



MATERIAL SAFETY DATA SHEET

PRODUCT

NALCO 71-D5 ANTIFOAM

Emergency Telephone Number

Medical (800) 462-5378 (24 hours)

(800) I-M-ALERT

SECTION 1 PRODUCT IDENTIFICATION

TRADE NAME: NALCO 71-D5 ANTIFOAM

DESCRIPTION: A blend of fatty acids, polyglycols, polyglycol esters, in hydrocarbon oil

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

SECTION 2 HAZARDOUS 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 14 for the nature of the hazard(s).

INGREDIENT(S)	CAS #	APPROX. %
Kerosene	8008-20-6	10-20
Paraffin wax	8002-74-2	1-5
Straight run middle distillates	64741-44-2	40-70

SECTION 3 PRECAUTIONARY LABEL INFORMATION

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.

SECTION 4 FIRST AID INFORMATION

EYES: Flush with water for 15 minutes. Call a physician.
SKIN: Wash thoroughly with soap and rinse with water. Call a physician.
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

NALCO 71-D5 ANTIFOAM

Emergency Telephone Number

Medical (800) 462-5378 (24 hours)

(800) I-M-ALERT

SECTION 5 HEALTH EFFECTS INFORMATION

PRIMARY ROUTE(S) OF EXPOSURE: Eye, Skin, Inhalation

EYE CONTACT: Can cause mild, short-lasting irritation.
SKIN CONTACT: Can cause mild, short-lasting irritation.
INHALATION: Prolonged inhalation of vapor may be harmful.

SYMPTOMS OF EXPOSURE:

ACUTE: Inhalation of high concentrations of product can cause nausea, dizziness, vomiting, stupor or unconsciousness.

CHRONIC: Prolonged skin contact with product can cause dry skin and defatting resulting in irritation and dermatitis.

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

SECTION 6 TOXICOLOGY INFORMATION

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

ACUTE ORAL TOXICITY (ALBINO RATS): LD₅₀ = Greater than 15,380 mg/kg

ACUTE DERMAL TOXICITY (ALBINO RABBITS): LD₅₀ = Greater than 3,038 mg/kg

PRIMARY SKIN IRRITATION TEST (ALBINO RABBITS):

SKIN IRRITATION INDEX DRAIZE RATING: 3.1/8.0 Moderately irritating

PRIMARY EYE IRRITATION TEST (ALBINO RABBITS):

EYE IRRITATION INDEX DRAIZE RATING: 6.0/110.0 Minimal irritation

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

SECTION 7 PHYSICAL AND CHEMICAL PROPERTIES

COLOR: Pale straw	FORM: Liquid	ODOR: Faintly hydrocarbon
DENSITY: 6.9-7.5 lbs/gal.		
SOLUBILITY IN WATER: Insoluble		
SPECIFIC GRAVITY: 0.83-0.90 @ 77 Degrees F		ASTM D-1298
VISCOSITY: 13.8 cps @ 80 Degrees F		ASTM D-2983
FREEZE POINT: 45 Degrees F		ASTM D-1177
POUR POINT: 45 Degrees F		ASTM D-97



MATERIAL SAFETY DATA SHEET

PRODUCT

NALCO 71-D5 ANTIFOAM

Emergency Telephone Number

Medical (800) 462-5378 (24 hours)

(800) I-M-ALERT

SECTION 7 PHYSICAL AND CHEMICAL PROPERTIES

(CONTINUED)

FLASH POINT:	260 Degrees F (PMCC)	ASTM D-93
VAPOR PRESSURE:	0.6 mm Hg @ 68 Degrees F	
	1.3 mm Hg @ 100 Degrees F	
	4.4 mm Hg @ 150 Degrees F	ASTM D-323

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

SECTION 8 FIRE AND EXPLOSION INFORMATION

FLASH POINT: 260 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: Containers exposed in a fire should be cooled with water to prevent vapor pressure buildup leading to a rupture.

