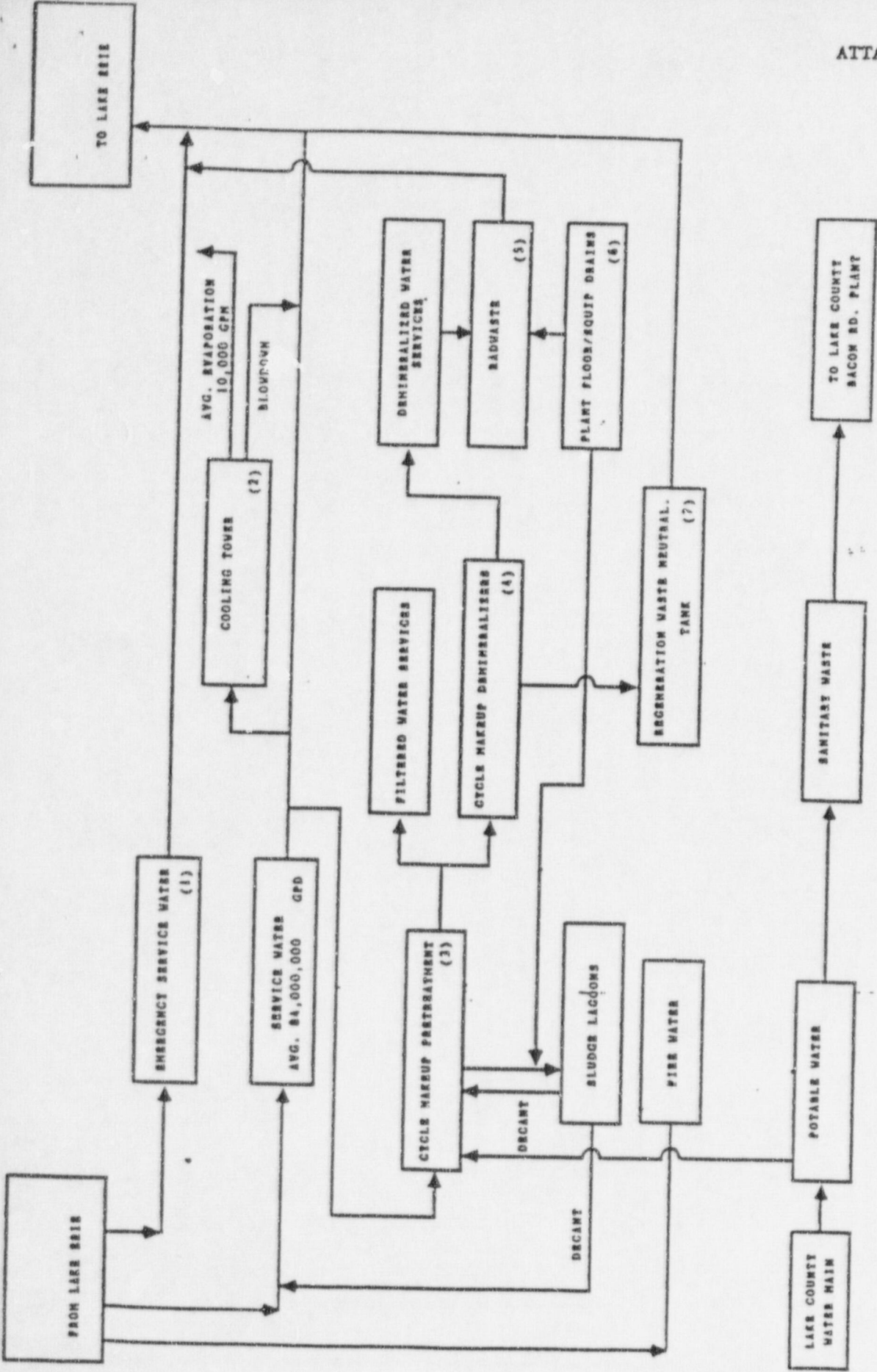
1. **The name of the additive(s) to be used and general product information.**
  - a. MSDS for each additive: Attached
  - b. list of individual constituents or ingredients (active or inert):  
Nalco 7348: Biodispersant  
Nalco 7468: Anti-foaming agent
  - c. chemical structure of each constituent:  
Nalco 7348: Polyglycol  
Nalco 7468: Silica & Fatty Esters
  - d. Specific Use of the additive:  
Nalco 7348: to control algae  
Nalco 7468: to control foam
  - e. The Federal Insecticide, Fungicide and Rodenticide Act (FIFRA)/U.S. EPA N/A  
Registration Number:
  
2. **The concentration(s) of the additive(s) to be used (mg/l).**

Nalco 7348: 10-20 mg/l in Circulating Water System  
Nalco 7468: 10-50 mg/l in Circulating Water System

  - a. frequency of the Nalco 7348 application: three times during first week, periodically thereafter, Nalco 7468 to be used as necessary
  - b. duration of applications: up to 6 hours each
  - c. feed system to be employed and appropriate safeguards to be taken to ensure accurate feed concentrations:  
Drum and tank feed per calculated volume.
  
