

PHILADELPHIA ELECTRIC COMPANY

2301 MARKET STREET

P.O. BOX 8699

PHILADELPHIA, PA. 19101

(215) 841-4000

August 5, 1986

Mr. Richard Hinkle
Chief, Facilities Section
Department of Environmental Resources
1875 New Hope Street
Norristown, PA 19401

RE: Limerick Generating Station NPDES Permit PA 0051926

Dear Mr. Hinkle:

In accordance with Section 92.7 "Reporting of New or Increased Discharges", of the Departments' Rules and Regulations, and pursuant to "Other Requirements" item E of the subject NPDES permit, we hereby request permission to use two chemical products for cooling water treatment at Limerick Generating Station, discharge point 001 (combined discharges). The two chemical products are: NALCO 1360 (polymaric zinc, 5% by weight zinc, 15% by weight polyacrylate) and NALCO 1372 (tolyltriazole (TTA)/phosphate, 4.2% by weight organic phosphate, 4.8% by weight in organic phosphate). These NALCO products will be evaluated as a means to control scale and corrosion in the Unit #1 cooling water system. Use of these chemical products is not expected to violate effluent limitations specified in the subject NPDES permit.

The TTA and polyacrylate contained in NALCO products 1372 and 1360 are the same chemicals previously approved for discharge at Limerick Generating Station (NALCO products 1336 and 1370 respectively.)

The NALCO 1360 (polymaric zinc) will be evaluated as a means to control steel corrosion. We intend to maintain a concentration up to 15 mg/l as product in the cooling water system. We do not expect to exceed the Federal Effluent Guideline of 1 mg/l total zinc in discharge 001.

The NALCO 1372 (TTA/phosphate) will be used and tested as a means to control scale and reduce silt, iron and manganese deposition in the cooling water system. We intend to maintain a concentration up to 15 ppm as product in the cooling water system.

Cool
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PDR

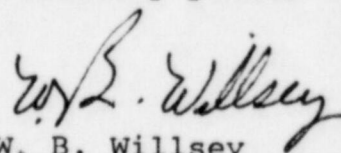
The concentration of these chemicals products in the cooling tower blowdown discharge is expected to be the same as stated above. As submitted in our NPDES permit application, the Unit #1 cooling tower blowdown rate is approximately 7.02 million gallons per day.

The existing treatment program which uses NALCO 1336, 1370 and 2513 will be terminated upon approval of this new treatment program.

Attached are product bulletins and Material Safety Data Sheets on the two NALCO products. Confidential information, such as the chemical formula for these chemical products, has been sent to you directly from the NALCO Chemical Company.

If you have any questions or concerns, please call David W. Mobraaten at (215) 841-5679.

Sincerely yours,



W. B. Willsey
Director
Environmental Affairs

Attachment
DWM:nas

cc: J. A. Feola, DER w/ att.

NRC, Director, ONRR
Washington, DC w/ att.

NRC, Administrator, OIE
King of Prussia, PA w/ att.

**Utility
Chemicals**
**Product
Bulletin**


SUPER ZINC™ 1360

CORROSION INHIBITOR

Product Benefits

- Extends the lifetime of system components
- Minimizes maintenance of corroded components
- Minimizes acid usage; pH above 8.0 is optimum

Principal Uses

SUPER ZINC 1360 is designed to minimize corrosion of mild steel and copper components in electric

utility recirculating cooling water systems.

General Description

SUPER ZINC 1360 is a liquid polymer zinc corrosion inhibitor.

Form	Clear, colorless liquid
Odor	Slight sulfurous
Specific Gravity	1.20
pH (Neat)	3.7
Freeze Point	22°F

Application

SUPER ZINC 1360 should be fed directly from the drum or bulk storage tank to a location in the system where it will be uniformly mixed and thoroughly distributed. It should be fed continuously to maintain optimum product activity.

