



MATERIAL SAFETY DATA SHEET

PRODUCT

3DT289

EMERGENCY TELEPHONE NUMBER(S)

(800) 424-9300 (24 Hours) CHEMTREC

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME : **3DT289**

APPLICATION : COOLING WATER TREATMENT

COMPANY IDENTIFICATION : Nalco Company
1601 W. Diehl Road
Naperville, Illinois
60563-1198

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NFPA 704M/HMIS RATING

HEALTH : 2/2 FLAMMABILITY : 0/1 INSTABILITY : 0/0 OTHER :

0 = Insignificant 1 = Slight 2 = Moderate 3 = High 4 = Extreme

2. COMPOSITION/INFORMATION ON INGREDIENTS

Our hazard evaluation has identified the following chemical substance(s) as hazardous. Consult Section 15 for the nature of the hazard(s).

| Hazardous Substance(s) | CAS NO | % (w/w) |
|----------------------------|-------------|-----------|
| Substituted aromatic amine | Proprietary | 1.0 - 5.0 |
| Phosphoric Acid | 7664-38-2 | 1.0 - 5.0 |
| Sulfuric Acid | 7664-93-9 | 1.0 - 5.0 |

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

WARNING

Irritating to eyes.

Do not get in eyes, on skin, on clothing. Do not take internally. Use with adequate ventilation. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. After contact with skin, wash immediately with plenty of water.

Wear suitable protective clothing.

May evolve oxides of carbon (COx) under fire conditions. May evolve oxides of sulfur (SOx) under fire conditions.

May evolve oxides of phosphorus (POx) under fire conditions.

PRIMARY ROUTES OF EXPOSURE :

Eye, Skin

HUMAN HEALTH HAZARDS - ACUTE :

EYE CONTACT :

Irritating, and may injure eye tissue if not removed promptly.



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SKIN CONTACT :

Can cause mild irritation.

INGESTION :

Not a likely route of exposure. No adverse effects expected.

INHALATION :

Not a likely route of exposure. No adverse effects expected.

SYMPTOMS OF EXPOSURE :

Acute :

A review of available data does not identify any symptoms from exposure not previously mentioned.

Chronic :

A review of available data does not identify any symptoms from exposure not previously mentioned.

HUMAN HEALTH HAZARDS - CHRONIC :

No adverse effects expected other than those mentioned above.

4. FIRST AID MEASURES

EYE CONTACT :

Immediately flush eye with water for at least 15 minutes while holding eyelids open. If symptoms develop, seek medical advice.

SKIN CONTACT :

Flush affected area with water. If symptoms develop, seek medical advice.

INGESTION :

Get medical attention. Do not induce vomiting without medical advice. If conscious, washout mouth and give water to drink. If reflexive vomiting occurs, rinse mouth and repeat administration of water.

INHALATION :

Remove to fresh air, treat symptomatically. If symptoms develop, seek medical advice.

NOTE TO PHYSICIAN :

Based on the individual reactions of the patient, the physician's judgement should be used to control symptoms and clinical condition.

5. FIRE FIGHTING MEASURES

FLASH POINT : Not applicable

EXTINGUISHING MEDIA :

This product would not be expected to burn unless all the water is boiled away. The remaining organics may be ignitable. Use extinguishing media appropriate for surrounding fire.



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FIRE AND EXPLOSION HAZARD :

May evolve oxides of carbon (COx) under fire conditions. May evolve oxides of sulfur (SOx) under fire conditions. May evolve oxides of phosphorus (POx) under fire conditions.

SPECIAL PROTECTIVE EQUIPMENT FOR FIRE FIGHTING :

In case of fire, wear a full face positive-pressure self contained breathing apparatus and protective suit.

6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS :

Restrict access to area as appropriate until clean-up operations are complete. Use personal protective equipment recommended in Section 8 (Exposure Controls/Personal Protection). Stop or reduce any leaks if it is safe to do so. Ventilate spill area if possible. Ensure clean-up is conducted by trained personnel only. Do not touch spilled material. Have emergency equipment (for fires, spills, leaks, etc.) readily available. Notify appropriate government, occupational health and safety and environmental authorities.

METHODS FOR CLEANING UP :

SMALL SPILLS: Soak up spill with absorbent material. Place residues in a suitable, covered, properly labeled container. Wash affected area. **LARGE SPILLS:** Contain liquid using absorbent material, by digging trenches or by diking. Reclaim into recovery or salvage drums or tank truck for proper disposal. Clean contaminated surfaces with water or aqueous cleaning agents. Contact an approved waste hauler for disposal of contaminated recovered material. Dispose of material in compliance with regulations indicated in Section 13 (Disposal Considerations).

ENVIRONMENTAL PRECAUTIONS :

Do not contaminate surface water.

