



# MATERIAL SAFETY DATA SHEET

PRODUCT

SOLUTION S0613 ST-1

Emergency Telephone Number  
Medical (800) 462-5378 (24 hours) (800) I-M-ALERT

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## SECTION 01 CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

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TRADE NAME: SOLUTION S0613 ST-1  
DESCRIPTION: ST-1, sulfamic acid

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

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## SECTION 02 COMPOSITION AND INFORMATION ON INGREDIENTS

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Our hazard evaluation has identified the following chemical ingredient(s) as hazardous under OSHA's Hazard Communication Rule, 29 CFR 1910.1200. Consult Section 15 for the nature of the hazard(s).

INGREDIENT(S)	CAS #	APPROX. %
Sulfamic acid	5329-14-6	95

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## SECTION 03 HAZARD IDENTIFICATION

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### EMERGENCY OVERVIEW:

**WARNING:** Causes eye injury and skin irritation. Do not get in eyes. Avoid contact with skin and clothing. Avoid breathing dust. Do not take internally.

**PRIMARY ROUTE(S) OF EXPOSURE:** Eye, Skin, Inhalation

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

**SKIN CONTACT:** Corrosive to the skin, possibly resulting in third degree burns depending on the length of exposure and on the first aid action given.

**INHALATION:** Can cause severe respiratory irritation.

**SYMPTOMS OF EXPOSURE:** A review of available data does not identify any symptoms from exposure not previously mentioned.



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AGGRAVATION OF EXISTING CONDITIONS: A review of available data does not identify any worsening of existing conditions.

## SECTION 04 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:** 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.

**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 05 FIRE FIGHTING MEASURES

**FLASH POINT:** Not applicable

**EXTINGUISHING MEDIA:** Not applicable

**UNUSUAL FIRE AND EXPLOSION HAZARD:** May evolve SO<sub>x</sub> under fire conditions.

## SECTION 06 ACCIDENTAL RELEASE MEASURES

IN CASE OF TRANSPORTATION ACCIDENTS, CALL THE FOLLOWING 24-HOUR TELEPHONE NUMBER (800) I-M-ALERT or (800) 462-5378.

**SPILL CONTROL AND RECOVERY:**

Solid spills: Sweep or vacuum up and reclaim into recovery or salvage drums



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for disposal. Wear the protective equipment specified in Section 8 . Refer to CERCLA in Section 15.

## SECTION 07 HANDLING AND STORAGE

Storage : Keep container closed when not in use.

## SECTION 08 EXPOSURE CONTROLS AND PERSONAL PROTECTION

**RESPIRATORY PROTECTION:** Respiratory protection not normally needed. If significant dusting occurs, wear either a disposable dust mask or a cartridge respirator with prefilter or high efficiency cartridge.

For large spills, entry into large tanks, vessels or enclosed small spaces with inadequate ventilation, a positive pressure, self-contained breathing apparatus is recommended.

**VENTILATION:** If significant dusting occurs, local exhaust ventilation is recommended.

**PROTECTIVE EQUIPMENT:** Wear impermeable gloves and chemical splash goggles.

If clothing is contaminated, remove clothing and thoroughly wash the affected area. Launder contaminated clothing before reuse.

**HUMAN EXPOSURE CHARACTERIZATION:** Based on Nalco's recommended product application and our recommended personal protective equipment, the potential human exposure is: **LOW**.

## SECTION 09 PHYSICAL AND CHEMICAL PROPERTIES

COLOR: Off-white	FORM: Crystals	ODOR: None
SOLUBILITY IN WATER:	Partially	
pH (at 1%) =	1.2	ASTM E-70
FLASH POINT:	Not applicable	

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

## SECTION 10 STABILITY AND REACTIVITY



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**INCOMPATIBILITY:** Avoid contact with strong bases.

**THERMAL DECOMPOSITION PRODUCTS:** In the event of combustion CO, CO<sub>2</sub>, SO<sub>x</sub>, NH<sub>3</sub> may be formed. Do not breathe smoke or fumes. Wear suitable protective equipment.