3. **The expected concentrations of the additives contained in the discharge or blowdown immediately prior to entering state surface waters.**
  - a. Nalco 7348: < 3.0 ppm in final outfall  
Nalco 7468: < 7.0 ppm in final outfall
  - b. N/A
  
4. **The average flowrate (MGD) and the outfall number of each outfall containing the additives.**
  - a. Blowdown to discharge structure: 12.0 MGD
  - b. Total Blowdown to Lake: 100.8 MGD
  
5. **Name of the state surface water(s) that receive the discharge.**

Lake Erie
  
6. **Toxicity and environmental information for the additive(s).**

Please refer to Section 12 on the MSDS sheets.



- (1) 0 GPM NORMALLY  
8,000 GPM AVG WHEN IN USE
- (2) AVG. MAKEUP RATE 18,000 GPM  
AVG. BLOWDOWN RATE 7,500 GPM
- (3) MAX. INTAKE 600 GPM  
AVG. INTAKE 200 GPM
- (4) MAX. FLOW RATE 400 GPM
- (5) BATCH FLOW ONLY  
MAX. 33,000 GAL./BATCH
- (6) POTENTIALLY RADIOACTIVE (RCA) DRAINS TO RADWASTE  
NONRADIOACTIVE (NON-RCA) DRAINS TO SLUDGE HOLDING SUMP
- (7) BATCH FLOW ONLY  
AVG. 20,000 GPD WHEN USED

PLANT WATER USE  
 PERRY NUCLEAR POWER PLANT  
 THE CLEVELAND ELECTRIC ILLUMINATING COMPANY



# MATERIAL SAFETY DATA SHEET



PRODUCT

NALSPERSE 7348 BIODISPERSANT

Emergency Telephone Number

Medical (800) 462-5378 (24 hours)

(800) I-M-ALERT

## SECTION 1 CHEMICAL PRODUCT IDENTIFICATION

TRADE NAME: NALSPERSE 7348 BIODISPERSANT

DESCRIPTION: A polyglycol

NFPA 704M/HMIS RATING: 0/1 HEALTH 1/1 FLAMMABILITY 0/0 REACTIVITY 0 OTHER  
0=Insignificant 1=Slight 2=Moderate 3=High 4=Extreme

## SECTION 2 COMPOSITION/INGREDIENT INFORMATION

Our hazard evaluation of the ingredient(s) under OSHA's Hazard Communication Rule, 29 CFR 1910.1200 has found none of the ingredient(s) hazardous.

## SECTION 3 HAZARD IDENTIFICATION

### EMERGENCY OVERVIEW:

CAUTION: May cause irritation to skin and eyes. Avoid contact with skin, eyes and clothing. Do not take internally.

Empty containers may contain residual product. Do not reuse container unless properly reconditioned.

PRIMARY ROUTE(S) OF EXPOSURE: Eye, Skin

EYE CONTACT: May cause irritation with prolonged contact.

SKIN CONTACT: May cause irritation with prolonged contact.

SYMPTOMS OF EXPOSURE: A review of available data does not identify any symptoms from exposure not previously mentioned.

AGGRAVATION OF EXISTING CONDITIONS: A review of available data does not identify any worsening of existing conditions.

## SECTION 4 FIRST AID INFORMATION

EYES: Flush with water for 15 minutes. Call a physician.

SKIN: Flush with water for 15 minutes.

INGESTION: Do not induce vomiting. Give water. Call a physician.

INHALATION: Remove to fresh air. Treat symptoms. Call a physician.

NOTE TO PHYSICIAN: Based on the individual reactions of the patient, the physician's judgment should be used to control symptoms and clinical condition.

CAUTION: If unconscious, having trouble breathing or in convulsions, do not induce vomiting or give water.





# MATERIAL SAFETY DATA SHEET

PRODUCT

NALSPERSE 7348 BIODISPERSANT

Emergency Telephone Number

Medical (800) 462-5378 (24 hours)

(800) I-M-ALERT

## SECTION 5 FIRE FIGHTING MEASURES

FLASH POINT: Greater than 200 Degrees F (PMCC) ASTM D-93

EXTINGUISHING MEDIA: Based on the NFPA guide, use dry chemical, foam, carbon dioxide or other extinguishing agent suitable for Class B fires. Use water to cool containers exposed to fire. For large fires, use water spray or fog, thoroughly drenching the burning material.

UNUSUAL FIRE AND EXPLOSION HAZARD: None

## SECTION 6 ACCIDENTAL RELEASE MEASURES

IN CASE OF TRANSPORTATION ACCIDENTS, CALL THE FOLLOWING 24-HOUR TELEPHONE NUMBER (800) I-M-ALERT or (800) 462-5378.

