



Product Bulletin

STA·BR·EX[®] ST20

Microorganism Control Chemical

PRODUCT DESCRIPTION AND APPLICATION

General Description

Nalco's STA·BR·EX ST20 is a liquid biocide best described as an aqueous, one-drum, all-bromine stabilized product that is already active and ready to feed. STA·BR·EX ST20 is used to control bacteria and other organisms in recirculating cooling water, pasteurizers, air washers and other heat transfer systems. It should be considered for use wherever chlorine bleach, chlorine gas, bromine tablets and other chlorine-based products are used.

Program Benefits

STA·BR·EX ST20 is a part of a BIO-MANAGE[®] service program that helps provide microorganism control and clean systems. BIO-MANAGE is an approach to controlling biological fouling in industrial water systems that emphasizes system surveys, understanding the root cause of microbial growth and biofilm formation, and using an Engineering Approach to develop comprehensive programs for biological control. When an antimicrobial product such as STA·BR·EX ST20 is used as part of BIO-MANAGE, greater efficacy and efficiency can be gained and this should lead to greater satisfaction for our customers.

STA·BR·EX ST20 is stabilized, which provides the features of stable long-term storage, improved biological deposit penetration, improved compatibility with other treatment chemicals, lower production of disinfection by-product, and low volatility for improved usage. The stabilizer is sulfamate (H_2NSO_3^-).

Other Benefits:

- STA·BR·EX ST20 is a stable liquid bromine biocide in one package for easy dosing and control. Unlike liquid chlorine bleach, it does not lose its activity in a matter of days (see Figure 1). It reduces operator time and makes dosing easy.
- STA·BR·EX ST20 kills bacteria and helps prevent slime problems. Combined with Nalco services, it helps keep heat exchangers and tower fill clean for low maintenance and cost-efficient operation.
- Because STA·BR·EX ST20 is bromine-based, it will work effectively in systems where chlorine is challenged by amine or ammonia contamination.
- STA·BR·EX ST20 has low volatility that reduces product loss from the cooling tower. This results in more active product retained in the system to kill microorganisms. Equipment lasts longer because STA·BR·EX significantly reduces vapor-phase corrosion.

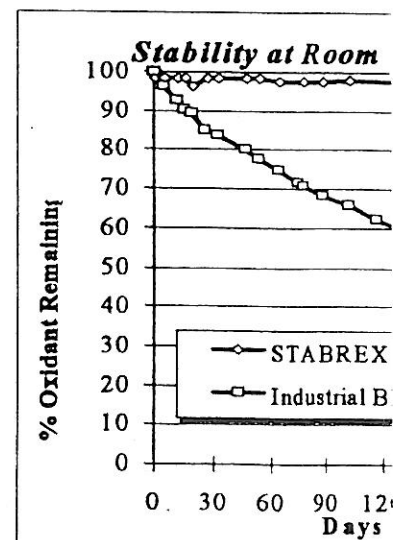


Figure 1 – Stability of STA-BR-EX

- **STA-BR-EX ST20** is packaged and delivered in PORTA-FEED[®] units. Nalco's delivery specialist does all of the chemical handling. Operators have less chance of exposure and a safer work environment.
- **STA-BR-EX ST20** generates less disinfection by-products as measured by the concentration of Adsorbable Organic Halide (AOX).

PHYSICAL & CHEMICAL PROPERTIES

Refer to SECTION 9 of the MSDS for the most current data. These properties are typical.

Form	Liquid
Color	Clear yellow to amber
Density	11.1 lb/gal [1.34 kg/l]
Specific Gravity @ 77°F [25°C]	1.34
pH (neat)	13.2
Freeze-Thaw Recovery	Complete
Freeze Point	16°F [-9°C]
Viscosity @ 20°F [-7°C]	21 cp
@ 75°F [24°C]	7 cp
Flash Point (PMCC)	> 200°F [93°C]
Odor	No odor, slight bromine odor when added to water

ACTIVE CONSTITUENTS

Sodium Hypochlorite	6.36% as available chlorine
Sodium Bromide	9.23% as NaBr

REGULATORY APPROVALS

STA-BR-EX ST20 must be applied according to appropriate national and local regulations.

As with all biocides applied in the United States, **STA-BR-EX ST20** is regulated by the U.S. EPA under The Federal Insecticide, Fungicide and Rodenticide Act (FIFRA). It is a violation of federal law to use this product or any biocide in a manner inconsistent with its product label.

U.S. EPA Registration Number 1706-179 is approval for STA-BR-EX ST20 use in:

- Cooling ponds
- Reservoirs
- Decorative fountains
- Heat transfer systems (such as evaporative condensers, hydrostatic sterilizers and retorts, dairy sweetwater systems, and once-through cooling water systems)
- Industrial and commercial recirculating cooling water systems
- Industrial pasteurizers (such as food, beverage and industrial process pasteurizers)
- Air washers

STA-BR-EX ST20 is not approved for use in potable water, swimming pools or spas.