SECTION 9 REACTIVITY INFORMATION

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.

STORAGE: Product should be stored at temperatures above 65 degrees F. If solidified, warm slowly (DO NOT USE LIVE STEAM) to 70-100 degrees F. Freezing does not reduce the efficiency of the product when properly reliquified.

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

SECTION 10 PERSONAL PROTECTION EQUIPMENT

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.



MATERIAL SAFETY DATA SHEET

PRODUCT

NALCO 71-D5 ANTIFOAM

Emergency Telephone Number

Medical (800) 462-5378 (24 hours)

(800) I-M-ALERT

SECTION 10 PERSONAL PROTECTION EQUIPMENT

(CONTINUED)

PROTECTIVE EQUIPMENT: Use impermeable gloves and chemical splash goggles when attaching feeding equipment or doing maintenance.

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 11 SPILL AND DISPOSAL INFORMATION

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 14.

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 14.

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 incinerated in accordance with local, state and federal regulations.

SECTION 12 ENVIRONMENTAL INFORMATION

BIOLOGICAL OXYGEN DEMAND (5-day BOD): 102,440 mg/L

CHEMICAL OXYGEN DEMAND (COD): 308,460 mg/L



MATERIAL SAFETY DATA SHEET

PRODUCT

NALCO 71-D5 ANTIFOAM

Emergency Telephone Number

Medical (800) 462-5378 (24 hours)

(800) 1-M-ALERT

SECTION 12 ENVIRONMENTAL INFORMATION

(CONTINUED)

TOTAL ORGANIC CARBON (TOC): 195,870 mg/L

AQUATIC DATA:

Results below are based on the product.

96 hour static acute LC₅₀ to Bluegill Sunfish = 121 ppm

TOXICITY RATING: Slightly toxic

96 hour static acute LC₅₀ to Rainbow Trout = 310 mg/L

96 hour no observed effect concentration is Less than 78 mg/L based on no mortality or abnormal effects.

TOXICITY RATING: Slightly toxic

48 hour static acute LC₅₀ to Daphnia Magna = 220 mg/L

48 hour static acute EC₅₀ to Daphnia Magna = 130 mg/L

48 hour no observed effect concentration is 16 mg/L based on no mortality or abnormal effects.

TOXICITY RATING: Toxic

96 hour static acute LC₅₀ to Fathead minnow = 190 mg/L

96 hour no observed effect concentration is less than 100 mg/L based on no mortality or abnormal effects.

TOXICITY RATING: Slightly toxic

If released into the environment, see CERCLA in Section 14.

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 TRANSPORTATION INFORMATION

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



MATERIAL SAFETY DATA SHEET

PRODUCT

NALCO 71-D5 ANTIFOAM

Emergency Telephone Number

Medical (800) 462-5378 (24 hours)

(800) I-M-ALERT

SECTION 13 TRANSPORTATION INFORMATION

(CONTINUED)

ALL TRANSPORTATION MODES : PRODUCT IS NOT REGULATED
DURING TRANSPORTATION

SECTION 14 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 ingredients in this product are hazardous and the reasons are shown below.

Kerosene - Skin irritant

Straight run middle distillates - Skin irritant

Kerosene (oil mist) = TWA 5 mg/m³, STEL 10 mg/m³ ACGIH/TLV

Paraffin wax (fume) = TWA 2 mg/m³ ACGIH/TLV

Straight run middle distillates (oil mist) = TWA 5 mg/m³,
STEL 10 mg/m³ ACGIH/TLV

Kerosene (oil mist) = TWA 5 mg/m³ OSHA/PEL

Straight run middle distillates (oil mist) = TWA 5 mg/m³ OSHA/PEL

Kerosene = TWA 100 ppm TLV

Manufacturer's recommendation

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

XX Immediate (acute) health hazard



MATERIAL SAFETY DATA SHEET

PRODUCT

NALCO 71-D5 ANTIFOAM

Emergency Telephone Number

Medical (800) 462-5378 (24 hours)

(800) I-M-ALERT

SECTION 14 REGULATORY INFORMATION

(CONTINUED)

- 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 176.210 defoaming agents used in the manufacture of paper and paperboard.