The specific dosage of SUPER ZINC 1360 will vary depending upon the operating characteristics

of your system, the water chemistry, and the severity of problems encountered. Your Nalco Utility Account Manager will recommend the optimum dosage necessary to ensure maximum program performance for your system.

For specific feeding and material compatibility instructions, consult your Nalco Utility Account Manager.

Handling and Storage

SUPER ZINC 1360 is an acidic solution and should be handled with caution to prevent contact with skin, eyes, or clothing. In case of contact, immediately flush with large amounts of water for at least

15 minutes; for eyes, also get medical attention. Do not take internally. Keep out of reach of children.

Recommended in-plant storage limit is one year.

Shipping

SUPER ZINC 1360 is available in bulk or in 55-gallon, nonreturnable lined steel drums. The net drum weight is approximately 550 pounds.

The product is shipped from Chicago, Illinois.

**NALCO CHEMICAL COMPANY
UTILITY CHEMICALS**

1601 WEST DIEHL ROAD □ NAPERVILLE, ILLINOIS 60566

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MATERIAL SAFETY DATA SHEET

PRODUCT SUPER-ZINC 1360 INHIBITOR

Emergency Telephone Number

Medical (312) 920-1510 (24 hours)

SECTION 1 PRODUCT IDENTIFICATION

TRADE NAME: SUPER-ZINC 1360 INHIBITOR

DESCRIPTION: An aqueous solution of zinc chloride and an acrylic polymer

NFPA 704M RATING 2 HEALTH 1 FLAMMABILITY 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.%
Zinc chloride	7646-85-7	10-20

SECTION 3 PRECAUTIONARY LABEL INFORMATION

Warning: Causes eye injury and skin irritation. Do not get in eyes. Avoid contact with skin and clothing. Wear goggles or face shield when handling. 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: 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.

NOTE TO PHYSICIAN: No specific antidote is known. 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



MATERIAL SAFETY DATA SHEET

PRODUCT SUPER-ZINC 1360 INHIBITOR

Emergency Telephone Number

Medical (312) 920-1510 (24 hours)

SECTION 4 FIRST AID INFORMATION

(CONTINUED)

of gastric lavage. Measures against circulatory shock, respiratory depression and convulsions may be needed.

SECTION 5 HEALTH EFFECTS INFORMATION

PRIMARY ROUTE(S) OF EXPOSURE: Eye, Skin

EYE CONTACT: Can cause moderate irritation. Can cause acidic, type burns.

SKIN CONTACT: Can cause moderate irritation. Can cause acidic, type burns.

SYMPTOMS OF EXPOSURE: A review of available data does not identify any symptoms from exposure.

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

SECTION 6 TOXICOLOGY INFORMATION

ACUTE TOXICITY STUDIES: No toxicity studies have been conducted on this product.

SECTION 7 PHYSICAL AND CHEMICAL PROPERTIES

COLOR: Clear colorless	FORM: Liquid	ODOR: Slight
DENSITY:	10 lbs/gal.	
SOLUBILITY IN WATER:	Completely	
SPECIFIC GRAVITY:	1.24 @ 60 Degrees F	ASTM D-1298
pH (NEAT) =	3.5	ASTM E-70
FREEZE POINT:	22 Degrees F	ASTM D-1177
BOILING POINT:	Greater than 212 Degrees F	
	@ 760 mm Hg	ASTM D-86
FLASH POINT:	None (PMCC)	ASTM D-93

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

SECTION 8 FIRE AND EXPLOSION INFORMATION

FLASH POINT: None (PMCC) ASTM D-93

EXTINGUISHING MEDIA: Not applicable

UNUSUAL FIRE AND EXPLOSION HAZARD: Treat like an acid fire.



