

# GUIDE TO USING THE NCP PRODUCT SCHEDULE NOTEBOOK

OCTOBER 2009  
(10/06/2009)

## FOREWORD

The U.S. Environmental Protection Agency's (EPA) Office of Emergency Management Regulatory and Policy Division compiled the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) Product Schedule, as required by the Clean Water Act, the Oil Pollution Act of 1990 (OPA 90), and the NCP. This NCP Product Schedule Notebook contains a compilation of product bulletins summarizing technical information and test results for those products listed on EPA's NCP Product Schedule.

Manufacturers/contacts of products on the Schedule are required to amend their technical product bulletins whenever there are changes in product formulation, application rates, and handling procedures. Updates to this Notebook, such as the addition of new products to the Schedule, or modifications and/or deletions of listed products, will be indicated in bold.

For further information, please leave a message on EPA's NCP Information Line at (202) 260-2342, or contact Leigh DeHaven (EPA Office of Emergency Management (OEM)) at (202) 564-1974 or Nick Nichols (EPA OEM) at (202) 564-1970.

Written requests may be mailed to:

Product Schedule Manager  
U.S. Environmental Protection Agency  
Office of Emergency Management (OEM)  
Regulation and Policy Development Division  
Ariel Rios Building  
1200 Pennsylvania Avenue, NW (Room 6450EE, Mail Code 5104A)  
Washington, DC 20460

TECHNICAL PRODUCT BULLETIN #D-1  
USEPA, OIL PROGRAM CENTER  
ORIGINAL LISTING DATE: MARCH 10, 1978  
REVISED LISTING DATE: DECEMBER 18, 1995  
“COREXIT® EC9527A”  
(formerly COREXIT 9527)

I. NAME, BRAND, OR TRADEMARK  
COREXIT® EC9527A  
Type of Product: Dispersant

II. NAME, ADDRESS, AND TELEPHONE NUMBER OF MANUFACTURER/CONTACT  
Nalco Energy Services, L.P.  
P.O. Box 87  
Sugar Land, TX 77487-0087  
Customer Services:  
Phone: (800) 333-3714  
Product Management:  
Office: (281) 263-7336  
Mobile: (281) 202-8126  
E-mail: [kapreston@nalco.com](mailto:kapreston@nalco.com)  
(Ms. Kathryn Preston)

III. NAME, ADDRESS, AND TELEPHONE NUMBER OF PRIMARY DISTRIBUTORS  
Nalco Energy Services, L.P.  
P.O. Box 87  
Sugar Land, TX 77487-0087  
Customer Services:  
Phone: (800) 333-3714  
Product Management:  
Office: (281) 263-7336  
Mobile: (281) 202-8126  
E-mail: [kapreston@nalco.com](mailto:kapreston@nalco.com)  
(Ms. Kathryn Preston)

IV. SPECIAL HANDLING AND WORKER PRECAUTIONS FOR STORAGE AND FIELD APPLICATION

1. Flammability:

COREXIT® EC9527A is not classified as flammable by either DOT or IMO regulations.

2. Ventilation:

Avoid prolonged breathing of vapors. Use with ventilation equal to unobstructed outdoors in moderate breeze.

3. Skin and eye contact; protective clothing; treatment in case of contact:

Avoid eye contact. In case of eye contact, immediately flush eyes with large amounts of water for

at least 15 minutes. Get prompt medical attention.

Avoid contact with skin and clothing. In case of skin contact, immediately flush with large amounts of water, and soap if available. Remove contaminated clothing, including shoes, after flushing has begun. If irritation persists, seek medical attention. For open systems where contact is likely, wear long sleeve shirt, chemical resistant gloves, and chemical protective goggles.

4.a. Maximum storage temperature: 170°F

4.b. Minimum storage temperature: -30°F

4.c. Optimum storage temperature range: 40°F to 100°F

4.d. Temperatures of phase separations and chemical changes:

COREXIT® EC9527A is not adversely affected by changes in storage temperature unless evaporation is allowed to occur.