RESOURCE CONSERVATION AND RECOVERY ACT (RCRA), 40 CFR 261 SUBPART C & D:

Consult Section 11 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 contains the following ingredients covered by the Clean Air Act:

Polypropylene glycol - Section 111

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.



MATERIAL SAFETY DATA SHEET

PRODUCT

NALCO 71-D5 ANTIFOAM

Emergency Telephone Number

Medical (800) 462-5378 (24 hours)

(800) I-M-ALERT

SECTION 14 REGULATORY INFORMATION

(CONTINUED)

STATE RIGHT TO KNOW LAWS:

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

Kerosene	8008-20-6
Oxyalkylate	Trade secret
Paraffin wax	8002-74-2
Polyglycol	Trade secret
Polyglycol acid ester	Trade secret
Straight run middle distillate	64741-44-2

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
Kerosene	8008-20-6	10-20
Paraffin wax	8002-74-2	1-5
Straight run middle distillates	64741-44-2	40-70

SECTION 15 ADDITIONAL INFORMATION

None

SECTION 16 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



MATERIAL SAFETY DATA SHEET

PRODUCT

NALCO 71-D5 ANTIFOAM

Emergency Telephone Number

Medical (800) 462-5378 (24 hours)

(800) I-M-ALERT

SECTION 16 RISK CHARACTERIZATION

(CONTINUED)

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 17 BIBLIOGRAPHY

ANNUAL REPORT ON CARCINOGENS, U.S. Department of Health and Human Services, Public Health Service, PB 33-135855, 1983.

CASARETT AND DOULL'S TOXICOLOGY, THE BASIC SCIENCE OF POISONS, Doull, J., Klaassen, C. D., and Admur, M. O., eds., Macmillan Publishing Company, Inc., N. Y., 4th edition, 1996.

CHEMICAL HAZARDS OF THE WORKPLACE, Proctor, N. H., and Hughes, J. P., eds., J. P. Lipincott Company, N.Y., 3rd edition, 1991.

DANGEROUS PROPERTIES OF INDUSTRIAL MATERIALS, Sax, N. Irving, ed., Van Nostrand Reinhold Company, N.Y., 9th edition, 1996.

IARC MONOGRAPHS ON THE EVALUATION OF THE CARCINOGENIC RISK OF CHEMICALS TO MAN, Geneva: World Health Organization, International Agency for Research on Cancer.

PATTY'S INDUSTRIAL HYGIENE AND TOXICOLOGY, Clayton, G. D., Clayton, F. E., eds., John Wiley and Sons, N. Y., 4th edition, Vol. 2 A-F, 1994.

REGISTRY OF TOXIC EFFECTS ON CHEMICAL SUBSTANCES, U.S. Department of Health and Human Services, Public Health Service, Center for Disease Control, National Institute for Occupational Safety and Health, 1983 supplement of 1981-1982 edition, Vol. 1-3, OH, 1984.

Title 29 Code of Federal Regulations Part 1910, Subpart Z, Toxic and Hazardous Substances, Occupational Safety and Health Administration (OSHA).

THRESHOLD LIMIT VALUES FOR CHEMICAL SUBSTANCES AND PHYSICAL AGENTS IN THE WORKROOM ENVIRONMENT WITH INTENDED CHANGES, American Conference of Governmental Industrial Hygienists, OH.



MATERIAL SAFETY DATA SHEET

PRODUCT

NALCO 71-D5 ANTIFOAM

Emergency Telephone Number

Medical (800) 462-5378 (24 hours)

(800) I-M-ALERT

SECTION 17 BIBLIOGRAPHY

(CONTINUED)

PREPARED BY: William S. Utley, PhD., DABT, Manager, Product Safety
DATE CHANGED: 01/23/96 DATE PRINTED: 10/11/96