MATERIAL SAFETY DATA SHEET

PRODUCT SUPER-ZINC 1360 INHIBITOR

Emergency Telephone Number
Medical (312) 920-1510 (24 hours)

SECTION 9 REACTIVITY INFORMATION

INCOMPATIBILITY: Avoid alkaline materials (eg. ammonia and its solutions, carbonates, sodium hydroxide (caustic), potassium hydroxide, calcium hydroxide (lime), cyanides, sulfides, hypochlorites, chlorites) which can generate heat with splattering or boiling and the release of toxic fumes.

THERMAL DECOMPOSITION PRODUCTS: In the event of combustion CO, CO₂, NO_x, SO_x, HCl 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, (ANSI Z 88.2, 1980 for requirements and selection).

For large spills, entry into large tanks, vessels or enclosed small spaces with inadequate ventilation, a pressure-demand, self-contained breathing apparatus is recommended.

VENTILATION: General ventilation is recommended.

PROTECTIVE EQUIPMENT: Wear gloves, boots, apron and a face shield with chemical splash goggles (ANSI Z 87.1 requirements and selection of gloves, goggles, shoes, etc.). 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. Discard contaminated shoes and leather items.

SECTION 11 SPILL AND DISPOSAL INFORMATION

IN CASE OF TRANSPORTATION ACCIDENTS, CALL THE FOLLOWING 24-HOUR TELEPHONE NUMBER (312-920-1510)

SPILL CONTROL AND RECOVERY:

Small liquid spills: Contain with absorbent material, such as saw dust, clay, soil or any commercially available absorbent. Shovel



MATERIAL SAFETY DATA SHEET

PRODUCT SUPER-ZINC 1360 INHIBITOR

Emergency Telephone Number
Medical (312) 920-1510 (24 hours)

SECTION 11 SPILL AND DISPOSAL INFORMATION

(CONTINUED)

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.

For large indoor spills, evacuate employees and ventilate area. Those responsible for control and recovery should wear the protective equipment specified in Section 10.

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, (i.e. D001 through D017) nor is it listed under Subpart D.

As a non-hazardous liquid waste, it should be solidified before disposal to a sanitary landfill. Can be deep-well injected in accordance with local, state and federal regulations.

SECTION 12 ENVIRONMENTAL INFORMATION

AQUATIC DATA:

96 hour static acute LC₅₀ to Rainbow Trout = 61 ppm
48 hour static acute LC₅₀ to Rainbow Trout = 110 ppm
24 hour static acute LC₅₀ to Rainbow Trout = 230 ppm

95% Confidence Limit of 96 hour LC₅₀ = 43 - 79 ppm

COMMENTS: Above study conducted with well-water at pH 8-8.5 hardness (as CaCO₃) of 225-275 ppm and alkalinity (CaCO₃) of 325-375 ppm.

OTHER STUDIES: When conducted in reconstituted soft water pH 7-7.5, hardness (as CaCO₃) of 40-45 ppm and CaCO₃ alkalinity of 30-35 ppm the 96 hour LC₅₀ for Rainbow trout was 5.2 ppm (3.9 - 7.0 95% L.C.) 24 and 48 hour LC₅₀ were 32 and 25 ppm respectively.

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

SECTION 13 TRANSPORTATION INFORMATION

DOT PROPER SHIPPING NAME/HAZARD CODE - HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
ORM-E NA 9188
CONTAINS - ZINC CHLORIDE



MATERIAL SAFETY DATA SHEET

PRODUCT

SUPER-ZINC 1360 INHIBITOR

Emergency Telephone Number

Medical (312) 920-1510 (24 hours)

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 ingredient in this product is hazardous and the reason is shown below.

Zinc chloride - Severe irritant

Zinc chloride fume = TWA 1 mg/m³, STEL 2 mg/m³ ACGIH TLV

CERCLA/SUPERFUND, 40 CFR 117, 302:

This product contains zinc chloride, a Reportable Quantity (RQ) substance and if 50,000 pounds of product are released, it requires notification to the NATIONAL RESPONSE CENTER, WASHINGTON, D. C. (1-800-424-8802).

