



Product Bulletin

# NALPREP<sup>®</sup> 2578

## Cooling Water Pretreatment

### PRODUCT DESCRIPTION AND APPLICATION

**NALPREP 2578** is a liquid product used to pretreat cooling water systems. It is a blend of several materials, including inorganic phosphate, an organic corrosion inhibitor, a dispersant, and an oil emulsifier.

**NALPREP 2578** is uniquely designed to pretreat both new and older systems that have been chemically or mechanically cleaned. **NALPREP 2578** prepares all metal surfaces in the system for long-term corrosion protection. It initially removes oil and grease from all metal surfaces to permit uniform layering of the passivating film. It aids in the prevention of flash corrosion when the system is most vulnerable to corrosive attack.

### PHYSICAL & CHEMICAL PROPERTIES

Please refer to the Material Safety Data Sheet (MSDS), SECTION 15 for the most recent information on approvals.

Form	Liquid
Density	9.7 - 10.0 lb/gal (1.16 - 1.20 kg/L)
Specific Gravity @ 77°F (25°C)	1.16 - 1.20
pH (neat)	8.0 - 8.4
pH (1% solution)	8.8
Freeze Point	31°F (-1°C)
Freeze Thaw Recovery	Complete
Viscosity @ 70°F (21°C)	10.5 cp
Flash Point	None
Odor	Sweet organic
Color	Clear, pale yellow
Pour Point	32°F (0°F)
Miscibility in Water	Complete
Cloud Point	200°F (93°C)

### ACTIVE CONSTITUENTS

Component	Function
Tolyltriazole (TT)	Yellow Metal Corrosion Inhibitor
Polyphosphate (SHMP)	Corrosion Inhibitor
Polymer (PMA)	Dispersant

## REGULATORY APPROVALS

Please refer to the Material Safety Data Sheet for the most recent approval information.

## MATERIALS OF COMPATIBILITY

Compatible	Not Compatible	Not Tested
Brass	Aluminum	EDPM
Buna-N	Carbon Steel	Plasite 4005
Hypalon	Nickel	PVC
Neoprene	Plasite 7122	
Plasite 6000		
Polypropylene		
Polyurethane		
Stainless Steel 304		
Teflon		
Vinyl		
Viton		

## DOSAGE AND FEEDING

For complete dosage and feeding recommendations, consult your Nalco representative.

## ENVIRONMENTAL AND TOXICITY DATA

Biological Oxygen Demand (5-day BOD <sub>5</sub> )	244 ppm
Chemical Oxygen Demand (COD)	49,000 ppm
Total Organic Carbon (TOC)	13,000 ppm

Refer to the product's Material Safety Data Sheet, SECTIONS 11 and 12, for all aquatic and mammalian information.

## SAFETY AND HANDLING

Read the Material Safety Data Sheet before using this product.

## STORAGE

Shipments of **NALPREP 2578** should be protected in cold climates to prevent freezing. Frozen product may be thawed with drum heaters with no adverse effect on the product. Before using, mix well since the product may form two distinct layers upon melting.

The recommended maximum in-plant storage limit is six months.

## REMARKS

If you need assistance or more information on this product, please call your nearest Nalco Representative. For more news about Nalco Company, visit our website at [www.nalco.com](http://www.nalco.com).

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

## **ADDITIONAL INFORMATION**

NALPREP and NALCO are registered trademarks of Nalco Company (12-03)

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

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**NALPREP® 2578**

EMERGENCY TELEPHONE NUMBER(S)

(800) 424-9300 (24 Hours) CHEMTREC

**1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION**PRODUCT NAME : **NALPREP® 2578**APPLICATION : **PRE-TREATMENT**COMPANY IDENTIFICATION : **Nalco Company  
1601 W. Diehl Road  
Naperville, Illinois  
60563-1198**EMERGENCY TELEPHONE NUMBER(S) : **(800) 424-9300 (24 Hours) CHEMTREC**

NFPA 704M/HMIS RATING

HEALTH : **1 / 2** FLAMMABILITY : **0 / 0** 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.

Hazardous Substance(s)	CAS NO	% (w/w)
Sodium Hydroxide	1310-73-2	0.1 - 1.0

**3. HAZARDS IDENTIFICATION****\*\*EMERGENCY OVERVIEW\*\*****CAUTION**

May cause irritation with prolonged contact.

