



# MATERIAL SAFETY DATA SHEET

PRODUCT NALCO 5196 CORROSION INHIBITOR

Emergency Telephone Number

Medical (708) 920-1510 (24 hours)

GS240

## SECTION 1 PRODUCT IDENTIFICATION

TRADE NAME: NALCO 5196 CORROSION INHIBITOR  
DESCRIPTION: A solution of alkyl primary amine

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

## SECTION 2 HAZARDOUS INGREDIENTS

Our hazard evaluation has identified one or more hazardous ingredient(s) under OSHA's hazard Communication Rule, 29 CFR 1910.1200. Their identity is being claimed a trade secret. Consult Section 14 for the nature of the hazard(s).

INGREDIENT(S)	CAS #	APPROX.%
Primary amine	Proprietary	20-40

## SECTION 3 PRECAUTIONARY LABEL INFORMATION

WARNING: Causes burns to skin and eyes. Do not get in eyes, on skin or on clothing. Wear goggles and 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.  
INHALATION: Remove to fresh air. Treat symptoms. 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.



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## SECTION 4 FIRST AID INFORMATION

( CONTINUED )

NOTE TO PHYSICIAN: Probable mucosal damage may contraindicate the use 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, Inhalation

EYE CONTACT: Can cause injury or damage. Corrosive to the eyes with possible permanent damage depending on the length of exposure and on the first aid action given.

SKIN CONTACT: Can cause severe irritation. Can cause allergic contact dermatitis in susceptible individuals.

INGESTION: Can be harmful.

INHALATION: May cause irritation to the respiratory tract and lungs.

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):

Primary amine LD<sub>50</sub> = 750 mg/kg

ACUTE DERMAL TOXICITY (ALBINO RABBITS):

Primary amine LD<sub>50</sub> = 2,600 mg/kg

PRIMARY SKIN IRRITATION TEST (ALBINO RABBITS):

SKIN IRRITATION INDEX DRAIZE RATING: 6.6/8.0 Corrosive

PRIMARY EYE IRRITATION TEST (ALBINO RABBITS):

EYE IRRITATION INDEX DRAIZE RATING: 104/110.0 Extremely irritating

SKIN SENSITIZATION: Skin sensitization expected.

OTHER TOXICITY RESULTS: Primary amine. Bacterial mutagenicity bioassay (Ames) negative.



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## SECTION 7 PHYSICAL AND CHEMICAL PROPERTIES

COLOR: Colorless to light yellow    FORM: Liquid    ODOR: Ammonia  
DENSITY: 8.2 lbs/gal.  
SOLUBILITY IN WATER: Completely  
SPECIFIC GRAVITY: 0.98 @ 60 Degrees F    ASTM D-1298  
pH (NEAT) = 12    pH (at 1%) 11.5    ASTM E-70  
VISCOSITY: 34 SUS @ 100 Degrees F    ASTM D-2983  
FREEZE POINT: -20 Degrees F    ASTM D-1177  
POUR POINT: Less than -30 Degrees F    ASTM D-97  
FLASH POINT: Greater than 200 Degrees F (TCC)    ASTM D-56  
PERCENT VOLATILE  
BY WEIGHT: 3 @ 75 Degrees F

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

## SECTION 8 FIRE AND EXPLOSION INFORMATION

FLASH POINT: Greater than 200 Degrees F (TCC)    ASTM D-56    \*

EXTINGUISHING MEDIA: Based on the NFPA guide, use dry chemical, 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: Ammonia, CO, CO<sub>2</sub> may be evolved under fire conditions.    \*

## SECTION 9 REACTIVITY INFORMATION

INCOMPATIBILITY: N-nitrosamines, many are cancer causing agents to laboratory animals, may be formed when certain amines are mixed with nitrous acid, organic or inorganic nitrites or atmospheres with high nitrous oxide concentrations.    \*

Avoid contact with strong oxidizers (eg. chlorine, peroxides, chromates, nitric acid, perchlorates, concentrated oxygen, permanganates) which can generate heat, fires, explosions and the release of toxic fumes.    \*

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.    \*

FEEDING EQUIPMENT: Do not use with aluminum, copper or brass, Plasite 7122, Plasite 8-4005, hypalon, viton, Buna-N, polyurethane, rubber, vinyl or neoprene.    \*

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## SECTION 9 REACTIVITY INFORMATION

( CONTINUED )

THERMAL DECOMPOSITION PRODUCTS: In the event of combustion CO may be formed. Do not breathe smoke or fumes. Wear suitable protective equipment.