TOXIC SUBSTANCES CONTROL ACT (TSCA):

The chemical ingredients in this product are on the 8(b) Inventory List (40 CFR 710).

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

If this product becomes a waste, it does not meet the criteria of a hazardous waste.

FEDERAL WATER POLLUTION CONTROL ACT, CLEAN WATER ACT, 40 CFR 401.15

(formerly Sec. 307), 40 CFR 116 (formerly Sec. 311):

This product contains the following ingredient(s) covered by the Clean Water Act:

Zinc chloride - Section 307, 311

CLEAN AIR ACT, 40 CFR 60, SECTION 111, 40 CFR 61, SECTION 112:

This product does not contain ingredients covered by the Clean Air Act.

STATE REGULATIONS:

MICHIGAN CRITICAL MATERIALS:

This product contains the following substance identified on the Michigan Critical Materials Register:

Zinc chloride



MATERIAL SAFETY DATA SHEET

PRODUCT SUPER-ZINC 1360 INHIBITOR

Emergency Telephone Number

Medical (312) 920-1510 (24 hours)

SECTION 14 REGULATORY INFORMATION

(CONTINUED)

STATE RIGHT TO KNOW LAWS:

Regulated in those states using the TLV for zinc chloride as a criteria for listing.

SECTION 15 ADDITIONAL INFORMATION

None

SECTION 16 USER'S RESPONSIBILITY

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 ensure safe workplace operations. Please consult your local sales representative for any further information.

SECTION 17 BIBLIOGRAPHY

SEE NALCO'S MSDS SECTION DESCRIPTION

PREPARED BY: John J. Kasper, MSc., Toxicologist
DATE ISSUED: 11/19/85


**Utility
Chemicals**
**Product
Bulletin**
**SURE-COOL®
1372**
**COOLING
SYSTEM
TREATMENT**
Product Benefits

- Helps maximize turbine condenser efficiency
- Helps extend condenser tube life
- Can reduce maintenance costs

Principal Uses

SURE-COOL 1372 is designed to inhibit mineral scales such as calcium carbonate, magnesium silicate, calcium sulfate, and amorphous

silica. In addition, it helps inhibit corrosion of mild steel, copper, and copper alloys.

General Description

SURE-COOL 1372 is a synergistic blend of organophosphonate, inorganic phosphates, and copper corrosion inhibitors that can effectively control scale under severe operating conditions such as high TDS waters.

Form	Liquid
Color	Yellow
Odor	Slight
Density	11.1 lb/gal
pH (Neat)	12.8
Freeze Point	5°F
Freeze-Thaw Recovery	Complete
Flash Point (PMCC)	None

Application

SURE-COOL 1372 should be fed directly from the drum or bulk storage tank to a location in the system where it will be uniformly mixed and thoroughly distributed. It should be fed continuously to maintain optimum product activity.

The specific dosage of SURE-COOL 1372 will vary depending upon the operating characteristics of your system, the water chemistry, and the severity of problems encountered.

Your Nalco Utility Account Manager can recommend the optimum dosage necessary to ensure maximum program performance for your system. For specific feeding and material compatibility instructions, consult your Nalco Utility Account Manager.

SURE-COOL 1372 should not be used in the treatment of potable water, or where contamination of potable water may occur.

(Continued on Reverse Side)

**NALCO CHEMICAL COMPANY
UTILITY CHEMICALS**

1801 WEST DIEHL ROAD □ NAPERVILLE, ILLINOIS 60566

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Handling and Storage

SURE-COOL 1372 is a very alkaline solution and should be handled with extreme caution. Do not get in eyes, on skin, or on clothing. Goggles or face shield are recommended for handling. In case of contact, immediately flush with large amounts of water

for at least 15 minutes; for eyes, also get medical attention. Do not take internally. Keep out of reach of children.