MATERIALS OF COMPATIBILITY

The following Materials of Compatibility information is available for the neat product exposed to containers, pumps, and feed lines:

Compatible	Not Compatible
Titanium	Brass
Vinyl	Carbon Steel
Polyethylene	Stainless Steel 304
Polypropylene	Stainless Steel 316
PVC	Buna-N
Hypalon	Aluminum
Viton	EPDM
Teflon	Plasite 9570
Kynar	Silicone
Chlorobutyl Rubber	
Derakane 411-45	
Derakane 470-36	
Polyurethane	
Neoprene	

Note: Do not use any metals except titanium on any parts that come in direct contact with product in its neat form.

DOSAGE AND FEEDING

The specific dosage of **STA-BR-EX ST20** will vary depending on the characteristics of your system and the **BIO-MANAGE** objective for your microbio control program. Typically, a dose of 0.5 to 2.0 ppm total residual halogen as chlorine is effective. However, the effective dose can range from a detectable total residual of 0.05 ppm up to 4.0 ppm as chlorine, the US EPA application maximum.

ENVIRONMENTAL AND TOXICITY DATA

Biological Oxygen Demand (5-day BOD ₅)	Not Available
Chemical Oxygen Demand (COD)	Not Available
Total Organic Carbon (TOC)	Not Available

Refer to MSDS, SECTIONS 11 and 12, for all mammalian and aquatic information.

If fed beyond the product label recommendations, this product may be toxic to fish. Do not discharge into lakes, streams, waterways, ponds or public waters unless in accordance with an NPDES permit. For guidance, contact your Nalco representative, your regional office of the EPA, or your local Environmental authority.

SAFETY AND HANDLING

Read and follow the label and MSDS for complete handling information before using this product.

STORAGE

STA-BR-EX ST20 has a freeze point of 16°F (-9°C) and should be stored appropriately. Recommended in-plant storage 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.

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

ADDITIONAL INFORMATION

PORTA-FEED, BIO-MANAGE, STA-BR-EX and NALCO are registered trademarks of Nalco Company (5-18-04)

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

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**MATERIAL SAFETY DATA SHEET****PRODUCT****STABREX® ST20****EMERGENCY TELEPHONE NUMBER(S)****(800) 424-9300 (24 Hours) CHEMTREC****1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION****PRODUCT NAME :** STABREX® ST20**APPLICATION :** MICROORGANISM CONTROL CHEMICAL**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 :** 3 / 3 **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 Hydroxide	1310-73-2	1.0 - 5.0

3. HAZARDS IDENTIFICATION****EMERGENCY OVERVIEW******DANGER****CORROSIVE. CAUSES SEVERE EYE AND SKIN INJURY. HARMFUL IF INHALED. HARMFUL IF SWALLOWED.**

Do not get in eyes, on skin or on clothing. Wear goggles or face shield and rubber gloves when handling. Remove and wash contaminated clothing before reuse. Wash thoroughly after handling.

May evolve hydrogen bromide and bromine under fire conditions. May evolve HCl under fire conditions. May evolve chlorine under fire conditions. May evolve oxides of nitrogen (NOx) under fire conditions. Contact with reactive metals (e.g. aluminum) may result in the generation of flammable hydrogen gas.

PRIMARY ROUTES OF EXPOSURE :

Eye, Skin

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

Corrosive. Will cause eye burns and permanent tissue damage.

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**MATERIAL SAFETY DATA SHEET**

PRODUCT

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SKIN CONTACT :

May cause severe irritation or tissue damage depending on the length of exposure and the type of first aid administered.

INGESTION :

Not a likely route of exposure. Corrosive; causes chemical burns to the mouth, throat and stomach.

INHALATION :

Not a likely route of exposure. Irritating, in high concentrations, to the eyes, nose, throat and lungs.

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 :

No adverse effects expected other than those mentioned above.

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

Get immediate medical attention. **PROMPT ACTION IS ESSENTIAL IN CASE OF CONTACT.** Immediately flush eye with water for at least 15 minutes while holding eyelids open.

SKIN CONTACT :

Get immediate medical attention. Immediately flush with plenty of water for at least 15 minutes. For a large splash, flood body under a shower. Remove contaminated clothing. Wash off affected area immediately with plenty of water. Contaminated clothing, shoes, and leather goods must be discarded or cleaned before re-use.

INGESTION :

Get immediate medical attention. **DO NOT INDUCE VOMITING.** If conscious, washout mouth and give water to drink.

INHALATION :

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

IF IN EYES: Immediately flush with plenty of water for at least 15 minutes. Call a physician.