SPILL CONTROL AND RECOVERY:

Small liquid spills: Contain with absorbent material, such as clay, soil or any commercially available absorbent. Shovel reclaimed liquid and absorbent into recovery or salvage drums for disposal. Refer to CERCLA in Section 15.

Large liquid spills: Dike to prevent further movement and reclaim into recovery or salvage drums or tank truck for disposal. Refer to CERCLA in Section 15.

## SECTION 7 HANDLING AND STORAGE

Storage : Keep container closed when not in use.

## SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

RESPIRATORY PROTECTION: Respiratory protection is not normally needed since the volatility and toxicity are low. If significant vapors, mists or aerosols are generated, wear a NIOSH approved or equivalent respirator.

For large spills, entry into large tanks, vessels or enclosed small spaces with inadequate ventilation, a positive pressure, self-contained breathing apparatus is recommended.

VENTILATION: General ventilation is recommended. Additionally, local exhaust ventilation is recommended where vapors, mists or aerosols may be released.

PROTECTIVE EQUIPMENT: Use impermeable gloves and chemical splash goggles when attaching feeding equipment, doing maintenance or handling product. Examples of

# MATERIAL SAFETY DATA SHEET



PRODUCT

NALSPERSE 7348 BIODISPERSANT

Emergency Telephone Number

Medical (800) 462-5378 (24 hours)

(800) I-M-ALERT

## SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION (CONTINUED)

impermeable gloves available on the market are neoprene, nitrile, PVC, natural rubber, viton, and butyl (compatibility studies have not been performed).

The availability of an eye wash fountain and safety shower is recommended.

If clothing is contaminated, remove clothing and thoroughly wash the affected area. Launder contaminated clothing before reuse.

HUMAN EXPOSURE CHARACTERIZATION: Based on Nalco's recommended product application and our recommended personal protective equipment, the potential human exposure is: MODERATE.

## SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

COLOR: Clear	FORM: Liquid	ODOR: None
DENSITY:	8.5 lbs/gal.	
SOLUBILITY IN WATER:	Insoluble	
SPECIFIC GRAVITY:	1.00-1.04 @ 68 Degrees F	ASTIM D-1298
pH (at 2.5%) =	5.0 - 7.5	ASTIM E-70
VISCOSITY:	273 cps @ 78 Degrees F	ASTIM D-2983
FREEZE POINT:	None	ASTIM D-1177
FLASH POINT:	Greater than 200 Degrees F (PMCC)	ASTIM D-93
VAPOUR PRESSURE:	Less than 0.01mm Hg @ 68 Degrees F	ASTIM D-323
VOLATILE ORGANIC COMPOUND (VOC):	0.06 lbs/gal.	EPA METHOD 24

NOTE: These physical properties are typical values for this product.

## SECTION 10 STABILITY AND REACTIVITY

INCOMPATIBILITY: Avoid contact with strong oxidizers (eg. chlorine, peroxides, chromates, nitric acid, perchlorates, concentrated oxygen, permanganates) which can generate heat, fires, explosions and the release of toxic fumes.

THERMAL DECOMPOSITION PRODUCTS: In the event of combustion CO, CO2 may be formed. Do not breathe smoke or fumes. Wear suitable protective equipment.

## SECTION 11 TOXICOLOGICAL INFORMATION

ACUTE TOXICITY STUDIES: Acute toxicity studies have been conducted on this product. The results are shown below.

ACUTE ORAL TOXICITY (ALBINO RATS): LD50 = 2,229 mg/kg



# MATERIAL SAFETY DATA SHEET

PRODUCT

NALSPERSE 7348 BIODISPERSANT

Emergency Telephone Number

Medical (800) 462-5378 (24 hours)

(800) I-M-ALERT

## SECTION 11 TOXICOLOGICAL INFORMATION

( CONTINUED )

95% Confidence Limit = 1,400 - 3,085 mg/kg

TOXICITY RATING: Moderately toxic

COMMENTS: Pharmacotoxic signs noted following product administration included anorexia, diarrhea, decreased activity, salivation, and ataxia. All surviving animals appeared normal 72-hours post dosing. Deaths occurred 24-48 hours after administration of the test article.

PRIMARY SKIN IRRITATION TEST (ALBINO RABBITS):

SKIN IRRITATION INDEX DRAIZE RATING: 0.57/8.0 Slightly irritating

COMMENTS: Application of 0.5 ml to a 6 cm<sup>2</sup> site on the shaven back of each of a group of six albino rabbits (4-hour occluded contact) resulted in very mild redness and no swelling. At the end of 72-hours, all sites had returned to normal.

PRIMARY EYE IRRITATION TEST (ALBINO RABBITS):

EYE IRRITATION INDEX DRAIZE RATING: 2.7/110.0 Minimally irritating

COMMENTS: Instillation of 0.1 ml into the conjunctival sac of one eye of each of a group of six albino rabbits produced very slight redness one hour after instillation. By the end of 24-hours, all eyes had essentially returned to normal.