Recommended in-plant storage limit is one year.

Shipping

SURE-COOL 1372 is available in bulk quantities or in 55-gallon nonreturnable steel drums weighing approxi-

mately 611 pounds net. The product is shipped from the nearest manufacturing or warehousing facility.



MATERIAL SAFETY DATA SHEET

SURE-COOL 1372 MULTIFUNCTIONAL
PRODUCT

Emergency Telephone Number

Medical (312) 928-1518 (24 hours)

SECTION 1 PRODUCT IDENTIFICATION

TRADE NAME: SURE-COOL 1372 MULTIFUNCTIONAL

DESCRIPTION: An aqueous solution of a phosphonate, phosphate and an aryltriazole salt

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

SECTION 2 HAZARDOUS INGREDIENTS

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.%
Potassium hydroxide	1310-58-3	1-10

SECTION 3 PRECAUTIONARY LABEL INFORMATION

Warning: Causes eye injury and skin irritation. Do not get in eyes. Avoid contact with skin and clothing. Wear goggles or face shield when handling. 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: 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.

NOTE TO PHYSICIAN: No specific antidote is known. 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



MATERIAL SAFETY DATA SHEET

PRODUCT SURE-COOL 1372 MULTIFUNCTIONAL

Emergency Telephone Number

Medical (312) 920-1510 (24 hours)

SECTION 4 FIRST AID INFORMATION

(CONTINUED)

depression and convulsions may be needed.

SECTION 5 HEALTH EFFECTS INFORMATION

PRIMARY ROUTE(S) OF EXPOSURE: Eye, Skin

EYE CONTACT: Can cause injury or damage.

SKIN CONTACT: Can cause caustic type burns.

SYMPTOMS OF EXPOSURE: A review of available data does not identify any symptoms from exposure.

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 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):

Potassium hydroxide LD₅₀ = 365 mg/kg

PRIMARY SKIN IRRITATION TEST (ALBINO RABBITS):

COMMENTS: Potassium hydroxide 24-hour contact with 50 mg produced severe irritation

SECTION 7 PHYSICAL AND CHEMICAL PROPERTIES

COLOR: Amber	FORM: Liquid	
DENSITY:	12.2 lbs/gal.	
SOLUBILITY IN WATER:	Completely	
pH (NEAT) =	12.8	ASTM E-70
VISCOSITY:	11 cps @ 72 Degrees F	ASTM D-2983
FREEZE POINT:	Less than 19 Degrees F	ASTM D-1177
FLASH POINT:	None (PMCC)	ASTM D-93

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

SECTION 8 FIRE AND EXPLOSION INFORMATION

FLASH POINT: None (PMCC) ASTM D-93

EXTINGUISHING MEDIA: Based on the NFPA guide, use dry chemical,



MATERIAL SAFETY DATA SHEET

SURE-COOL 1372 MULTIFUNCTIONAL
PRODUCT

Emergency Telephone Number

Medical (312) 920-1510 (24 hours)

SECTION 8 FIRE AND EXPLOSION INFORMATION

alcohol 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: Not applicable

SECTION 9 REACTIVITY INFORMATION

INCOMPATIBILITY: Avoid contact with strong acids (eg. sulfuric, phosphoric, nitric, hydrochloric, chromic, sulfonic) which can generate heat, splattering or boiling and the release of toxic fumes.

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. If significant mists or aerosols are generated, wear a NIOSH approved or equivalent respirator, (ANSI Z 88.2, 1980 for requirements and selection).

For large spills, entry into large tanks, vessels or enclosed small spaces with inadequate ventilation, a pressure-demand, self-contained breathing apparatus is recommended.

VENTILATION: General ventilation is recommended.

PROTECTIVE EQUIPMENT: Wear gloves, boots, apron and a face shield with chemical splash goggles (ANSI Z 87.1 requirements and selection of gloves, goggles, shoes, etc.). 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. Discard contaminated shoes and leather items.

