

Material Safety Data Sheet

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SECTION I - Material Identity

Item Name	
Part Number/Trade Name	NALCOOL 2000/3000 COOLING SYSTEM TREATMENT
National Stock Number	6850010854717
CAGE Code	OWT79
Part Number Indicator	A
MSDS Number	134102
HAZ Code	B

SECTION II - Manufacturer's Information

Manufacturer Name	PENRAY COMPANY
Street	440 DENNISTON COURT
City	WHEELING
State	IL
Country	US
Zip Code	60090
Emergency Phone	800-942-5969
Information Phone	708-459-5000

MSDS Preparer's Information

MSDS Preparer Name	P.A. ZOUBECK
Date MSDS Prepared/Revised	08JUL92
Date of Technical Review	26APR93
Active Indicator	N
Item Manager	CX

Alternate Vendors

Vendor #5 CAGE	BQNGD
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SECTION III - Physical/Chemical Characteristics

Hazard Storage Compatibility Code	N1
NRC License Number	N/R
Net Propellant Weight (Ammo)	N/R
Appearance/Odor	REDISH LIQUID, ODORLESS
Boiling Point	212F,100C
Melting Point	N/R
Vapor Pressure	N/K
Vapor Density	9.7
Specific Gravity	1.16
Decomposition Temperature	N/R
Evaporation Rate	N/K
Solubility in Water	COMPLETE
Percent Volatiles by Volume	N/K
Chemical pH	11.5
Corrosion Rate	N/K
Container Pressure Code	4
Temperature Code	8
Product State Code	U

SECTION IV - Fire and Explosion Hazard Data

Flash Point Method	UNK
Lower Explosion Limit	N/R
Upper Explosion Limit	N/R
Extinguishing Media	EXTINGUISH WITH AGENT SUITABLE FOR SURROUNDING FIRE
Special Fire Fighting Procedures	FIRE FIGHTERS SHOULD WEAR PROTECTIVE CLOTHING AND SELF-CONTAINED BREATHING APPARATUS. WATER SPRAY MAY BE USED TO COOL CONTAINERS PREVENTING PRESSURE BUILDUP

Unusual Fire/Explosion Hazards

MAY EVOLVE TOXIC OXIDES OF
NITROGEN UNDER FIRE

SECTION V - Reactivity Data

Stability	YES
Stability Conditions to Avoid	NOT KNOWN
Materials to Avoid	STRONG ACIDS,AMINES
Hazardous Decomposition Products	OXIDES OF CARBON, AND OXIDES OF NITROGEN MAY BE FORMED
Hazardous Polymerization	NO
Polymerization Conditions to Avoid	NONE
LD50 - LD50 Mixture	ORAL RAT: 3,362 MG/KG

SECTION VI - Health Hazard Data

Route of Entry: Skin	YES
Route of Entry: Ingestion	YES
Route of Entry: Inhalation	YES
Health Hazards - Acute and Chronic	ACUTE- MAY CAUSE IRRITATION OF EYES, SKIN, RESPIRATORY AND GI. TRACT. INGESTION MAY CAUSE KIDNEY DAMAGE OR CAN BE FATAL. SODIUM NITRITE HAS CAUSED REPRODUCTIVE DEFECTS IN ANIMALS. CHRONIC: MAY DAMAGE LIVER, KIDNEY AND CENTRAL NERVOUS SYSTEM
Carcinogenity: NTP	NO
Carcinogenity: IARC	NO
Carcinogenity: OSHA	NO
Symptoms of Overexposure	EYES AND SKIN: IRRITATION, TEARING, REDNESS. INGESTION:NAUSE, CRAMPS, VOMITING
Medical Cond. Aggravated by Exposure	PREGNANT WOMEN SHOULD AVOID EXPOSURE TO SODIUM NITRITE
Emergency/First Aid Procedures	INHALATION:REMOVE TO FRESH AIR, PROVIDE CPR/OXYGEN IF NEEDED. EYE CONTACT:FLUSH WITH WATER FOR 15 MINUTES. GET MEDICAL HELP. SKIN CONTACT:WASH WITH SOAP AND WATER. GET MED ATTENTION IF SYMPTOMS PERSIST. INGESTION:INDUCE VOMITING, DRINK 1-2 GLASSES OF WATER. GET MEDICAL HELP IMMEDIATELY

