



**NALCO/EXXON
ENERGY CHEMICALS, L.P.**

MATERIAL SAFETY DATA SHEET

PRODUCT

NALCO 303MC FUEL OIL TREATMENT

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

SECTION 01 CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

TRADE NAME: NALCO 303MC FUEL OIL TREATMENT

DESCRIPTION: A hydrocarbon solution of an amine substituted resin and an imidazoline.

NFPA 704M/HMIS RATING: 3/3 HEALTH 2/2 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. One or more is being claimed as a trade secret under OSHA's Hazard Communication Rule, 29 CFR 1910.1200. Consult Section 15 for the nature of the hazard(s).

INGREDIENT(S)	CAS #	APPROX. %
Amine substituted resin	Trade secret	40-70
Heavy aromatic naphtha	64742-94-5	20-40
1-(2-hydroxyethyl)-2-alkyl(C-18)-2-imidazoline	61791-39-7	25

SECTION 03 HAZARD IDENTIFICATION

EMERGENCY OVERVIEW:

DANGER: Corrosive. Harmful if swallowed, inhaled, or absorbed through the skin. Causes severe eye and skin damage. Do not get in eyes, on skin, or on clothing. Wear goggles or face shield and rubber gloves when handling. Keep away from heat and open flame. Keep container closed when not in use. Avoid 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, Inhalation

EYE CONTACT: Corrosive to the eyes with possible permanent damage depending on the length of exposure and on the first aid action given.

SKIN CONTACT: Corrosive to the skin with possible permanent damage depending on the length of exposure and on the first aid action given.

INGESTION: Can be harmful.

INHALATION: Inhalation of vapor may be harmful.

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 04 FIRST AID INFORMATION



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 EYES: Immediately flush for at least 15 minutes while holding eyelids open. Call a physician at once.
 SKIN: Immediately flush with water for at least 15 minutes. For a large splash, flood body under a shower. Call a physician at once.
 INGESTION: Do not induce vomiting. Give water. Call a physician at once.
 INHALATION: Remove to fresh air. Treat symptoms. Call a physician at once.

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.

NOTE TO PHYSICIAN: Probable mucosal damage may contraindicate the use of gastric lavage. Measures against circulatory shock, respiratory depression and convulsions may be needed.

SECTION 05 FIRE FIGHTING MEASURES

FLASH POINT: 151 Degrees F (PMCC) ASTM D-56

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 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.



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SECTION 08 EXPOSURE CONTROLS AND PERSONAL PROTECTION

RESPIRATORY PROTECTION: If it is possible to generate significant levels of vapors or mists, a NIOSH approved or equivalent respirator is recommended.

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 or mists may be released.

PROTECTIVE EQUIPMENT: Wear impermeable gloves, boots, apron and a face shield with chemical splash goggles. Examples of impermeable gloves available on the market are neoprene, nitrile, PVC, natural rubber, viton and butyl (compatibility studies have not been performed). A full slicker suit is recommended if gross exposure is possible.

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:	Clear to slightly hazy, amber	FORM:	Liquid
ODOR:	Hydrocarbon		
DENSITY:	7.6-7.4 lbs/gal.		
SOLUBILITY IN WATER:	Insoluble		
SPECIFIC GRAVITY:	0.91-0.93 @ 60 Degrees F		
VISCOSITY:	106 cts/97 cps/489 SUS @ 60 Degrees F		ASTM D-445
POUR POINT:	Less than -22 Degrees F		ASTM D-97
FLASH POINT:	151 Degrees F (PMCC)		ASTM D-93
PERCENT VOLATILE:	2 @ 75 Degrees F		
VAPOR PRESSURE:	Less than 5.2 mm Hg @ 100 Degrees F		ASTM D-5191

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, NOx, may be formed. Do not breathe smoke or fumes. Wear suitable protective equipment.



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SECTION 11 TOXICOLOGICAL INFORMATION

TOXICITY STUDIES: Toxicity studies have not been conducted on this product, but toxicity studies of the ingredient(s) in Section 2 have been reviewed. The results are shown below.

ACUTE ORAL TOXICITY (ALBINO RATS):
Imidazoline LD50 = 1,932 mg/kg

ACUTE DERMAL TOXICITY (ALBINO RABBITS):
Imidazoline LD50 = Greater than 2,000 mg/kg

PRIMARY SKIN IRRITATION TEST (ALBINO RABBITS): Imidazoline
SKIN IRRITATION INDEX DRAIZE RATING: 5.0/8.0 Corrosive (escar formation)

COMMENTS: The irritation was characterized by well-defined to moderate-severe erythema, eschar formation, and moderate to severe edema.

PRIMARY EYE IRRITATION TEST (ALBINO RABBITS): Imidazoline

COMMENTS: Only one rabbit was tested. Due to severe irritation (corneal opacity, iritis, and conjunctival blistering) the test was terminated after 24 hours.