IF ON SKIN: Immediately wash with soap and plenty of water. Remove contaminated clothing and wash before reuse. Get medical attention if irritation persists.

IF SWALLOWED: Drink large quantities of water. Do not induce vomiting. Call a physician or poison control immediately.

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NOTE TO PHYSICIAN: Probable mucosal damage may contraindicate the use of gastric lavage. Measures against circulatory shock, respiratory depression and convulsion may be needed.

NOTE TO PHYSICIAN :

Probable mucosal damage may contraindicate the use of gastric lavage. 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 :

Not expected to burn. Use extinguishing media appropriate for surrounding fire.

FIRE AND EXPLOSION HAZARD :

May evolve hydrogen bromide and bromine under fire conditions. May evolve HCl under fire conditions. May evolve chlorine under fire conditions. May evolve oxides of nitrogen (NOx) under fire conditions. Contact with reactive metals (e.g. aluminum) may result in the generation of flammable hydrogen gas.

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. Ventilate spill area if possible. 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: Contain and absorb with sand or vermiculite and mix well. Collect up and remove to a safe place until disposal. Wash site of spillage thoroughly with water. Assistance can be obtained from waste disposal companies. **LARGE SPILLS:** Dike to prevent further movement. Recover by pumping or by using a suitable absorbent. Reclaim into recovery or salvage drums. 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 :

This pesticide is toxic to fish and aquatic organisms. Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans or other waters, unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance contact your State Water Board or Regional Office of the EPA. Apply this pesticide only as specified on the label.

**MATERIAL SAFETY DATA SHEET****PRODUCT****STABREX® ST20****EMERGENCY TELEPHONE NUMBER(S)****(800) 424-9300 (24 Hours) CHEMTREC****7. HANDLING AND STORAGE****HANDLING :**

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

STORAGE CONDITIONS :

Store the containers tightly closed. Store separately from acids. Store in a cool well ventilated area away from direct sunlight.

UNSUITABLE CONSTRUCTION MATERIAL :

This product is corrosive to mild steel., Brass, Stainless steel, Buna-N, EPDM

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. Use local exhaust ventilation if necessary to control airborne mist and vapor.

RESPIRATORY PROTECTION :

If significant mists, vapors or aerosols are generated an approved respirator is recommended. In event of emergency or planned entry into unknown concentrations a positive pressure, full-facepiece SCBA should be used. If respiratory protection is required, institute a complete respiratory protection program including selection, fit testing, training, maintenance and inspection. A particulate cartridge may be used.

HAND PROTECTION :

PVC gloves, Rubber gloves, Neoprene gloves, Nitrile gloves, Butyl gloves, Viton® gloves

SKIN PROTECTION :

Wear chemical resistant apron, chemical splash goggles, impervious gloves and boots. A full slicker suit is recommended if gross exposure is possible.

EYE PROTECTION :

Wear a face shield with chemical splash goggles.

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Eye wash station and safety shower are necessary. If clothing is contaminated, remove clothing and thoroughly wash the affected area. Launder contaminated clothing before reuse.

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	Clear Light yellow
ODOR	None
SPECIFIC GRAVITY	1.32 - 1.36 @ 77 °F / 25 °C
DENSITY	11.0 - 11.3 lb/gal
SOLUBILITY IN WATER	Complete
pH (100 %)	13
FREEZING POINT	17 °F / -8.3 °C
VAPOR PRESSURE	7.7 mm Hg @ 77 °F / 25 °C 115 mm Hg @ 115 °F / 46 °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 :

High temperatures Direct sunlight

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. Contact with organic materials (e.g. rags, sawdust, hydrocarbon oils or solvents) and avoid reducing agents (e.g. hydrazine, sulfites, sulfide, aluminum or magnesium dust) which can generate heat, fires, explosions and the release of toxic fumes. Do not mix with any sodium hypochlorite or bleach product. Resulting mixture will result in a violent exothermic reaction releasing large amounts of nitrogen gas and liquid sulfuric acid.

HAZARDOUS DECOMPOSITION PRODUCTS :

Under fire conditions: Chlorine gas, HCl, Bromine, Hydrogen bromide, Oxides of nitrogen

**MATERIAL SAFETY DATA SHEET****PRODUCT****STABREX® ST20****EMERGENCY TELEPHONE NUMBER(S)****(800) 424-9300 (24 Hours) CHEMTREC****11. TOXICOLOGICAL INFORMATION**

The following results are for a similar product.

ACUTE ORAL TOXICITY :

Species	LD50	Test Descriptor
Rat	> 5,000 mg/kg	Similar Product
Rating : Non-Hazardous		

PRIMARY SKIN IRRITATION :

Draize Score	Test Descriptor
7.9 / 8.0	Similar Product
Rating : Extremely irritating (Corrosive)	

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: High

12. ECOLOGICAL INFORMATION**ECOTOXICOLOGICAL EFFECTS :**

The following results are for the product.