7. HANDLING AND STORAGE

HANDLING :

Do not get in eyes, on skin, on clothing. Do not take internally. Use with adequate ventilation. Do not breathe vapors/gases/dust. Keep the containers closed when not in use. Have emergency equipment (for fires, spills, leaks, etc.) readily available. Ensure all containers are labelled.

STORAGE CONDITIONS :

Store in suitable labelled containers. Store the containers tightly closed.

SUITABLE CONSTRUCTION MATERIAL :

Buna-N, Hypalon, EPDM, Polyethylene, Polypropylene, HDPE (high density polyethylene), PVC, Epoxy phenolic resin

UNSUITABLE CONSTRUCTION MATERIAL :

Brass, Stainless Steel 304, Neoprene, Viton, Polyurethane, 100% phenolic resin liner, Stainless Steel 316L

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

OCCUPATIONAL EXPOSURE LIMITS :

Exposure guidelines have not been established for this product. Available exposure limits for the substance(s) are shown below.



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ACGIH/TLV :

Substance(s)

Phosphoric Acid TWA: 1 mg/m³
 STEL: 3 mg/m³

Sulfuric Acid TWA: 1 mg/m³
 STEL: 3 mg/m³

OSHA/PEL :

Substance(s)

Phosphoric Acid TWA: 1 mg/m³
 STEL: 3 mg/m³

Sulfuric Acid TWA: 1 mg/m³

ENGINEERING MEASURES :

General ventilation is recommended.

RESPIRATORY PROTECTION :

Where concentrations in air may exceed the limits given in this section, the use of a half face filter mask or air supplied breathing apparatus is recommended. A suitable filter material depends on the amount and type of chemicals being handled. Consider the use of filter type: Multi-contaminant cartridge. with a Particulate pre-filter. If respiratory protection is required, institute a complete respiratory protection program including selection, fit testing, training, maintenance and inspection.

HAND PROTECTION :

When handling this product, the use of chemical gauntlets is recommended., The choice of work glove depends on work conditions and what chemicals are handled, but we have positive experience under light handling conditions using gloves made from, PVC, ., Gloves should be replaced immediately if signs of degradation are observed., Breakthrough time not determined as preparation, consult PPE manufacturers.

SKIN PROTECTION :

Wear standard protective clothing. See general advice.

EYE PROTECTION :

When handling this product, the use of splash chemical goggles is recommended.

HYGIENE RECOMMENDATIONS :

Use good work and personal hygiene practices to avoid exposure. Keep an eye wash fountain available. Keep a safety shower available. If clothing is contaminated, remove clothing and thoroughly wash the affected area. Launder contaminated clothing before reuse. Always wash thoroughly after handling chemicals. When handling this product never eat, drink or smoke.

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE Liquid



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| | |
|-----------------------|------------------------------|
| APPEARANCE | Yellow |
| ODOR | None |
| SPECIFIC GRAVITY | 1.151 @ 77 °F / 25 °C |
| DENSITY | 9.56 lb/gal |
| SOLUBILITY IN WATER | Complete |
| pH (100 %) | 1.8 |
| VISCOSITY | 5.4 cst |
| INITIAL BOILING POINT | 212 °F / 100 °C |
| VAPOR PRESSURE | 0.5 mm Hg @ 100 °F / 37.8 °C |
| VOC CONTENT | 0.4 % Calculated |

Note: These physical properties are typical values for this product and are subject to change.

10. STABILITY AND REACTIVITY

STABILITY :

Stable under normal conditions.

HAZARDOUS POLYMERIZATION :

Hazardous polymerization will not occur.

CONDITIONS TO AVOID :

Freezing temperatures.

MATERIALS TO AVOID :

Bases Contact with strong alkalis (e.g. ammonia and its solutions, carbonates, sodium hydroxide (caustic), potassium hydroxide, calcium hydroxide (lime), cyanide, sulfide, hypochlorites, chlorites) may generate heat, splattering or boiling and toxic vapors. Contact with reactive metals (e.g. aluminum) may result in the generation of flammable hydrogen gas.

HAZARDOUS DECOMPOSITION PRODUCTS :

Under fire conditions: Oxides of carbon, Oxides of sulfur, Oxides of phosphorus, Oxides of nitrogen

11. TOXICOLOGICAL INFORMATION

No toxicity studies have been conducted on this product.

SENSITIZATION :

This product is not expected to be a sensitizer.

CARCINOGENICITY :

None of the substances in this product are listed as carcinogens by the International Agency for Research on Cancer (IARC), the National Toxicology Program (NTP) or the American Conference of Governmental Industrial Hygienists (ACGIH).



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HUMAN HAZARD CHARACTERIZATION :

Based on our hazard characterization, the potential human hazard is: Low

12. ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL EFFECTS :

The following results are for the product.