HUMAN HAZARD CHARACTERIZATION: Based on our hazard characterization, the potential human hazard is: LOW

## SECTION 12 ECOLOGICAL INFORMATION

BIOCHEMICAL OXYGEN DEMAND (5-day BOD): 3 ppm

CHEMICAL OXYGEN DEMAND (COD): 2,000,000 ppm

TOTAL ORGANIC CARBON (TOC): 540,000 ppm

AQUATIC DATA:

96 hour static acute LC50 to Bluegill Sunfish = Greater than 1,000 ppm

96 hour static acute LC50 to Rainbow Trout = Greater than 1,000 mg/L

96 hour no observed effect concentration is 320 mg/L based on no mortality or abnormal effects.



# MATERIAL SAFETY DATA SHEET



PRODUCT

NALSPERSE 7348 BIODISPERSANT

Emergency Telephone Number

Medical (800) 462-5378 (24 hours)

(800) I-M-ALERT

## SECTION 12 ECOLOGICAL INFORMATION

( CONTINUED )

TOXICITY RATING: Essentially non-toxic

48 hour static acute LC50 to Daphnia Magna = Greater than 1,000 mg/L  
48 hour no observed effect concentration is 180 mg/L based on no mortality or abnormal effects.

TOXICITY RATING: Essentially non-toxic

96 hour static acute LC50 to Channel Catfish, Largemouth Bass, Grass Shrimp, Shore Crabs = Greater than 1,000 ppm

96 hour static acute LC50 to Eastern Oysters = 307 ppm

96 hour static acute LC50 to Quahog Clams = 567 ppm

48 hour EC50 to Ceriodaphnia dubia = 240 mg/L

48 hour no observed effect concentration is 130 mg/L based on no mortality or abnormal effects.

7-day chronic reproductive IC50 and IC25 to Ceriodaphnia dubia is 17 mg/L and 13 mg/L, respectively

The 7-day NOEL based on reproduction is 12.5 mg/L

The 7-day LOEL based on reproduction is 25 mg/L

If released into the environment, see CERCLA in Section 15.

ENVIRONMENTAL HAZARD AND EXPOSURE CHARACTERIZATION: Based on our Hazard Characterization, the potential environmental hazard is: LOW.

Based on Nalco's recommended product application and the product's characteristics, the potential environmental exposure is: HIGH.

## SECTION 13 DISPOSAL CONSIDERATIONS

DISPOSAL: If this product becomes a waste, it does not meet the criteria of a hazardous waste as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261, since it does not have the characteristics of Subpart C, nor is it listed under Subpart D.

As a non-hazardous liquid waste, it should be solidified with stabilizing agents (such as sand, fly ash, or cement) so that no free liquid remains before disposal to an industrial waste landfill. A non-hazardous liquid waste can



# MATERIAL SAFETY DATA SHEET

PRODUCT

NALSPERSE 7348 BIODISPERSANT

Emergency Telephone Number

Medical (800) 462-5378 (24 hours)

(800) I-M-ALERT

## SECTION 13 DISPOSAL CONSIDERATIONS

( CONTINUED )

also be incinerated in accordance with local, state, and federal regulations.

## SECTION 14 TRANSPORTATION INFORMATION

PROPER SHIPPING NAME/HAZARD CLASS MAY VARY BY PACKAGING, PROPERTIES, AND MODE OF TRANSPORTATION. TYPICAL PROPER SHIPPING NAMES FOR THIS PRODUCT ARE:

ALL TRANSPORTATION MODES : PRODUCT IS NOT REGULATED DURING TRANSPORTATION

## SECTION 15 REGULATORY INFORMATION

The following regulations apply to this product.

### FEDERAL REGULATIONS:

OSHA'S HAZARD COMMUNICATION RULE, 29 CFR 1910.1200:  
Based on our hazard evaluation, this product is not hazardous.

CERCLA, 40 CFR 117, 302:  
Notification of spills of this product is not required.

SARA/SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986  
(TITLE III) - SECTIONS 302, 311, 312 AND 313:

SECTION 302 - EXTREMELY HAZARDOUS SUBSTANCES (40 CFR 355):  
This product does not contain ingredients listed in Appendix A and B as an Extremely Hazardous Substance.

SECTIONS 311 and 312 - MATERIAL SAFETY DATA SHEET REQUIREMENTS (40 CFR 370):  
Our hazard evaluation has found that this product is not hazardous under 29 CFR 1910.1200.

Under SARA 311 and 312, the EPA has established threshold quantities for the reporting of hazardous chemicals. The current thresholds are: 500 pounds or the threshold planning quantity (TPQ), whichever is lower, for extremely hazardous substances and 10,000 pounds for all other hazardous chemicals.

SECTION 313 - LIST OF TOXIC CHEMICALS (40 CFR 372):  
This product does not contain ingredients on the List of Toxic Chemicals.