SECTION 11 SPILL AND DISPOSAL INFORMATION

IN CASE OF TRANSPORTATION ACCIDENTS, CALL THE FOLLOWING 24-HOUR



MATERIAL SAFETY DATA SHEET

SURE-COOL 1372 MULTIFUNCTIONAL
PRODUCT

Emergency Telephone Number

Medical (312) 920-1510 (24 hours)

SECTION 11 SPILL AND DISPOSAL INFORMATION

(CONTINUED)

TELEPHONE NUMBER (312-920-1510)

SPILL CONTROL AND RECOVERY:

Small liquid spills: Contain with absorbent material, such as saw dust, 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 meets the criteria of a hazardous waste as defined under the Resources Conservation and Recovery Act (RCRA) 40 CFR 261. Hazardous Waste D002.

As a hazardous liquid waste, it must be solidified before disposal in a landfill (Hazardous Waste Treatment, Storage and Disposal facility). Can be deep-well injected in accordance with local, state and federal regulations.

SECTION 12 ENVIRONMENTAL INFORMATION

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

SECTION 13 TRANSPORTATION INFORMATION

DOT PROPER SHIPPING NAME/HAZARD CODE - ORM-B, N.O.S. NA 1760
CONTAINS - POTASSIUM HYDROXIDE

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 ingredient in this product is hazardous and the reason is shown below.

Potassium hydroxide - Severe irritant

Potassium hydroxide = TWA 2 mg/m³ (ceiling) ACGIH TLV



MATERIAL SAFETY DATA SHEET

SURE-COOL 1372 MULTIFUNCTIONAL
PRODUCT

Emergency Telephone Number

Medical (312) 920-1510 (24 hours)

SECTION 14 REGULATORY INFORMATION

(CONTINUED)

CERCLA/SUPERFUND, 40 CFR 117, 302:

This product contains potassium hydroxide, a Reportable Quantity (RQ) substance and if 100,000 pounds of product are released, it requires notification to the NATIONAL RESPONSE CENTER, WASHINGTON, D. C. (1-800-424-8802).

TOXIC SUBSTANCES CONTROL ACT (TSCA):

The chemical ingredients in this product are on the 8(b) Inventory List (40 CFR 710).

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

If this product becomes a waste, it does meet the criteria of a hazardous waste as defined under RCRA 40 CFR 261 (consult Section 11).

FEDERAL WATER POLLUTION CONTROL ACT, CLEAN WATER ACT, 40 CFR 401.15 (formerly Sec. 307), 40 CFR 116 (formerly Sec. 311):

This product contains the following ingredient(s) covered by the Clean Water Act:

Potassium hydroxide - Section 311

CLEAN AIR ACT, 40 CFR 60, SECTION 111, 40 CFR 61, SECTION 112:

This product does not contain ingredients covered by the Clean Air Act.

STATE REGULATIONS:

MICHIGAN CRITICAL MATERIALS:

This product does not contain ingredients listed on the Michigan Critical Materials Register.

STATE RIGHT TO KNOW LAWS:

Regulated in those states using the TLV for potassium hydroxide as a criteria for listing.

SECTION 15 ADDITIONAL INFORMATION

None

SECTION 16 USER'S RESPONSIBILITY

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



MATERIAL SAFETY DATA SHEET

PRODUCT SURE-COOL 1372 MULTIFUNCTIONAL

Emergency Telephone Number

Medical (312) 920-1510 (24 hours)

SECTION 16 USER'S RESPONSIBILITY

(CONTINUED)

so that appropriate handling practices and training programs can be established to ensure safe workplace operations. Please consult your local sales representative for any further information.

SECTION 17 BIBLIOGRAPHY

SEE NALCO'S MSDS SECTION DESCRIPTION

PREPARED BY: John J. Kasper, MSc., Toxicologist

DATE ISSUED: 11/12/85