ACUTE FISH RESULTS :

| Species | Exposure | LC50 | Test Descriptor |
|----------------|----------|------------|-----------------|
| Fathead Minnow | 96 hrs | 3,750 mg/l | Product |
| Rainbow Trout | 96 hrs | 1,830 mg/l | Product |

ACUTE INVERTEBRATE RESULTS :

| Species | Exposure | LC50 | EC50 | Test Descriptor |
|--------------------|----------|------------|------------|-----------------|
| Daphnia magna | 48 hrs | | 1,908 mg/l | Product |
| Ceriodaphnia dubia | 48 hrs | 1,875 mg/l | | Product |

PERSISTENCY AND DEGRADATION :

Total Organic Carbon (TOC) : 62,000 mg/l

The organic portion of this preparation is expected to be readily biodegradable.

MOBILITY :

The environmental fate was estimated using a level III fugacity model embedded in the EPI (estimation program interface) Suite TM , provided by the US EPA. The model assumes a steady state condition between the total input and output. The level III model does not require equilibrium between the defined media. The information provided is intended to give the user a general estimate of the environmental fate of this product under the defined conditions of the models. If released into the environment this material is expected to distribute to the air, water and soil/sediment in the approximate respective percentages;

| Air | Water | Soil/Sediment |
|-----|----------|---------------|
| <5% | 30 - 50% | 50 - 70% |

The portion in water is expected to be soluble or dispersible.

BIOACCUMULATION POTENTIAL

This preparation or material is not expected to bioaccumulate.

ENVIRONMENTAL HAZARD AND EXPOSURE CHARACTERIZATION

Based on our hazard characterization, the potential environmental hazard is: Low

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



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13. DISPOSAL CONSIDERATIONS

If this product becomes a waste, it could meet the criteria of a hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA) 40 CFR 261. Before disposal, it should be determined if the waste meets the criteria of a hazardous waste.

Hazardous Waste: D002

Hazardous wastes must be transported by a licensed hazardous waste transporter and disposed of or treated in a properly licensed hazardous waste treatment, storage, disposal or recycling facility. Consult local, state, and federal regulations for specific requirements.

14. TRANSPORT INFORMATION

The information in this section is for reference only and should not take the place of a shipping paper (bill of lading) specific to an order. Please note that the proper Shipping Name / Hazard Class may vary by packaging, properties, and mode of transportation. Typical Proper Shipping Names for this product are as follows.

LAND TRANSPORT :

| | |
|--------------------------|---|
| Proper Shipping Name : | CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. |
| Technical Name(s) : | PHOSPHORIC ACID, SULFURIC ACID |
| UN/ID No : | UN 3264 |
| Hazard Class - Primary : | 8 |
| Packing Group : | III |

| | |
|---------------|----------------|
| Flash Point : | Not applicable |
|---------------|----------------|

AIR TRANSPORT (ICAO/IATA) :

| | |
|-----------------------------------|---|
| Proper Shipping Name : | CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. |
| Technical Name(s) : | PHOSPHORIC ACID, SULFURIC ACID |
| UN/ID No : | UN 3264 |
| Hazard Class - Primary : | 8 |
| Packing Group : | III |
| IATA Cargo Packing Instructions : | 820 |
| IATA Cargo Aircraft Limit : | 60 L (Max net quantity per package) |

MARINE TRANSPORT (IMDG/IMO) :

| | |
|--------------------------|---|
| Proper Shipping Name : | CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. |
| Technical Name(s) : | PHOSPHORIC ACID, SULFURIC ACID |
| UN/ID No : | UN 3264 |
| Hazard Class - Primary : | 8 |
| Packing Group : | III |



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15. REGULATORY INFORMATION

NATIONAL REGULATIONS, USA :

OSHA HAZARD COMMUNICATION RULE, 29 CFR 1910.1200 :

Based on our hazard evaluation, the following substance(s) in this product is/are hazardous and the reason(s) is/are shown below.

Substituted aromatic amine : Eye irritant

Phosphoric Acid : Corrosive

Sulfuric Acid : Corrosive

CERCLA/SUPERFUND, 40 CFR 117, 302 :

This product contains the following Reportable Quantity (RQ) Substance. Also listed is the RQ for the product. If a reportable quantity of product is released, it requires notification to the NATIONAL RESPONSE CENTER, WASHINGTON, D.C. (1-800-424-8802).

RQ Substance

Sulfuric Acid

RQ

53,648 lbs

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 contains the following substance(s) which is listed in Appendix A and B as an Extremely Hazardous Substance. Listed below are the statutory Threshold Planning Quantity (TPQ) for the substance(s) and the Reportable Quantity (RQ) of the product. If a reportable quantity of product is released, it requires notification to your State Emergency Response Commission. You may also be required to notify the National Response Center - See CERCLA/SUPERFUND, above.