TOXIC SUBSTANCES CONTROL ACT (TSCA):

PAGE 6 OF 9

# MATERIAL SAFETY DATA SHEET



PRODUCT

NALSPERSE 7348 BIODISPERSANT

Emergency Telephone Number

Medical (800) 462-5378 (24 hours)

(800) I-M-ALERT

## SECTION 15 REGULATORY INFORMATION

( CONTINUED )

The chemical ingredients in this product are on the 8(b) Inventory List (40 CFR 710).

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 176.180 - components of paper and paperboard in contact with dry food.

U. S. DEPARTMENT OF AGRICULTURE (USDA):  
USDA Inspection and Grading Programs - Food Safety and Inspection Service: This product is authorized by USDA for use in federally inspected meat and poultry plants. Authorized uses are under category G5, G7.

RESOURCE CONSERVATION AND RECOVERY ACT (RCRA), 40 CFR 261 SUBPART C & D: Consult Section 13 for RCRA classification.

FEDERAL WATER POLLUTION CONTROL ACT, CLEAN WATER ACT, 40 CFR 401.15 (formerly Sec. 307), 40 CFR 116 (formerly Sec. 311):  
None of the ingredients are specifically listed.

CLEAN AIR ACT, Sec. 111 (40 CFR 60), Sec. 112 (40 CFR 61, 1990 Amendments), Sec. 611 (40 CFR 82, CLASS I and II Ozone depleting substances):  
This product does not contain ingredients covered by the Clean Air Act.

### STATE REGULATIONS:

CALIFORNIA PROPOSITION 65:  
This product contains ethylene oxide, known to the State of California to cause cancer, birth defects or other reproductive effects, as an impurity or residue.

MICHIGAN CRITICAL MATERIALS:  
This product does not contain ingredients listed on the Michigan Critical Materials Register.

STATE RIGHT TO KNOW LAWS:  
The following ingredient(s) are disclosed for compliance with State Right To Know Laws:

Polyglycol                      Trade secret

### INTERNATIONAL REGULATIONS:

This is not a WHMIS controlled product under The House of Commons of Canada





# MATERIAL SAFETY DATA SHEET

PRODUCT

NALSPERSE 7348 BIODISPERSANT

Emergency Telephone Number

Medical (800) 462-5378 (24 hours)

(800) I-M-ALERT

## SECTION 15 REGULATORY INFORMATION

( CONTINUED )

Bill C-70.

## SECTION 16 OTHER INFORMATION

Nalco internal number 308644

## SECTION 17 RISK CHARACTERIZATION

Due to our commitment to Product Stewardship, we have evaluated the human and environmental hazards and exposures of this product. Based on our recommended use of this product, we have characterized the product's general risk. This information should provide assistance for your own risk management practices. We have evaluated our product's risk as follows:

- \* The human risk is: LOW.
- \* The environmental risk is: LOW.

Any use inconsistent with Nalco's recommendations may affect our risk characterization. Our sales representative will assist you to determine if your product application is consistent with our recommendations. Together we can implement an appropriate risk management process.

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.

## SECTION 18 REFERENCES

Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices, American Conference of Governmental Industrial Hygienists, OH.

Hazardous Substances Data Bank, National Library of Medicine, Bethesda, Maryland (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.

# MATERIAL SAFETY DATA SHEET



PRODUCT

NALSPERSE 7348 BIODISPERSANT

Emergency Telephone Number

Medical (800) 462-5378 (24 hours)

(800) I-M-ALERT

## SECTION 18 REFERENCES

( CONTINUED )

Integrated Risk Information System, U.S. Environmental Protection Agency, Washington, D.C. (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).

Registry of Toxic Effects of Chemical Substances, National Institute for Occupational Safety and Health, Cincinnati, Ohio (CD-ROM version), Micromedex, Inc., Englewood, CO.

Shepard's Catalog of Teratogenic Agents (CD-ROM version), Micromedex, Inc., Englewood, CO.

Suspect Chemicals Sourcebook (a guide to industrial chemicals covered under major regulatory and advisory programs), Roytech Publications (a Division of Ariel Corporation), Bethesda, MD.

The Teratogen Information System, University of Washington, Seattle, Washington (CD-ROM version), Micromedex, Inc., Englewood, CO.

PREPARED BY: William S. Utley, PhD., DABT, Manager, Product Safety

DATE CHANGED: 03/10/98

DATE PRINTED: 09/10/98



# MATERIAL SAFETY DATA SHEET

PRODUCT

*Emergency Telephone Number*

Medical (800) 462-5378 (24 hours)

(800) I-M-ALERT





# MATERIAL SAFETY DATA SHEET

## PRODUCT

NALCO 7468 LIQUID

Emergency Telephone Number  
 Medical (800) 462-5378 (24 hours) (800) I-M-ALERT

### SECTION 01 CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

TRADE NAME: NALCO 7468 LIQUID

DESCRIPTION: An aqueous solution of silica and a fatty ester

NFPA 704M/HMIS RATING: 0/0 HEALTH 0/0 FLAMMABILITY 0/0 REACTIVITY 0 OTHER  
 0=Insignificant 1=Slight 2=Moderate 3=High 4=Extreme

### SECTION 02 COMPOSITION AND INFORMATION ON INGREDIENTS

Our hazard evaluation has identified the following chemical ingredient(s) as hazardous under OSHA's Hazard Communication Rule, 29 CFR 1910.1200. Consult Section 15 for the nature of the hazard(s).

