



Nalcool 2000

Material Safety Data Sheet

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SECTION I - Material Identity

Item Name	
Part Number/Trade Name	NALCOOL 2000 COOLING TREATMENT
National Stock Number	6850P2055
CAGE Code	89524
Part Number Indicator	A
MSDS Number	180940
HAZ Code	B

SECTION II - Manufacturer's Information

Manufacturer Name	NALCO CHEMICAL COMPANY
Street	ONE NALCO CENTER
City	NAPERVILLE
State	IL
Country	US
Zip Code	60583-1198
Emergency Phone	312-920-1510
Information Phone	708-305-1000

MSDS Preparer's Information

Date MSDS Prepared/Revised	29FEB92
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Date of Technical Review	10SEP86
Active Indicator	N

Alternate Vendors

Vendor #1 CAGE	89524
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SECTION III - Physical/Chemical Characteristics

Specification Number	N/K
Hazard Storage Compatibility Code	L1-N1
Appearance/Odor	CLEAR-HAZY DEEP RED LIQUID; NO ODOR
Boiling Point	212F
Vapor Density	9.3
Specific Gravity	1.12
Solubility in Water	COMPLETE
Chemical pH	11.1
Container Pressure Code	4
Temperature Code	8
Product State Code	L

SECTION IV - Fire and Explosion Hazard Data

Flash Point Method	UNK
Lower Explosion Limit	N/R
Upper Explosion Limit	N/R
Extinguishing Media	N/A
Special Fire Fighting Procedures	NONE SPECIFIED
Unusual Fire/Explosion Hazards	MAY EVOLVE OXIDES OF NITROGEN UNDER FIRE

SECTION V - Reactivity Data

Stability	YES
Stability Conditions to Avoid	NONE LISTED BY MFR
Materials to Avoid	NITROUS ACID, ORGANIC/INORGANIC NITRITES OR ATMOSPHERES W/HIGH NITROUS OXIDE CONCENTRATIONS
Hazardous Decomposition Products	IN EVENT OF COMBUSTION: CO, CO2, NOX MAY BE FORMED. DO NOT BREATHE SMOKE/FUMES. WEAR SUITABLE PROTECTIVE EQUIPMENT
Hazardous Polymerization	NO
Polymerization Conditions to Avoid	N/K

SECTION VI - Health Hazard Data

Route of Entry: Skin	YES
Route of Entry: Ingestion	YES
Health Hazards - Acute and Chronic	INGEST: MAY CAUSE DEATH, REPEATED INGESTION CAUSES BLOOD PRESSURE TO DROP, RAPID PULSE, HEADACHES, AND VISUAL DISTURBANCES. CAUSES CENTRAL NERVOUS SYSTEM EFFECTS
Symptoms of Overexposure	EYES/SKIN: MILD SHORT-LASTING IRRITATION INGEST: CAN DAMAGE KIDNEY. CAN BE HARMFUL OR FATAL
Emergency/First Aid Procedures	EYES: FLUSH W/H2O FOR 15 MIN. CALL PHYSICIAN SKIN: FLUSH W/H2O FOR 15 MIN. INGEST: INDUCE VOMITING. GIVE WATER. CALL PHYSICIAN AT ONCE. INHALE: REMOVE TO FRESH AIR. TREAT SYMPTOMS. CALL PHYSICIAN. IF UNCONSCIOUS OR HAVING TROUBLE BREATHING OR IN CONVULSIONS DO NO INDUCE VOMITING OR GIVE WATER

SECTION VII - Precautions for Safe Handling and Use

Steps if Material Released/Spilled	WEAR PROTECTIVE EQUIP. PROVIDE VENTILATION; SM SPILLS (LIQ): CONTAIN W/ABSRBNT MATL, SUCH AS DUST, CALY, SOIL OR OTHER INERT ABSORBENT. SHOVEL RECLAIMD WASTE INTO RECVRY DRUM FOR DISPOSAL; LG SPILLS: DIKE TO PREVNT FURTHR MOVMT & RECLAIM INTO SALVAGE TANKS
Waste Disposal Method	PER MFR, IF THIS PRODUCT BECOMES A WASTE, IT DOES NOT MEET THE CRITERIA OF HAZARDOUS WASTE AS DEFINED UNDER RCRA; AS A NON-HAZARDOUS LIQ WASTE, IT SHOULD BE SOLID IF BEFORE DISPOSAL TO A SANITARY LANDFILL. CAN BE DEEP-WELL INJECTED IAW FED/ST/LOC REGS
Other Precautions	STORE IN COOL, DRY, WELL VENTILATED AREA. PROTECT FROM PHYSICAL DAMAGE. AVOID ANY PHYSICAL CONTACT. KEEP CONTAINERS TIGHTLY CLOSED

SECTION VIII - Control Measures

Respiratory Protection	NONE SHOULD BE NEEDED
Ventilation	GENERAL VENTILATION IS RECOMMENDED
Protective Gloves	IMPERMEABLE (NEOPRENE, NITRILE, ECT.)
Eye Protection	CHEM SPLASH GOGGLES
Other Protective Equipment	FULL WORK CLOTHING TO PREVENT REPEATED OR PROLONGED CONTACT
Work Hygenic Practices	IF CLOTHING CONTAMINATED REMOVE CLOTHING AND THOROUGHLY WASH THE AFFECTED AREA. LAUNDRY CONTAMINATED CLOTHING
Disposal Code	0