## V. SHELF LIFE

The shelf life of unopened drums of COREXIT® EC9527A is unlimited. Containers should always be capped when not in use to prevent contamination and evaporation of solvents.

## VI. RECOMMENDED APPLICATION PROCEDURE

### 1. Application Method:

COREXIT® EC9527A is most effectively applied by aircraft, however, application with boat spray booms, boat fire monitors, and by hand held sprayers and back packs has been successfully done on a number of spills and trials.

**Aerial Spraying** - Aircraft provide the most rapid method of applying dispersants to an oil spill and a variety of aircraft can be used for spraying. For aerial spraying, COREXIT® EC9527A is applied undiluted. Typical application altitudes of 30 to 50 feet have been used, although higher altitudes may be effective under certain conditions. Actual effective altitudes will depend on the application equipment, weather and aircraft. Careful selection of spray nozzles is critical to achieve desired dose levels, since droplet size must be controlled. Many nozzles used for agricultural spraying are of low capacity and produce too fine a spray. A quarter-inch open pipe may be all that is necessary if the aircraft travels at 120 mph (104 knots) or more, since the air shear at these speeds will be sufficient to break the dispersant into the proper sized droplets.

**Boat Spraying** - COREXIT® EC9527A may be applied by workboats equipped with spray booms mounted ahead of the bow wake or as far forward as possible. The preferred and most effective method of application from a workboat is to use a low-volume, low-pressure pump so the chemical can be applied undiluted. Spray equipment designed to provide a five to ten percent diluted dispersant solution to the spray booms can also be used. COREXIT® EC9527A should be applied as droplets, not fogged or atomized. Natural wave or boat wake action usually provides adequate mixing energy to disperse the oil.

Recent tests have indicated that a fire monitor modified with a screen cap for droplet size may also be useful for applying COREXIT® EC9527A. Due to the increased volume output and the greater reach of the fire monitor, significantly more area can be covered in a shorter period of time.

**System Calibration** - Spray systems should be calibrated at temperatures anticipated to insure successful application and dosage control.

## 2. Concentration/Application Rate:

A treatment rate of about 2 to 10 U.S. gallons per acre, or a dispersant to oil ratio of 1:50 to 1: 10 is recommended. This rate varies depending on the type of oil, degree of weathering, temperature, and thickness of the slick.

## 3. Conditions for Use:

As with all dispersants, timely application ensures the highest degree of success. Early treatment with COREXIT® EC9527A, even at reduced treat rates, can reduce the “mousse” forming tendencies of the spilled oil. COREXIT® EC9527A is useful on oil spills in salt water.

## VII. TOXICITY AND EFFECTIVENESS

### a. Toxicity:

<u>Material Tested</u>	<u>Species</u>	<u>LC50 (ppm)</u>
COREXIT® EC9527A	Menidia beryllina	14.57 96-hr
	Mysidopsis bahia	24.14 48-hr
No. 2 Fuel Oil	Menidia beryllina	10.72 96-hr
	Mysidopsis bahia	16.12 48-hr
COREXIT® EC9527A & No. 2 Fuel Oil (1:10)	Menidia beryllina	4.49 96-hr
	Mysidopsis bahia	6.60 48-hr
Reference Toxicant (DSS)	Menidia beryllina	7.07 96-hr
	Mysidopsis bahia	9.82 48-hr

NOTE: This toxicity data was derived using the concentrated product. See Section VI of this bulletin for information regarding the manufacturer’s recommendations for concentrations and application rates for field use.