OTHER TOXICITY RESULTS: Mutagenicity assays (Ames test, chromosome aberration assay, unscheduled DNA synthesis assay) with the imidazoline were negative.

CHRONIC TOXICITY RESULTS: A 5-day repeated dose oral toxicity study with the imidazoline resulted in a NOAEL of 100 mg/kg.

In a teratology study, doses of 15, 65, and 100 mg/kg/day of the imidazoline were administered to pregnant rats during days 6-15 of gestation by gastric gavage. The doses of 65 and 100 mg/kg/day produced maternal toxicity but not developmental toxicity. The NOAEL for material toxicity was 15 mg/kg/day, while the NOAEL for developmental toxicity was 100 mg/kg/day.

SECTION 12 ECOLOGICAL INFORMATION

ENVIRONMENTAL HAZARDS: This pesticide is toxic to fish. Do not discharge into lakes, streams, ponds or public waters. Do not contaminate water by cleaning of equipment or disposal of wastes.

AQUATIC DATA:

96-hour static acute LC50 to Bluegill Sunfish = 1.09 ppm

95% Confidence Limit of 96 hour LC50 = 0.93 - 1.24 ppm

TOXICITY RATING: Toxic

96-hour static acute LC50 to Rainbow Trout = 1.17 ppm

TOXICITY RATING: Toxic



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48 hour static acute EC50 to Daphnia magna = 1.5 mg/L

48 hour no observed effect concentration is Less than 1.3 mg/L based on no mortality or abnormal effects.

OTHER STUDIES:

8-day dietary LC50 - Bobwhite Quail = Greater than 5,000 ppm

8-day dietary LC50 - Mallard Ducks = Greater than 5,000 ppm

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

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

Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

METAL CONTAINERS: Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

PLASTIC CONTAINERS: Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or if allowed by state and local authorities, by burning. If burned, stay out of smoke.

SECTION 14 TRANSPORTATION INFORMATION

PROPER SHIPPING NAME/HAZARD CLASS MAY VARY BY PACKAGING, PROPERTIES, AND MODE OF TRANSPORTATION. THIS PRODUCT IS REGULATED IN THE U.S. ONLY WHEN SHIPPED IN CONTAINERS EXCEEDING 119 GALLONS OR 882 POUNDS CAPACITY OR WHEN THE PACKAGE EXCEEDS THE REPORTABLE QUANTITY. TYPICAL PROPER SHIPPING NAMES FOR THIS PRODUCT ARE:

ALL TRANSPORTATION MODES : COMBUSTIBLE LIQUID, N.O.S.
(UNLESS SPECIFIED BELOW)

AIR TRANSPORTATION : PRODUCT IS NOT REGULATED
(IATA/ICAO) DURING TRANSPORTATION

MARINE TRANSPORTATION : PRODUCT IS NOT REGULATED
(IMDG/IMO) DURING TRANSPORTATION

UN/ID NO : NA 1993
HAZARD CLASS - PRIMARY : 3 - COMBUSTIBLE LIQUID
PACKING GROUP : III



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IMDG PAGE NO : N/A
IATA PACKING INSTRUCTION : CARGO: N/A
IATA CARGO AIRCRAFT LIMIT : NO LIMIT (MAX NET QUANTITY PER PACKAGE)
FLASH POINT : 151 F 66.1 C
TECHNICAL NAME(S) : AROMATIC HYDROCARBONS
RQ LBS (PER PACKAGE) : NONE
RQ COMPONENT(S) : NONE

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

Amine substituted resin - Eye/skin irritant
Heavy aromatic naphtha - Irritant, combustible
1-(2-hydroxyethyl)-2-alkyl(C-18)-2-imidazoline - Corrosive

Heavy aromatic solvent = 100 ppm TLV
Manufacturer's recommendation

CERCLA/SUPERFUND, 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
-- Delayed (chronic) health hazard
XX 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):



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The active ingredient is regulated under FIFRA and exempted under TSCA. All the inerts are on the Inventory List.

FEDERAL INSECTICIDE, FUNGICIDE AND RODENTICIDE ACT (FIFRA), 7 USC 135: EPA Reg. No. 68708-3. This product is registered for use as a microorganism control chemical. In all cases follow instructions on the product label.

REGISTERED WITH THE U. S. EPA, OFFICE OF FUEL AND FUEL ADDITIVE REGISTRATION, as a fuel additive.

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 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:
This product is regulated under FIFRA and is exempt from Right To Know Laws.

INTERNATIONAL REGULATIONS:

This product is a registered biocide and is exempt from WHMIS under The House of Commons of Canada Bill C-70.

SECTION 16 OTHER INFORMATION

Nalco internal number F08515

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: MODERATE.
- * The environmental risk is: LOW.



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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.

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.

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