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.

**PRIMARY ROUTES OF EXPOSURE :**

Eye, Skin

**HUMAN HEALTH HAZARDS - ACUTE :****EYE CONTACT :**

Can cause mild to moderate irritation.

**SKIN CONTACT :**

May cause irritation with prolonged contact.

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**INGESTION :**

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

**INHALATION :**

Not a likely route of exposure. Repeated or prolonged exposure may irritate the respiratory tract.

**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.

**AGGRAVATION OF EXISTING CONDITIONS :**

A review of available data does not identify any worsening of existing conditions.

**4. FIRST AID MEASURES****EYE CONTACT :**

Immediately flush with plenty of water for at least 15 minutes. Get medical attention.

**SKIN CONTACT :**

Immediately flush with plenty of water for at least 15 minutes. If skin irritation persists, obtain medical attention.

**INGESTION :**

Induce vomiting if the patient is fully conscious. If conscious, washout mouth and give water to drink. Get medical attention.

**INHALATION :**

Remove to fresh air, treat symptomatically. Get medical attention.

**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 flammable

**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. Keep containers cool by spraying with water.

**FIRE AND EXPLOSION HAZARD :**

May evolve oxides of carbon (COx) 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 :**

Keep people away from and upwind of spill/leak. Ensure adequate ventilation. Use personal protective equipment recommended in Section 8 (Exposure Controls/Personal Protection).

**METHODS FOR CLEANING UP :**

Dike to prevent further movement. Soak up with inert absorbent material. Reclaim into recovery or salvage drums.

**ENVIRONMENTAL PRECAUTIONS :**

Do not contaminate surface water.

**7. HANDLING AND STORAGE****HANDLING :**

Prevent contact with skin, eyes and clothing. Do not take internally. Use with adequate ventilation.

**STORAGE CONDITIONS :**

Store the containers tightly closed.

**SUITABLE CONSTRUCTION MATERIAL :**

Brass, Buna-N, Hypalon, Neoprene, Polypropylene, Polyethylene, Polyurethane, Stainless steel, Teflon, Viton

**UNSUITABLE CONSTRUCTION MATERIAL :**

Do not use aluminum or mild steel., Carbon steel, Nickel

**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.

**ACGIH/TLV :****Substance(s)**

Sodium Hydroxide

CEILING: 2 mg/m3

**OSHA/PEL :****Substance(s)**

Sodium Hydroxide

CEILING: 2 mg/m3

**ENGINEERING MEASURES :**

General ventilation is recommended.

**RESPIRATORY PROTECTION :**

Respiratory protection is not normally needed. In event of emergency or planned entry into unknown concentrations a positive pressure, full-facepiece SCBA should be used.

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**HAND PROTECTION :**

Rubber gloves

**SKIN PROTECTION :**

Wear standard protective clothing.

**EYE PROTECTION :**

Wear chemical splash goggles.

**HYGIENE RECOMMENDATIONS :**

Eye wash station and safety shower are necessary.

**HUMAN EXPOSURE CHARACTERIZATION :**

Based on our recommended product application and personal protective equipment, the potential human exposure is: Low

**9. PHYSICAL AND CHEMICAL PROPERTIES**

PHYSICAL STATE	Liquid
APPEARANCE	Light yellow
ODOR	Sweet
SPECIFIC GRAVITY	1.18 @ 77 °F / 25 °C
DENSITY	9.7 - 10.1 lb/gal
SOLUBILITY IN WATER	Complete
pH (100 %)	> 8
VISCOSITY	10 cps @ 68 °F / 20 °C
FREEZING POINT	32 °F / 0 °C
VOC CONTENT	0.00 %

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 :**

Extremes of temperature

**MATERIALS TO AVOID :**

Contact with strong oxidizers (e.g. chlorine, peroxides, chromates, nitric acid, perchlorate, concentrated oxygen, permanganate) may generate heat, fires, explosions and/or toxic vapors.



HAZARDOUS DECOMPOSITION PRODUCTS : -  
Under fire conditions: Oxides of carbon

**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).

**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.

**PERSISTENCY AND DEGRADATION :**

Total Organic Carbon (TOC) : 13,000 mg/l

Chemical Oxygen Demand (COD) : 49,000 mg/l

Greater than 95% of this product consists of inorganic substances for which a biodegradation value is not applicable.