## SECTION 10 PERSONAL PROTECTION EQUIPMENT

RESPIRATORY PROTECTION: If it is possible to generate significant levels of vapors or mists, a NIOSH approved or equivalent respirator is recommended.

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. Additionally, local exhaust ventilation is recommended where vapors, mists or aerosols may be released.

PROTECTIVE EQUIPMENT: Wear gloves, boots, apron and a face shield with chemical splash goggles. 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.

## SECTION 11 SPILL AND DISPOSAL INFORMATION

IN CASE OF TRANSPORTATION ACCIDENTS, CALL THE FOLLOWING 24-HOUR TELEPHONE NUMBER (708-920-1510)

### SPILL CONTROL AND RECOVERY:

Small liquid spills: Contain with absorbent material, such as 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.

Keep the spill away from heat, sparks, flames and welding operations. Ventilate area and evacuate employees from exposure if the airborne concentration exceeds the TLV. Refer to Section 14.

DISPOSAL: If this product becomes a waste, it does not meet the criteria of



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## SECTION 11 SPILL AND DISPOSAL INFORMATION

( CONTINUED )

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 with stabilizing agents (such as sand, fly ash, or cement) so that no free liquid remains before disposal to an industrial waste landfill. A non-hazardous liquid waste can also be incinerated 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 - CORROSIVE LIQUID, N.O.S.  
CORROSIVE MATERIAL UN 1760  
CONTAINS - ORGANIC AMINE COMPOUND

## 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.

Primary amine - Corrosive, sensitizer

Primary amine = 10 ppm, STEL 20 ppm  
Workplace Environmental Exposure Limit (WEEL)

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 ingredients listed in Appendix A and B as an Extremely Hazardous Substance.



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**SECTION 14 REGULATORY INFORMATION**

( CONTINUED )

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 EPA hazard categories:

- XX Immediate (acute) health hazard
- Delayed (chronic) health hazard
- Fire hazard
- Sudden release of pressure hazard
- Reactive hazard

Under Section 311, submittal of MSDS's or a list of product names to the local emergency planning commission, state emergency response commission and local fire department is required after October 17, 1987 if you have:

- 10,000 pounds or more of a hazardous substance, or
- 500 pounds or the threshold planning quantity, whichever is less, of an extremely hazardous substance.

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

This product does not contain ingredients (at a level of 1% or greater) on the List of Toxic Chemicals.

**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):

None of the ingredients are specifically listed.

**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:**

**CALIFORNIA PROPOSITION 65:**

None of the chemicals on the current Proposition 65 list are known to be present in this product.



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## SECTION 14 REGULATORY INFORMATION

( CONTINUED )

### MICHIGAN CRITICAL MATERIALS:

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

### STATE RIGHT TO KNOW LAWS:

The following ingredient(s) are disclosed for compliance with State Right To Know Laws:

Primary amine	Trade secret
Water	7732-18-5

## 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

ANNUAL REPORT ON CARCINOGENS, U.S. Department of Health and Human Services, Public Health Service, PB 33-135855, 1983.

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DANGEROUS PROPERTIES OF INDUSTRIAL MATERIALS, Sax, N. Irving, ed., Van Nostrand Reinhold Company, N.Y., 6th edition, 1984.

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## SECTION 17 BIBLIOGRAPHY

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REGISTRY OF TOXIC EFFECTS ON CHEMICAL SUBSTANCES, U.S. Department of Health and Human Services, Public Health Service, Center for Disease Control, National Institute for Occupational Safety and Health, 1983 supplement of 1981-1982 edition, Vol. 1-3, OH, 1984.

Title 29 Code of Federal Regulations Part 1910, Subpart Z, Toxic and Hazardous Substances, Occupational Safety and Health Administration (OSHA).

THRESHOLD LIMIT VALUES FOR CHEMICAL SUBSTANCES AND PHYSICAL AGENTS IN THE WORKROOM ENVIRONMENT WITH INTENDED CHANGES, American Conference of Governmental Industrial Hygienists, OH.

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Information on this MSDS has changed. The changes are indicated by asterisks on the right side of only the changed sections. This is an updated MSDS as required by OSHA's Hazard Communication Rule 29 CFR 1910.1200.

PREPARED BY: Ricky A. Stackhouse PhD., Toxicologist

DATE CHANGED: 04/18/90

DATE PRINTED: 08/18/90