INGREDIENT(S)	CAS #	APPROX.%
Silica (amorphous)	10279-57-9	1-5

### SECTION 03 HAZARD IDENTIFICATION

#### EMERGENCY OVERVIEW:

CAUTION! May cause irritation to skin and eyes. Avoid contact with skin, eyes, and clothing. Avoid prolonged or repeated breathing of vapor. Use with adequate ventilation. Do not take internally.

Empty containers may contain residual product. Do not reuse container unless properly reconditioned.

PRIMARY ROUTE(S) OF EXPOSURE: Eye, Skin

EYE CONTACT: May cause irritation with prolonged contact.  
 SKIN CONTACT: May cause irritation with prolonged contact.

#### SYMPTOMS OF EXPOSURE:

CHRONIC: Prolonged inhalation of dried product may lead to pneumoconiosis.

AGGRAVATION OF EXISTING CONDITIONS: A review of available data does not identify any worsening of existing conditions.

### SECTION 04 FIRST AID INFORMATION

EYES: Flush with water for 15 minutes. Call a physician.  
 SKIN: Flush with water for 15 minutes.  
 INGESTION: Do not induce vomiting. Give water. Call a physician.  
 INHALATION: Remove to fresh air. Treat symptoms. Call a physician.

NOTE TO PHYSICIAN: Based on the individual reactions of the patient, the physician's judgment should be used to control symptoms and clinical condition.

### SECTION 05 FIRE FIGHTING MEASURES

FLASH POINT: None (PMCC) ASTM D-93



# MATERIAL SAFETY DATA SHEET

PRODUCT

NALCO 7468 LIQUID

Emergency Telephone Number

Medical (800) 462-5378 (24 hours)

(800) I-M-ALERT

EXTINGUISHING MEDIA: Not applicable

UNUSUAL FIRE AND EXPLOSION HAZARD: Not applicable

-----  
SECTION 06 ACCIDENTAL RELEASE MEASURES

-----  
IN CASE OF TRANSPORTATION ACCIDENTS, CALL THE FOLLOWING 24-HOUR  
TELEPHONE NUMBER (800) I-M-ALERT or (800) 462-5378.

SPILL CONTROL AND RECOVERY:

Small liquid spills: Contain with absorbent material, such as clay, soil or any commercially available absorbent. Shovel reclaimed liquid and absorbent into recovery or salvage drums for disposal. Refer to CERCLA in Section 15.

Large liquid spills: Dike to prevent further movement and reclaim into recovery or salvage drums or tank truck for disposal. Refer to CERCLA in Section 15.

-----  
SECTION 07 HANDLING AND STORAGE

Storage : Keep container closed when not in use.

-----  
SECTION 08 EXPOSURE CONTROLS AND PERSONAL PROTECTION

RESPIRATORY PROTECTION: Respiratory protection is not normally needed. If significant vapors, mists or aerosols are generated, wear a NIOSH approved or equivalent respirator.

For large spills, entry into large tanks, vessels or enclosed small spaces with inadequate ventilation, a positive pressure, self-contained breathing apparatus is recommended.

VENTILATION: General ventilation is recommended.

PROTECTIVE EQUIPMENT: Use impermeable gloves and chemical splash goggles when attaching feeding equipment, doing maintenance or handling product. Examples of impermeable gloves available on the market are neoprene, nitrile, PVC, natural rubber, viton and butyl (compatibility studies have not been performed).

The availability of an eye wash fountain and safety shower is recommended.

If clothing is contaminated, remove clothing and thoroughly wash the affected area. Launder contaminated clothing before reuse.

HUMAN EXPOSURE CHARACTERIZATION: Based on Nalco's recommended product application and our recommended personal protective equipment, the potential human exposure is: MODERATE.

-----  
SECTION 09 PHYSICAL AND CHEMICAL PROPERTIES

COLOR: Off-white  
FORM: Liquid



# MATERIAL SAFETY DATA SHEET

## PRODUCT

NALCO 7468 LIQUID

### Emergency Telephone Number

Medical (800) 462-5378 (24 hours)

(800) I-M-ALERT

DENSITY:	8.2-8.6 lbs/gal.	
SOLUBILITY IN WATER:	Completely	
SPECIFIC GRAVITY:	0.99-1.03 @ 77 Degrees F	ASTM D-1298
pH (NEAT) =	7.5	ASTM E-70
VISCOSITY:	300-1100 cps @ 77 Degrees F	ASTM D-2983
FREEZE POINT:	32 Degrees F	ASTM D-1177
FLASH POINT:	None (PMCC)	ASTM D-93

NOTE: These physical properties are typical values for this product.