### b. Effectiveness:

#### SWIRLING FLASK DISPERSANT EFFECTIVENESS TEST WITH SOUTH LOUISIANA (S/L) AND PRUDHOE BAY (P/B) CRUDE OIL

<u>Oil</u>	<u>Effectiveness (%)</u>
Prudhoe Bay Crude	37.4
South Louisiana Crude	63.4
Average of Prudhoe Bay and South Louisiana Crudes	50.4

## VIII. MICROBIOLOGICAL ANALYSIS

NA

## IX. PHYSICAL PROPERTIES

1. Flash Point: 163°F
2. Pour Point: < - 40°F
3. Viscosity: 160 cst at 32°F
4. Specific Gravity: 0.98 - 1.02
5. pH: 6.1
6. Surface Active Agents: CONFIDENTIAL
7. Solvents: Water, Propylene Glycol, 2-Butoxyethanol
8. Additives: CONFIDENTIAL
9. Solubility: Complete

X. ANALYSIS FOR HEAVY METALS, CYANIDE, AND CHLORINATED HYDROCARBONS

<u>Compound</u>	<u>Concentration (ppm)</u>
Arsenic	<0.005
Cadmium	<0.01
Chromium	1.0
Copper	<0.2
Lead	<0.1
Mercury	<0.003
Nickel	<0.1
Zinc	0.1
Cyanide	<0.01
Chlorinated Hydrocarbons	<0.01

TECHNICAL PRODUCT BULLETIN #D-4  
USEPA, OIL PROGRAM CENTER  
ORIGINAL LISTING DATE: APRIL 13, 1994  
REVISED LISTING DATE: DECEMBER 18, 1995  
"COREXIT® EC9500A"  
(formerly COREXIT 9500)

I. NAME, BRAND, OR TRADEMARK  
COREXIT® EC9500A  
Type of Product: Dispersant

II. NAME, ADDRESS, AND TELEPHONE NUMBER OF MANUFACTURER/CONTACT  
Nalco Energy Services, L.P.  
P.O. Box 87  
Sugar Land, TX 77487-0087  
Customer Services:  
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(Ms. Kathryn Preston)

IV. SPECIAL HANDLING AND WORKER PRECAUTIONS FOR STORAGE AND FIELD APPLICATION

1. Flammability:

IMO - Non-flammable; DOT - Non-hazardous.

2. Ventilation:

Use with ventilation equal to unobstructed outdoors in moderate breeze.

3. Skin and eye contact; protective clothing; treatment in case of contact:

Avoid eye contact. In case of eye contact, immediately flush eyes with large amounts of water for at least 15 minutes. Get prompt medical attention.

Avoid contact with skin and clothing. In case of skin contact, immediately flush with large amounts of water, and soap if available. Remove contaminated clothing, including shoes, after flushing has begun. If irritation persists, seek medical attention.

For open systems where contact is likely, wear long sleeve shirt, chemical resistant gloves, and chemical protective goggles.

4.a. Maximum storage temperature: 170°F

4.b. Minimum storage temperature: -30°F

4.c. Optimum storage temperature range: 40°F to 100°F

4.d. Temperatures of phase separations and chemical changes: None

## V. SHELF LIFE

The shelf life of unopened drums of COREXIT® EC9500A is unlimited. Containers should always be capped when not in use to prevent contamination and evaporation of solvents.

## VI. RECOMMENDED APPLICATION PROCEDURE

### 1. Application Method:

COREXIT® EC9500A contains the same surfactants present in COREXIT® EC9527A and a new improved oleophilic solvent delivery system.

**Aerial Spraying** - Aircraft provide the most rapid method of applying dispersants to an oil spill and a variety of aircraft can be used for spraying. For aerial spraying, COREXIT® EC9500A is applied undiluted. Typical application altitudes of 30 to 50 feet have been used, although higher altitudes may be effective under certain conditions. Actual effective altitudes will depend on the application equipment, weather and aircraft. Careful selection of spray nozzles is critical to achieve desired dose levels, since droplet size must be controlled. Many nozzles used for agricultural spraying are of low capacity and produce too fine a spray. A quarter-inch open pipe may be all that is necessary if the aircraft travels at 120 mph (104 knots) or more, since the air shear at these speeds will be sufficient to break the dispersant into the proper sized droplets.