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**SECTION 11 TOXICOLOGICAL 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):** LD(LO) = 1,600 mg/kg

**PRIMARY SKIN IRRITATION TEST (ALBINO RABBITS):**

**SKIN IRRITATION INDEX DRAIZE RATING:** 24 hour contact with 500 mg caused severe irritation to rabbits.

**PRIMARY EYE IRRITATION TEST (ALBINO RABBITS):**

**EYE IRRITATION INDEX DRAIZE RATING:** 24 hour contact with 250 micrograms caused severe irritation to rabbits

**HUMAN HAZARD CHARACTERIZATION:** Based on our hazard characterization, the potential human hazard is: HIGH.

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**SECTION 12 ECOLOGICAL INFORMATION**

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

**ENVIRONMENTAL HAZARD AND EXPOSURE CHARACTERIZATION:** Based on our Hazard Characterization, the potential environmental hazard is: MODERATE. Based on Nalco's recommended product application and the product's characteristics, the potential environmental exposure is: LOW.

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**SECTION 13 DISPOSAL CONSIDERATIONS**

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**DISPOSAL:** If this product becomes a waste, it meets the criteria of a



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hazardous waste as defined under the Resources Conservation and Recovery Act (RCRA) 40 CFR 261. Hazardous Waste D002.

As a hazardous solid waste, it must be disposed of in a licensed Hazardous Waste Treatment, Storage and Disposal facility in accordance with local, state, and federal regulations.

## SECTION 14 TRANSPORTATION INFORMATION

PROPER SHIPPING NAME/HAZARD CLASS MAY VARY BY PACKAGING, PROPERTIES, AND MODE OF TRANSPORTATION. TYPICAL PROPER SHIPPING NAMES FOR THIS PRODUCT ARE:

ALL TRANSPORTATION MODES : SULFAMIC ACID  
(UNLESS SPECIFIED BELOW)

AIR TRANSPORTATION : SULPHAMIC ACID

MARINE TRANSPORTATION : SULPHAMIC ACID

UN/ID NO : UN 2967

HAZARD CLASS - PRIMARY : 8 - CORROSIVE

PACKING GROUP : III

IMDG PAGE NO : 8229

IATA PACKING INSTRUCTION : CARGO: 823

IATA CARGO AIRCRAFT LIMIT : 100 KG (MAX NET QUANTITY PER PACKAGE)

FLASH POINT : NONE

TECHNICAL NAME(S) : NONE

RQ LBS (PER PACKAGE) : NONE

RQ COMPONENT(S) : NONE

## SECTION 15 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



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hazardous and the reason is shown below.

Sulfamic acid - Irritant

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.

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 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 ingredients 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:  
Consult Section 13 for RCRA classification.

FEDERAL WATER POLLUTION CONTROL ACT, CLEAN WATER ACT, 40 CFR 401.15



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(formerly Sec. 307), 40 CFR 116 (formerly Sec. 311):  
None of the ingredients are specifically listed.

CLEAN AIR ACT, Sec. 111 (40 CFR 60), Sec. 112 (40 CFR 61, 1990 Amendments),  
Sec. 611 (40 CFR 82, CLASS I and II Ozone depleting  
substances):  
This product does not contain ingredients covered by the Clean Air Act.

**STATE REGULATIONS:**

**CALIFORNIA PROPOSITION 65:**  
This product does not contain any chemicals which require warning under  
California Proposition 65.

**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:

Corn starch                    9005-25-8  
Sulfamic acid                5329-14-6

This is a WHMIS controlled product under The House of Commons of Canada Bill  
C-70 (Class E). The product contains the following substance(s), from the  
Ingredient Disclosure List or has been evaluated based on its toxicological  
properties, to contain the following hazardous ingredient(s):

Chemical Name	CAS #	% Concentration Range
Sulfamic acid	5329-14-6	95

**SECTION 16 OTHER INFORMATION**

None

**SECTION 17 RISK CHARACTERIZATION**



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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 Nalco's recommendations may affect our 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.

## SECTION 18 REFERENCES

Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices, American Conference of Governmental Industrial Hygienists, OH.

Hazardous Substances Data Bank, National Library of Medicine, Bethesda, Maryland (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. (CD-ROM version), Micromedex, Inc., Englewood, CO.





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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).

Registry of Toxic Effects of Chemical Substances, National Institute for Occupational Safety and Health, Cincinnati, Ohio (CD-ROM version), Micromedex, Inc., Englewood, CO.

Shepard's Catalog of Teratogenic Agents (CD-ROM version), Micromedex, Inc., Englewood, CO.

Suspect Chemicals Sourcebook (a guide to industrial chemicals covered under major regulatory and advisory programs), Roytech Publications (a Division of Ariel Corporation), Bethesda, MD.

The Teratogen Information System, University of Washington, Seattle, Washington (CD-ROM version), Micromedex, Inc., Englewood, CO.

PREPARED BY: William S. Utley, PhD., DABT, Manager, Product Safety

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