Extremely Hazardous Substance

Sulfuric Acid

TPQ

1,000 lbs

RQ

53,648 lbs

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 indicated EPA hazard categories:

- X Immediate (Acute) Health Hazard
- Delayed (Chronic) Health Hazard
- 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.



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SECTION 313 - LIST OF TOXIC CHEMICALS (40 CFR 372) :

This product contains the following substance(s), (with CAS # and % range) which appear(s) on the List of Toxic Chemicals

| <u>Hazardous Substance(s)</u> | <u>CAS NO</u> | <u>% (w/w)</u> |
|-------------------------------|---------------|----------------|
| Sulfuric Acid | 7664-93-9 | 1.0 - 5.0 |

TOXIC SUBSTANCES CONTROL ACT (TSCA) :

The substances in this preparation are included on or exempted from the TSCA 8(b) Inventory (40 CFR 710)

NSF NON-FOOD COMPOUNDS REGISTRATION PROGRAM (former USDA List of Proprietary Substances & Non-Food Compounds) :

NSF Registration number for this product is : 136003

This product is acceptable for treatment of cooling and retort water (G5) in and around food processing areas.

This product has been certified as KOSHER/PAREVE for year-round use INCLUDING THE PASSOVER SEASON by the CHICAGO RABBINICAL COUNCIL.

FEDERAL WATER POLLUTION CONTROL ACT, CLEAN WATER ACT, 40 CFR 401.15 / formerly Sec. 307, 40 CFR 116.4 / formerly Sec. 311 :

This product contains the following substances listed in the regulation:

| Substance(s) | Citations |
|---|-----------|
| <ul style="list-style-type: none">Phosphoric AcidSulfuric Acid | Sec. 311 |

CLEAN AIR ACT, Sec. 112 (40 CFR 61, Hazardous Air Pollutants), Sec. 602 (40 CFR 82, Class I and II Ozone Depleting Substances) :

This product may contain trace levles (<0.1% for carcinogens, <1% all other substances) of the following substance(s) listed under the regulation:

| Substance(s) | Citations |
|--|--------------------|
| <ul style="list-style-type: none">Methanol | Sec. 112, Sec. 111 |

CALIFORNIA PROPOSITION 65 :

This product does not contain substances which require warning under California Proposition 65.

MICHIGAN CRITICAL MATERIALS :

None of the substances are specifically listed in the regulation.

STATE RIGHT TO KNOW LAWS :

The following substances are disclosed for compliance with State Right to Know Laws:

| | |
|---|-------------|
| Other ingredients determined not to be hazardous, including water | Proprietary |
| Phosphoric Acid | 7664-38-2 |



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Sulfuric Acid
Substituted aromatic amine

7664-93-9
Proprietary

NATIONAL REGULATIONS, CANADA :

WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM (WHMIS) :

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

WHMIS CLASSIFICATION :

E - Corrosive Material

CANADIAN ENVIRONMENTAL PROTECTION ACT (CEPA) :

This product contains substance(s) which are found on the Non-Domestic Substances List (NDSL).

INTERNATIONAL CHEMICAL CONTROL LAWS

AUSTRALIA

All substances in this product comply with the National Industrial Chemicals Notification & Assessment Scheme (NICNAS).

EUROPE

The substances in this preparation have been reviewed for compliance with the EINECS or ELINCS inventories.

KOREA

All substances in this product comply with the Toxic Chemical Control Law (TCCL) and are listed on the Existing Chemicals List (ECL)

16. OTHER INFORMATION

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.

REFERENCES

Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices, American Conference of Governmental Industrial Hygienists, OH., (Ariel Insight# CD-ROM Version), Ariel Research Corp., Bethesda, MD.

Hazardous Substances Data Bank, National Library of Medicine, Bethesda, Maryland (TOMES CPS# 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.



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Integrated Risk Information System, U.S. Environmental Protection Agency, Washington, D.C. (TOMES CPS# 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), (Ariel Insight# CD-ROM Version), Ariel Research Corp., Bethesda, MD.

Registry of Toxic Effects of Chemical Substances, National Institute for Occupational Safety and Health, Cincinnati, OH, (TOMES CPS# CD-ROM Version), Micromedex, Inc., Englewood, CO.

Ariel Insight# (An integrated guide to industrial chemicals covered under major regulatory and advisory programs), North American Module, Western European Module, Chemical Inventories Module and the Generics Module (Ariel Insight# CD-ROM Version), Ariel Research Corp., Bethesda, MD.

The Teratogen Information System, University of Washington, Seattle, WA (TOMES CPS# CD-ROM Version), Micromedex, Inc., Englewood, CO.

Prepared By : Product Safety Department

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