**Boat Spraying** - COREXIT® EC9500A may also be applied by workboats equipped with spray booms mounted ahead of the bow wake or as far forward as possible. The preferred and most effective method of application from a workboat is to use a low-volume, low-pressure pump so the chemical can be applied undiluted. Spray equipment designed to provide a five to ten percent diluted dispersant solution to the spray booms can also be used. COREXIT® EC9500A should be applied as droplets, not fogged or atomized. Natural wave or boat wake action usually provides adequate mixing energy to disperse the oil.

Recent tests have indicated that a fire monitor modified with a screen cap for droplet size control may also be useful for applying COREXIT® EC9500A. Due to the increased volume output and the greater reach of the fire monitor, significantly more area can be covered in a shorter period of time.

**System Calibration** - Spray systems should be calibrated at temperatures anticipated to insure successful application and dosage control. Application at sub-freezing temperatures may require larger nozzle, supply lines and orifices due to higher product viscosity.

### 2. Concentration/Application Rate:

A treatment rate of about 2 to 10 U.S. gallons per acre, or a dispersant to oil ratio of 1:50 to 1:10 is recommended. This rate varies depending on the type of oil, degree of weathering, temperature, and thickness of the slick.

### 3. Conditions for Use:

As with all dispersants, timely application ensures the highest degree of success. Early treatment with COREXIT® EC9500A, even at reduced treat rates, can also counter the “mousse” forming tendencies of the spilled oil. COREXIT® EC9500A is useful on oil spills in salt water.

## VII. TOXICITY AND EFFECTIVENESS

### a. Toxicity

<u>Material Tested</u>	<u>Species</u>	<u>LC50 (ppm)</u>
COREXIT® EC9500A	Menidia beryllina	25.20 96-hr
	Mysidopsis bahia	32.23 48-hr
No. 2 Fuel Oil	Menidia beryllina	10.72 96-hr
	Mysidopsis bahia	16.12 48-hr
COREXIT® EC9500A & No. 2 Fuel Oil (1:10)	Menidia beryllina	2.61 96-hr
	Mysidopsis bahia	3.40 48-hr
Reference Toxicant (SDS)	Menidia beryllina	7.07 96-hr
	Mysidopsis bahia	9.82 48-hr

NOTE: This toxicity data was derived using the concentrated product. See Section VI of this bulletin for information regarding the manufacturer’s recommendations for concentrations and application rates for field use.

### b. Effectiveness:

#### SWIRLING FLASK DISPERSANT EFFECTIVENESS TEST WITH SOUTH LOUISIANA (S/L) AND PRUDHOE BAY (P/B) CRUDE OILS

<u>Oil</u>	<u>Effectiveness (%)</u>
Prudhoe Bay Crude	45.3
South Louisiana Crude	54.7
Average of Prudhoe Bay and South Louisiana Crudes	50.0

## VIII. MICROBIOLOGICAL PROPERTIES

NA

## IX. PHYSICAL PROPERTIES

1. Flash Point: 181.4°F
2. Pour Point: <-71°F
3. Viscosity: 22.5 cst at 104°F
4. Specific Gravity: 0.95 at 60°F
5. pH: 6.2
6. Chemical Name and Percentage by Weight of the Total Formulation: CONFIDENTIAL
7. Surface Active Agents: CONFIDENTIAL
8. Solvents: CONFIDENTIAL
9. Additives: None
10. Solubility: Miscible

X. ANALYSIS FOR HEAVY METALS, CYANIDE, AND CHLORINATED  
HYDROCARBONS

<u>Compound</u>	<u>Concentration (ppm)</u>
Arsenic	0.16
Cadmium	ND
Chromium	0.03
Copper	0.10
Lead	ND
Mercury	ND
Nickel	ND
Zinc	ND
Cyanide	ND
Chlorinated hydrocarbons	ND