



MATERIAL SAFETY DATA SHEET

PRODUCT

NALCO® 7408

EMERGENCY TELEPHONE NUMBER(S)
(800) 424-9300 (24 Hours) CHEMTREC

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME : **NALCO® 7408**

APPLICATION : CHLORINE SCAVENGER

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. Consult Section 15 for the nature of the hazard(s).

Hazardous Substance(s)	CAS NO	% (w/w)
Sodium Bisulfite	7631-90-5	30.0 - 60.0

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

WARNING

Harmful if swallowed. Contains Sulfite. Causes asthmatic signs and symptoms in hyper-reactive individuals. 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 sulfur (SOx) under fire conditions.

PRIMARY ROUTES OF EXPOSURE :

Skin, Eye, Inhalation

HUMAN HEALTH HAZARDS - ACUTE :

EYE CONTACT :

Can cause mild irritation.

SKIN CONTACT :

Can cause mild irritation.



MATERIAL SAFETY DATA SHEET

PRODUCT

NALCO® 7408

EMERGENCY TELEPHONE NUMBER(S)

(800) 424-9300 (24 Hours) CHEMTREC

INGESTION :

Not a likely route of exposure. May cause asthmatic-like attack.

INHALATION :

Irritant to respiratory system. Causes asthmatic signs and symptoms in hyper-reactive individuals.

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.

HUMAN HEALTH HAZARDS - CHRONIC :

Ingestion of sulfite can cause a severe allergic reaction in asthmatics and some sulfite sensitive individuals. The resulting symptoms can include difficulty in breathing, flushed skin and a rash. Chronic exposure to sulfites may cause symptoms of upper respiratory disease and affect sense of taste and smell.

4. FIRST AID MEASURES

EYE CONTACT :

Immediately flush eye with water for at least 15 minutes while holding eyelids open. If irritation persists, repeat flushing. Get immediate medical attention.

SKIN CONTACT :

Immediately flush with plenty of water for at least 15 minutes. If symptoms persist, call a physician.

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. If breathing is difficult, administer oxygen. 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 : None

EXTINGUISHING MEDIA :

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



MATERIAL SAFETY DATA SHEET

PRODUCT

NALCO® 7408

EMERGENCY TELEPHONE NUMBER(S)

(800) 424-9300 (24 Hours) CHEMTREC

FIRE AND EXPLOSION HAZARD :

May evolve oxides of sulfur (SO_x) 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. Ensure clean-up is conducted by trained personnel only. Ensure adequate ventilation. Do not touch spilled material. Stop or reduce any leaks if it is safe to do so. Use personal protective equipment recommended in Section 8 (Exposure Controls/Personal Protection). 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. Wash site of spillage thoroughly with water. 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 :

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

STORAGE CONDITIONS :

Protect product from freezing. Store the containers tightly closed. Store separately from acids. Store in suitable labelled containers. Amine and sulphite products should not be stored within close proximity or resulting vapors may form visible airborne particles.

SUITABLE CONSTRUCTION MATERIAL :

HDPE (high density polyethylene), Compatibility with Plastic Materials can vary; we therefore recommend that compatibility is tested prior to use., Brass, Neoprene, Polyurethane, Viton, Hypalon, EPDM, Polypropylene, Polyethylene, PVC

UNSUITABLE CONSTRUCTION MATERIAL :

Stainless Steel 304, Buna-N, Epoxy phenolic resin, 100% phenolic resin liner



MATERIAL SAFETY DATA SHEET

PRODUCT

NALCO® 7408

EMERGENCY TELEPHONE NUMBER(S)

(800) 424-9300 (24 Hours) CHEMTREC

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. Exposure limits are listed for sulfur dioxide (SO₂) since this product evolves SO₂ when open to the atmosphere.

ACGIH/TLV :

Substance(s)

Sodium Bisulfite TWA: 5 mg/m³

Sulfur Dioxide TWA: 2 ppm , 5.2 mg/m³
STEL: 5 ppm , 13 mg/m³

OSHA/PEL :

Substance(s)

Sodium Bisulfite TWA: 5 mg/m³

Sulfur Dioxide TWA: 2 ppm , 5 mg/m³
STEL: 5 ppm , 13 mg/m³

ENGINEERING MEASURES :

General ventilation is recommended. Local exhaust ventilation may be necessary when dusts or mists are generated.