ACUTE FISH RESULTS :

Species	Exposure	LC50	Test Descriptor
Rainbow Trout	96 hrs	4.5 mg/l	Product
Sheepshead Minnow	96 hrs	16 mg/l	Product
Fathead Minnow	96 hrs	8.3 mg/l	Product

Rating : Toxic

ACUTE INVERTEBRATE RESULTS :

Species	Exposure	LC50	EC50	Test Descriptor
Daphnia magna	48 hrs	4.2 mg/l	4.2 mg/l	Product
Mysid Shrimp (Mysidopsis bahia)	96 hrs	27 mg/l		Product
Ceriodaphnia dubia	48 hrs	1.6 mg/l		Product

Rating : Toxic

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PRODUCT**STABREX® ST20****EMERGENCY TELEPHONE NUMBER(S)****(800) 424-9300 (24 Hours) CHEMTREC****CHRONIC INVERTEBRATE RESULTS :**

Species	Test Type	IC25	End Point	Test Descriptor
Ceriodaphnia dubia	3 Brood	15.6 mg/l	Reproduction	Product

PERSISTENCY AND DEGRADATION :

Biological Oxygen Demand (BOD) : This material is an oxidizing biocide and is not expected to persist in the environment.

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.

ENVIRONMENTAL HAZARD AND EXPOSURE CHARACTERIZATION

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

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

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

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

Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste Representative at the nearest EPA Regional Office for guidance.

METAL CONTAINERS: Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities. **PLASTIC CONTAINERS:** Do not reuse empty container. Triple rinse (or equivalent). Then puncture and dispose of in a sanitary landfill, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

**MATERIAL SAFETY DATA SHEET****PRODUCT****STABREX® ST20****EMERGENCY TELEPHONE NUMBER(S)****(800) 424-9300 (24 Hours) CHEMTREC****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, BASIC, INORGANIC, N.O.S.
Technical Name(s) :	SODIUM HYDROXIDE, ALKALINE LIQUID BROMINE
	ANTIMICROBIAL
UN/ID No :	UN 3266
Hazard Class - Primary :	8
Packing Group :	II
Flash Point :	None
DOT Reportable Quantity (per package) :	35,000 lbs
DOT RQ Component :	SODIUM HYDROXIDE

AIR TRANSPORT (ICAO/IATA) :

Proper Shipping Name :	CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S.
Technical Name(s) :	SODIUM HYDROXIDE, ALKALINE LIQUID BROMINE
	ANTIMICROBIAL
UN/ID No :	UN 3266
Hazard Class - Primary :	8
Packing Group :	II
IATA Cargo Packing Instructions :	812
IATA Cargo Aircraft Limit :	30 L (Max net quantity per package)

MARINE TRANSPORT (IMDG/IMO) :

Proper Shipping Name :	CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S.
Technical Name(s) :	SODIUM HYDROXIDE, ALKALINE LIQUID BROMINE
	ANTIMICROBIAL
UN/ID No :	UN 3266
Hazard Class - Primary :	8
Packing Group :	II

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.

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PRODUCT

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EMERGENCY TELEPHONE NUMBER(S)

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Sodium Hydroxide : 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
Sodium Hydroxide

RQ
35,000 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 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) :

This product is exempted under TSCA and regulated under FIFRA. The inerts are on the Inventory List.

FEDERAL INSECTICIDE, FUNGICIDE AND RODENTICIDE ACT (FIFRA) :

EPA Reg. No. 1706-179

In all cases follow instructions on the product label.

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:

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Substance(s)	Citations
• Sodium Hydroxide	Sec. 311

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) :
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 :

This product is a registered biocide and is exempt from State Right to Know Labelling Laws.

Sodium Hydroxide
Sodium Hypochlorite

1310-73-2
7681-52-9

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 :

Pesticide controlled products are not regulated under WHMIS.

CANADIAN ENVIRONMENTAL PROTECTION ACT (CEPA) :

Substances regulated under the Pest Control Products Act are exempt from CEPA New Substance Notification requirements.

INTERNATIONAL CHEMICAL CONTROL LAWS**AUSTRALIA**

All substances in this product comply with the National Industrial Chemicals Notification & Assessment Scheme (NICNAS) and are listed on the Australian Inventory of Chemical Substances (AICS).

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.

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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)

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

Nalco: EHS2818, F105047/104688

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: Moderate

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.

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**MATERIAL SAFETY DATA SHEET****PRODUCT****STABREX® ST20****EMERGENCY TELEPHONE NUMBER(S)****(800) 424-9300 (24 Hours) CHEMTREC**

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