## SECTION 10 STABILITY AND REACTIVITY

INCOMPATIBILITY: None known

STORAGE: Keep product from freezing; do not store at temperatures below 32 Degrees F.

THERMAL DECOMPOSITION PRODUCTS: In the event of combustion CO, CO2 may be formed. Do not breathe smoke or fumes. Wear suitable protective equipment.

## SECTION 11 TOXICOLOGICAL INFORMATION

TOXICITY STUDIES: No toxicity studies have been conducted on this product.

HUMAN HAZARD CHARACTERIZATION: Based on our hazard characterization, the potential human hazard is: LOW

## SECTION 12 ECOLOGICAL INFORMATION

BIOCHEMICAL OXYGEN DEMAND (5-day BOD): 16,100 mg/L

CHEMICAL OXYGEN DEMAND (COD): 147,000 mg/L

### AQUATIC DATA:

Results are based on the product.

96 hour static acute LC50 to Fathead minnow = Greater than 1,000 mg/L

96 hour no observed effect concentration is 1,000 mg/L based on no mortality or abnormal effects.

TOXICITY RATING: Essentially non-toxic

48 hour static acute LC50 to Daphnia magna = Greater than 1,000 ppm

48 hour no observed effect concentration is greater than 1,000 ppm based on no mortality or abnormal effects.

TOXICITY RATING: Essentially non-toxic

If released into the environment, see CERCLA in Section 15.





# MATERIAL SAFETY DATA SHEET

## PRODUCT

NALCO 7468 LIQUID

Emergency Telephone Number  
 Medical (800) 462-5376 (24 hours) (800) I-M-ALERT

ENVIRONMENTAL HAZARD AND EXPOSURE CHARACTERIZATION: Based on our Hazard Characterization, the potential environmental hazard is: LOW. Based on Nalco's recommended product application and the product's characteristics, the potential environmental exposure is: MODERATE.

### SECTION 13 DISPOSAL CONSIDERATIONS

DISPOSAL: If this product becomes a waste, it does not meet the criteria of a hazardous waste as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261, since it does not have the characteristics of Subpart C, nor is it listed under Subpart D.

As a non-hazardous liquid waste, it should be solidified with stabilizing agents (such as sand, fly ash, or cement) so that no free liquid remains before disposal to an industrial waste landfill. A non-hazardous liquid waste can also be deep-well injected in accordance with local, state and federal regulations.

### SECTION 14 TRANSPORTATION INFORMATION

PROPER SHIPPING NAME/HAZARD CLASS MAY VARY BY PACKAGING, PROPERTIES, AND MODE OF TRANSPORTATION. TYPICAL PROPER SHIPPING NAMES FOR THIS PRODUCT ARE:

ALL TRANSPORTATION MODES : PRODUCT IS NOT REGULATED DURING TRANSPORTATION

### SECTION 15 REGULATORY INFORMATION

The following regulations apply to this product.

#### FEDERAL REGULATIONS:

OSHA'S HAZARD COMMUNICATION RULE, 29 CFR 1910.1200:

Based on our hazard evaluation, the following ingredient in this product is hazardous and the reason is shown below.

Silica (amorphous) = TWA 10 mg/m<sup>3</sup> (total dust) ACGIH/TLV

Silica (amorphous) = TWA 6 mg/m<sup>3</sup> OSHA/PEL

CERCLA/SUPERFUND, 40 CFR 117, 302:

Notification of spills of this product is not required.

SARA/SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1985 (TITLE III) - SECTIONS 302, 311, 312 AND 313:

SECTION 302 - EXTREMELY HAZARDOUS SUBSTANCES (40 CFR 355):

This product does not contain ingredients listed in Appendix A and B as an Extremely Hazardous Substance.

SECTIONS 311 and 312 - MATERIAL SAFETY DATA SHEET REQUIREMENTS (40 CFR 370):



# MATERIAL SAFETY DATA SHEET

## PRODUCT

NALCO 7468 LIQUID

Emergency Telephone Number  
 Medical (800) 462-5378 (24 hours) (800) I-M-ALERT

Our hazard evaluation has found this product to be hazardous. The product should be reported under the following EPA hazard categories:

XX Immediate (acute) health hazard  
 XX Delayed (chronic) health hazard  
 -- Fire hazard  
 -- Sudden release of pressure hazard  
 -- Reactive hazard

Under SARA 311 and 312, the EPA has established threshold quantities for the reporting of hazardous chemicals. The current thresholds are: 500 pounds or the threshold planning quantity (TPQ), whichever is lower, for extremely hazardous substances and 10,000 pounds for all other hazardous chemicals.

### SECTION 313 - LIST OF TOXIC CHEMICALS (40 CFR 372):

This product does not contain ingredients on the List of Toxic Chemicals.

### TOXIC SUBSTANCES CONTROL ACT (TSCA):

The chemical ingredients in this product are on the 8(b) Inventory List (40 CFR 710).