RESPIRATORY PROTECTION :

If significant mists, vapors or aerosols are generated an approved respirator is recommended. An approved respirator must be worn if the occupational exposure limit is likely to be exceeded.

HAND PROTECTION :

Neoprene gloves, Nitrile gloves, Butyl gloves, PVC gloves

SKIN PROTECTION :

Wear standard protective clothing.

EYE PROTECTION :

Wear chemical splash goggles.

HYGIENE RECOMMENDATIONS :

If clothing is contaminated, remove clothing and thoroughly wash the affected area. Launder contaminated clothing before reuse. Keep an eye wash fountain available. Keep a safety shower available.

HUMAN EXPOSURE CHARACTERIZATION :

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



MATERIAL SAFETY DATA SHEET

PRODUCT

NALCO® 7408

EMERGENCY TELEPHONE NUMBER(S)

(800) 424-9300 (24 Hours) CHEMTREC

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE	Liquid
APPEARANCE	Yellow
ODOR	Pungent
SPECIFIC GRAVITY	1.37 @ 77 °F / 25 °C
DENSITY	11.4 lb/gal
BULK DENSITY	11.4 lb/ft ³
SOLUBILITY IN WATER	Complete
pH (1 %)	4.1
VISCOSITY	2.8 cps @ 77 °F / 25 °C
FREEZING POINT	34 °F / 1.1 °C
BOILING POINT	219 °F / 104 °C
VAPOR PRESSURE	32 mm Hg @ 77 °F / 25 °C 76 mm Hg @ 99.9 °F / 37.7 °C
VAPOR DENSITY	2.2 (Air = 1)
VOC CONTENT	0.00 % EPA Method 24

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 :

Contact with strong oxidizers (e.g. chlorine, peroxides, chromates, nitric acid, perchlorate, concentrated oxygen, permanganate) may generate heat, fires, explosions and/or toxic vapors. Contact with strong acids (e.g. sulfuric, phosphoric, nitric, hydrochloric, chromic, sulfonic) may generate heat, splattering or boiling and toxic vapors. SO₂ may react with vapors from neutralizing amines and may produce a visible cloud of amine salt particles.

HAZARDOUS DECOMPOSITION PRODUCTS :

Under fire conditions: Oxides of sulfur

11. TOXICOLOGICAL INFORMATION

The following results are for a similar product.



MATERIAL SAFETY DATA SHEET

PRODUCT

NALCO® 7408

EMERGENCY TELEPHONE NUMBER(S)
(800) 424-9300 (24 Hours) CHEMTREC

ACUTE ORAL TOXICITY :

Species LD50 Test Descriptor
Rat 4.1 g/kg Similar Product
Rating : Non-Hazardous

ACUTE DERMAL TOXICITY :

Species LD50 Test Descriptor
Rabbit 3 g/kg Similar Product
Rating : Non-Hazardous

PRIMARY SKIN IRRITATION :

Draize Score Test Descriptor
1.0 / 8.0 Similar Product
Rating : Slightly irritating

PRIMARY EYE IRRITATION :

Draize Score Test Descriptor
9.4 / 110.0 Similar Product
Rating : Practically non-irritating

SENSITIZATION :

Sulfites can cause an allergic reaction in sensitive individuals.

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 and a similar product.

ACUTE FISH RESULTS :

Species	Exposure	LC50	Test Descriptor
Rainbow Trout	96 hrs	> 100 mg/l	Product
Fathead Minnow	96 hrs	382 mg/l	Similar Product

ACUTE INVERTEBRATE RESULTS :

Species	Exposure	LC50	EC50	Test Descriptor
Daphnia magna	48 hrs	275 mg/l		Product
Daphnia magna	48 hrs	728 mg/l		Similar Product



MATERIAL SAFETY DATA SHEET

PRODUCT

NALCO® 7408

EMERGENCY TELEPHONE NUMBER(S)

(800) 424-9300 (24 Hours) CHEMTREC

CHRONIC FISH RESULTS :

Species	Exposure	NOEC / LOEC	End Point	Test Descriptor
Fathead Minnow	7 Days	250 mg/l / 500 mg/l	Growth	Product

CHRONIC INVERTEBRATE RESULTS :

Species	Test Type	NOEC / LOEC	End Point	Test Descriptor
Ceriodaphnia dubia	3 Brood	250 mg/l / 500 mg/l	Reproduction	Product

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

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

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.