SECTION VII - Precautions for Safe Handling and Use

Steps if Material Released/Spilled	WEAR PROTECTIVE EQUIP. CONTAIN AND COLLECT WITH INERT ABSORBENT MATERIAL SUCH AS CLAY OR SOIL AND PLACE INTO RECOVERY DRUMS FOR DISPOSAL
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 SOLIDIFIED BEFORE DISPOSAL TO A SANITARY LANDFILL. FOLLOW ALL REGULATIONS FOR DISPOSAL
Handling and Storage Precautions	RE IN COOL, DRY, WELL VENTILATED AREA. PROTECT FROM PHYSICAL DAMAGE. AVOID ANY PHYSICAL CONTACT. KEEP CONTAINERS TIGHTLY CLOSED
Other Precautions	WARNING] HARMFUL IF SWALLOWED. DO NOT TAKE INTERNALLY. AVOID CONTACT W/EYE, & PROLONGED/REPEATED SKIN CONTACT; EMPTY CONTAINER MAY CONTAIN RESIDUAL PRODUCT; WASH CONTAMINATED CLOTHING/AREA. DISCARD CONTAMINATED SHOES/CLOTHING

SECTION VIII - Control Measures

Respiratory Protection	NONE SHOULD BE NEEDED
Ventilation	GENERAL VENTILATION IS RECOMMENDED
Protective Gloves	IMPERMEABLE
Eye Protection	CHEM SPLASH GOGGLES
Other Protective Equipment	FULL WORK CLOTHING TO PREVENT REPEATED OR PROLONGED CONTACT
Work Hygienic Practices	WASH HANDS THOROUGHLY AFTER USE
Disposal Code	0

SECTION IX - Label Data

Protect Eye	NO
Protect Skin	NO
Protect Respiratory	NO
Chronic Indicator	UNKNOWN
Contact Code	UNKNOWN
Fire Code	UNKNOWN
Health Code	UNKNOWN
React Code	UNKNOWN

SECTION X - Transportation Data

Container Quantity	1
Unit of Measure	PT

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 (SARA III)
CAS Number	7632000
NIOSH Number	RA1225000
Proprietary	NO
Percent	5
OSHA PEL	NOT ESTABLISHED
ACGIH TLV	NOT ESTABLISHED
Recommended Limit	NONE NORMALLY REQUI
Ingredient #	02
Ingredient Name	SODIUM MERCAPTOBENZOTHAZOLE
CAS Number	2492264
NIOSH Number	DL6825000
Proprietary	NO
Percent	5
OSHA PEL	NOT ESTABLISHED
ACGIH TLV	NOT ESTABLISHED
Recommended Limit	NONE NORMALLY REQUI
Ingredient #	03
Ingredient Name	SODIUM TETRABORATE, ANHYDROUS
CAS Number	1330434
NIOSH Number	VZ2240000
Proprietary	NO
Percent	5
OSHA PEL	10 MG/M3
ACGIH TLV	1 MG/M3; 9293
Recommended Limit	NONE NORMALLY REQUI
Ingredient #	04
Ingredient Name	SODIUM NITRATE
CAS Number	7631994
NIOSH Number	WC5600000
Proprietary	NO
Percent	5
OSHA PEL	NOT ESTABLISHED

ACGIH TLV	NOT ESTABLISHED
Recommended Limit	NONE NORMALLY REQUI
Ingredient #	05
Ingredient Name	SODIUM SILICATE
CAS Number	1344098
NIOSH Number	1002947SS
Proprietary	NO
Percent	5
OSHA PEL	NOT ESTABLISHED
ACGIH TLV	NOT ESTABLISHED
Recommended Limit	NONE SPECIFIED BY M