### FOOD AND DRUG ADMINISTRATIONS (FDA) Federal Food, Drug and Cosmetic Act:

When use situations necessitate compliance with FDA regulations, this product is acceptable under 21 CFR 173.340(a)(2) for use as a defoaming agent in the processing of foods up to a maximum limit of 100 ppm with the exception of zero allowance in milk. This product is also acceptable under 21 CFR 175.105 for adhesives and 21 CFR 176.200 for coatings.

Under Environmental Protection Agency regulations title 40 CFR 180.1001(c), this product is exempted from requirements of tolerance when used as ingredients in pesticide formulations applied to growing crops or to raw agricultural commodities after harvest.

### U. S. DEPARTMENT OF AGRICULTURE (USDA):

USDA Inspection and Grading Programs - Food Safety and Inspection Service: This product is authorized by USDA for use in federally inspected meat and poultry plants. Authorized use is under category 3D - for washing fruits and vegetables that are used as ingredients of meat, poultry and rabbit products. The following limitations apply: After using the substance, the fruits and vegetables must be thoroughly rinsed with potable water.

This product has been certified as KOSHER/PAREVE for year-round use EXCEPT FOR THE PASSOVER SEASON by the CHICAGO RABBINICAL COUNCIL.

RESOURCE CONSERVATION AND RECOVERY ACT (RCRA), 40 CFR 261 SUBPART C & D: Consult Section 13 for RCRA classification.

FEDERAL WATER POLLUTION CONTROL ACT, CLEAN WATER ACT, 40 CFR 401.15 (formerly Sec. 307), 40 CFR 116 (formerly Sec. 311): None of the ingredients are specifically listed.

CLEAN AIR ACT, Sec. 111 (40 CFR 60), Sec. 112 (40 CFR 61, 1990 Amendments), Sec. 611 (40 CFR 82, CLASS I and II Ozone depleting substances):



# MATERIAL SAFETY DATA SHEET

## PRODUCT

NALCO 7468 LIQUID

Emergency Telephone Number  
 Medical (800) 462-5378 (24 hours) (800) I-M-ALERT

This product does not contain ingredients covered by the Clean Air Act.

### STATE REGULATIONS:

#### CALIFORNIA PROPOSITION 65:

This product does not contain any chemicals which require warning under California Proposition 65.

#### MICHIGAN CRITICAL MATERIALS:

This product does not contain ingredients listed on the Michigan Critical Materials Register.

#### STATE RIGHT TO KNOW LAWS:

The following ingredient(s) are disclosed for compliance with State Right To Know Laws:

Amorphous silica	10279-57-9
Fatty ester	Trade secret
Silicone	Trade secret
Water	7732-18-5

### INTERNATIONAL REGULATIONS:

This is a WHMIS controlled product under The House of Commons of Canada Bill C-70 (Class D2B). The product contains the following substance(s), from the Ingredient Disclosure List or has been evaluated based on its toxicological properties, to contain the following hazardous ingredient(s):

Chemical Name	CAS #	% Concentration Range
Silica (amorphous)	10279-57-9	1-5

### SECTION 16 OTHER INFORMATION

Nalco internal number F700203

### SECTION 17 RISK CHARACTERIZATION

Due to our commitment to Product Stewardship, we have evaluated the human and environmental hazards and exposures of this product. Based on our recommended use of this product, we have characterized the product's general risk. This information should provide assistance for your own risk management practices. We have evaluated our product's risk as follows:

- \* The human risk is: LOW.
- \* The environmental risk is: LOW.

Any use inconsistent with Nalco's recommendations may affect our risk characterization. Our sales representative will assist you to determine if your product application is consistent with our recommendations. Together we can implement an appropriate risk management process.

This product material safety data sheet provides health and safety





# MATERIAL SAFETY DATA SHEET

## PRODUCT

NALCO 7468 LIQUID

### Emergency Telephone Number

Medical (800) 462-5378 (24 hours)

(800) I-M-ALERT

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.

### SECTION 16 REFERENCES

Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices, American Conference of Governmental Industrial Hygienists, OH.

Hazardous Substances Data Bank, National Library of Medicine, Bethesda, Maryland (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. (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).

Registry of Toxic Effects of Chemical Substances, National Institute for Occupational Safety and Health, Cincinnati, Ohio (CD-ROM version), Micromedex, Inc., Englewood, CO.

Silber's Catalog of Teratogenic Agents (CD-ROM version), Micromedex, Inc., Englewood, CO.

Suspect Chemicals Sourcebook (a guide to industrial chemicals covered under major regulatory and advisory programs), Roytech Publications (a Division of Ariel Corporation), Bethesda, MD.

The Teratogen Information System, University of Washington, Seattle, Washington (CD-ROM version), Micromedex, Inc., Englewood, CO.

PREPARED BY: William S. Utley, PhD., DABT, Manager, Product Safety  
DATE CHANGED: 02/03/1998 DATE PRINTED: 03/28/1999