**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%	30 - 50%

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

**BIOACCUMULATION POTENTIAL**

This preparation or material is not expected to bioaccumulate.

**MATERIAL SAFETY DATA SHEET****PRODUCT****NALPREP® 2578****EMERGENCY TELEPHONE NUMBER(S)****(800) 424-9300 (24 Hours) CHEMTREC****ENVIRONMENTAL HAZARD AND EXPOSURE CHARACTERIZATION**

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

Based on our recommended product application and the product's characteristics, the potential environmental exposure is: Low

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

**13. DISPOSAL CONSIDERATIONS**

If this product becomes a waste, it is not a hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA) 40 CFR 261, since it does not have the characteristics of Subpart C, nor is it listed under Subpart D.

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.

The presence of an RQ component (Reportable Quantity for U.S. EPA and DOT) in this product causes it to be regulated with an additional description of RQ for road, or as a class 9 for road and air, ONLY when the net weight in the package exceeds the calculated RQ for the product.

**LAND TRANSPORT :**

Proper Shipping Name :	CORROSIVE LIQUID, N.O.S.
Technical Name(s) :	SODIUM HYDROXIDE, SODIUM TOLYLTRIAZOLE
UN/ID No :	UN 1760
Hazard Class - Primary :	8
Packing Group :	III
Flash Point :	Not flammable

**AIR TRANSPORT (ICAO/IATA) :**

Proper Shipping Name :	CORROSIVE LIQUID, N.O.S.
Technical Name(s) :	SODIUM HYDROXIDE, SODIUM TOLYLTRIAZOLE
UN/ID No :	UN 1760
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 :

Technical Name(s) :

UN/ID No :

Hazard Class - Primary :

Packing Group :

CORROSIVE LIQUID, N.O.S.

SODIUM HYDROXIDE, SODIUM TOLYLTRIAZOLE

UN 1760

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III

**15. REGULATORY INFORMATION**

## NATIONAL REGULATIONS, USA :

OSHA HAZARD COMMUNICATION RULE, 29 CFR 1910.1200 :

Based on our hazard evaluation, none of the substances in this product are hazardous.

Sodium Hydroxide : Corrosive

CERCLA/SUPERFUND, 40 CFR 117, 302 :

Notification of spills of this product is not required.

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 does not contain substances listed in Appendix A and B as an Extremely Hazardous Substance.

SECTIONS 311 AND 312 - MATERIAL SAFETY DATA SHEET REQUIREMENTS (40 CFR 370) :

Our hazard evaluation has found that this product is not hazardous under 29 CFR 1910.1200.

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.

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

This product does not contain substances on the List of Toxic Chemicals.

TOXIC SUBSTANCES CONTROL ACT (TSCA) :

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

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
• Sodium Hydroxide	Sec. 311

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CLEAN AIR ACT, Sec. 111 (40 CFR 60, Volatile Organic Compounds), Sec. 112 (40 CFR 61, Hazardous Air Pollutants), Sec. 602 (40 CFR 82, Class I and II Ozone Depleting Substances) :

This product contains the following substances listed in the regulation: None of the substances are specifically listed in the regulation.

**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:

Sodium Hydroxide  
Polycarboxylate

1310-73-2  
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) :**

The substances in this preparation are listed on the Domestic Substances List (DSL), are exempt, or have been reported in accordance with the New Substances Notification Regulations.

**INTERNATIONAL CHEMICAL CONTROL LAWS****NEW ZEALAND**

This product's trade name is registered with the Environmental Risk Management Authority (ERMA).

**16. OTHER INFORMATION**

Due to our commitment to Product Stewardship, we have evaluated the human and environmental hazards and exposures of this product. Based on our recommended use of this product, we have characterized the product's general risk. This information should provide assistance for your own risk management practices. We have evaluated our product's risk as follows:

\* The human risk is: Low

\* The environmental risk is: Low

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Any use inconsistent with our recommendations may affect the risk characterization. Our sales representative will assist you to determine if your product application is consistent with our recommendations. Together we can implement an appropriate risk management process.

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.

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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