SECTION IX - Label Data

Protect Eye	YES
Protect Skin	YES
Protect Respiratory	NO
Chronic Indicator	YES
Contact Code	SLIGHT
Fire Code	UNKNOWN
Health Code	UNKNOWN
React Code	UNKNOWN
Specific Hazard and Precaution	HARMFUL/FATAL IF SWALLOWED IN LARGE DOSES. MAY CAUSE IRRITATION IRRITATION TO SKIN AND EYES. CAUSES BLOOD SYSEM DISORDERS WHEN SWALLOWED.

SECTION X - Transportation Data

Container Quantity	55
Unit of Measure	GL

SECTION XI - Site Specific/Reporting Information

Volatile Organic Compounds (P/G)	0
Volatile Organic Compounds (G/L)	0

SECTION XII - Ingredients/Identity Information

Ingredient #	01
Ingredient Name	SODIUM NITRITE; CAS #7632-00-0; WT% RANGE;1-10% (OLD MSDS

	CITED 7% OF NANO*2)
CAS Number	7632000
NIOSH Number	RA1225000
Proprietary	NO
Percent	5
ACGIH TLV	NOT KNOWN (N/K)
Ingredient #	02
Ingredient Name	SODIUM MERCAPTOBENZOTHAZOLE; CAS #2492-26-4; WT % RANGE:1-10%
CAS Number	2492264
NIOSH Number	DL6825000
Proprietary	NO
Percent	5
ACGIH TLV	N/K
Ingredient #	03
Ingredient Name	SODIUM TETRABORATE; CAS #1330-43-4; WT % RANGE 1-10%
CAS Number	1330434
NIOSH Number	VZ2275000
Proprietary	NO
Percent	5
ACGIH TLV	N/K

NALCOOL® 2000

Diesel Engine Corrosion Inhibitor



Product Bulletin

PRODUCT BENEFITS

- Designed to protect cast iron diesel engine cooling systems
- Contains additives to protect against sludge and mineral scale formation
- Prevents overheating
- Effective against liner pitting and cavitation erosion
- Not harmful to radiator or heater connecting hoses, diesel liner seals and 'O'rings
- Recommended and used by major diesel engine manufacturers throughout the world

PRINCIPAL USES

NALCOOL 2000 functions as a protective, film-forming corrosion inhibitor and scale suppressant to keep engines clean and free from scale, and reduces downtime and maintenance costs. The product protects cooling systems against corrosion, liner pitting, cavitation-erosion, mineral scale deposits and electrolysis.

GENERAL DESCRIPTION

Characteristics:

Color — Red

Odor — Slight

Solubility in water — Soluble in all proportions

Refer to the NALCOOL 2000 Material Safety Data Sheet for additional chemical and physical properties.

INSTRUCTIONS FOR USE

1. **Before Treatment:** Drain, chemically clean and flush the cooling system before charging with NALCOOL 2000 to remove dirt, deposits, oil and rust particles.
2. **Initial Dosage:** Add NALCOOL 2000 to the system at an initial dosage of 1 pint for every 4 gallons of cooling system capacity.
3. **Preventive Maintenance Treatment:**

Top Off — Never top off with plain water. Always top up with a mixture of one part NALCOOL 2000 for every 32 parts of clean, soft water.

Make Up Dosage — Maintain the correct treatment level of inhibitor level by adding additional NALCOOL 2000 inhibitor:

—For systems less than 20 gallons: One pint for every 4 gallon capacity, every 12,000 miles or 250 hours.

—For systems larger than 20 gallons: One pint for every 20 gallons capacity, every routine service.

Product Life — NALCOOL 2000, once in use, should be drained and flushed once every 12 months.

TESTING

For control, use a test kit available from Nalco. Part #500-P3206.88 tests for glycol and nitrite. Maintain a nitrite reserve of 1000–1500 ppm.

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HANDLING AND STORAGE

Read the label and Material Safety Data Sheet for complete handling information before using this product.

NALCOOL 2000 may be stored up to one year. The product becomes 'mushy' at -15°F (-26°C) and is satisfactory for use after complete thawing.

SHIPPING

NALCOOL 2000 is supplied in the following packaging:

- N2000-16 — Case of 12 pint containers
- N2000-64 — Case of 6-1/2 gallon containers
- N2000-5 — 5 gallon pail
- N2000-55 — 55 gallon drum

QUALITY

Nalco is licensed as a Quality Endorsed Manufacturing Company under ISO9002.

REMARKS

If you need assistance or more information on this product, please call your nearest Nalco Representative. For more news about Nalco, visit our Web site at www.nalco.com.

For Medical and Transportation Emergencies involving Nalco products, please see the Material Safety Data Sheet for the phone number.

Nalco Company 1601 West Diehl Road • Naperville, Illinois 60563-1198

SUBSIDIARIES AND AFFILIATES IN PRINCIPAL LOCATIONS AROUND THE WORLD

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