As a non-hazardous waste, it is not subject to federal regulation. Consult state or local regulation for any additional handling, treatment or disposal requirements. For disposal, contact a properly licensed waste treatment, storage, disposal or recycling facility.

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.



MATERIAL SAFETY DATA SHEET

PRODUCT

NALCO® 7408

EMERGENCY TELEPHONE NUMBER(S)

(800) 424-9300 (24 Hours) CHEMTREC

LAND TRANSPORT :

Proper Shipping Name :	BISULPHITES, AQUEOUS SOLUTION, N.O.S.
Technical Name(s) :	SODIUM BISULPHITE
UN/ID No :	UN 2693
Hazard Class - Primary :	8
Packing Group :	III
Flash Point :	None
DOT Reportable Quantity (per package) :	12,500 lbs
DOT RQ Component :	SODIUM BISULFITE

AIR TRANSPORT (ICAO/IATA) :

Proper Shipping Name :	BISULPHITES, AQUEOUS SOLUTION, N.O.S.
Technical Name(s) :	SODIUM BISULPHITE
UN/ID No :	UN 2693
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 :	BISULPHITES, AQUEOUS SOLUTION, N.O.S.
Technical Name(s) :	SODIUM BISULPHITE
UN/ID No :	UN 2693
Hazard Class - Primary :	8
Packing Group :	III

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.

Sodium Bisulfite : Respiratory irritant

CERCLA/SUPERFUND, 40 CFR 117, 302 :

This product contains the following Reportable Quantity (RQ) Substance. Also listed is the RQ for the product.

<u>RQ Substance</u>	<u>RQ</u>
Sodium Bisulfite	12,000 lbs



MATERIAL SAFETY DATA SHEET

PRODUCT

NALCO® 7408

EMERGENCY TELEPHONE NUMBER(S)

(800) 424-9300 (24 Hours) CHEMTREC

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 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.

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)

FOOD AND DRUG ADMINISTRATION (FDA) Federal Food, Drug and Cosmetic Act :

When use situations necessitate compliance with FDA regulations, this product is acceptable under : 21 CFR 173.310 Boiler Water Additives, 21 CFR 176.170 Components of paper and paperboard in contact with aqueous and fatty foods and 21 CFR 176.180 Components of paper and paperboard in contact with dry foods.

Limitations: no more than required to produce intended technical effect.

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
• Sodium Bisulfite	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) :

None of the substances are specifically listed in the regulation.



MATERIAL SAFETY DATA SHEET

PRODUCT

NALCO® 7408

EMERGENCY TELEPHONE NUMBER(S)

(800) 424-9300 (24 Hours) CHEMTREC

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 Bisulfite	7631-90-5
Water	7732-18-5

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

AUSTRALIA

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

CHINA

All substances in this product comply with the Chemical Control Law and are listed on the Inventory of Existing Chemical Substances China (IECSC).

EUROPE

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

JAPAN

All substances in this product comply with the Law Regulating the Manufacture and Importation Of Chemical Substances and are listed on the Ministry of International Trade & Industry List (MITI).

KOREA

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

NEW ZEALAND

This product complies with Parts XI - XV of the HSNO Act (1996).



MATERIAL SAFETY DATA SHEET

PRODUCT

NALCO® 7408

EMERGENCY TELEPHONE NUMBER(S)

(800) 424-9300 (24 Hours) CHEMTREC

THE PHILIPPINES

All substances in this product comply with the Republic Act 6969 (RA 6969) and are listed on the Philippine Inventory of Chemicals & Chemical Substances (PICCS).

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

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.



MATERIAL SAFETY DATA SHEET

PRODUCT

NALCO® 7408

EMERGENCY TELEPHONE NUMBER(S)

(800) 424-9300 (24 Hours) CHEMTREC

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
Date issued : 05/03/2006
Version Number : 1.13