

MSDS PART NUMBER: 4381859 US
OHS PART NUMBER: 00232284
Revision number : A
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MATERIAL SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

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SUBSTANCE: RNAlater®

TRADE NAMES/SYNONYMS:

US MSDS P/N 4381859; P/N AM7020; P/N AM7021; P/N AM7022; P/N AM7023; P/N AM7024; P/N SAM7023; P/N 7020; P/N 7021; P/N 7022; P/N 7023; P/N 7024; P/N 7020G; P/N 7022G1; 00232284

PRODUCT USE: For Research Use Only. Not for use in diagnostic procedures.

CREATION DATE: Nov 13 2006

REVISION DATE: Jan 08 2007

2. COMPOSITION, INFORMATION ON INGREDIENTS

COMPONENT: TRADE SECRET 00232384
CAS NUMBER: Not assigned.
PERCENTAGE: 30-60

COMPONENT: TRADE SECRET 00232322
CAS NUMBER: Not assigned.
PERCENTAGE: <10

COMPONENT: SULFURIC ACID
CAS NUMBER: 7664-93-9

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PERCENTAGE: <0.1

3.	HAZARDS IDENTIFICATION
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NFPA RATINGS (SCALE 0-4): HEALTH=2 FIRE=1 REACTIVITY=0

EMERGENCY OVERVIEW:

PHYSICAL FORM: solution

MAJOR HEALTH HAZARDS: respiratory tract irritation, skin irritation, eye irritation

POTENTIAL HEALTH EFFECTS:

INHALATION:

SHORT TERM EXPOSURE: irritation, cough, sore throat, difficulty breathing, lung congestion

LONG TERM EXPOSURE: irritation

SKIN CONTACT:

SHORT TERM EXPOSURE: irritation

LONG TERM EXPOSURE: irritation

EYE CONTACT:

SHORT TERM EXPOSURE: irritation

LONG TERM EXPOSURE: irritation

INGESTION:

SHORT TERM EXPOSURE: irritation, sore throat, nausea, vomiting, diarrhea, stomach pain, convulsions

LONG TERM EXPOSURE: no information on significant adverse effects

4.	FIRST AID MEASURES
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INHALATION: If adverse effects occur, remove to uncontaminated area. Give artificial respiration if not breathing. Get immediate medical attention.

SKIN CONTACT: Wash skin with soap and water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention, if needed. Thoroughly clean and dry contaminated clothing and shoes before reuse.

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EYE CONTACT: Flush eyes with plenty of water for at least 15 minutes. Then get immediate medical attention.

INGESTION: If a large amount is swallowed, get medical attention.

5. FIRE FIGHTING MEASURES

FIRE AND EXPLOSION HAZARDS: Slight fire hazard.

EXTINGUISHING MEDIA: carbon dioxide, regular dry chemical, regular foam, water

FIRE FIGHTING: Move container from fire area if it can be done without risk.
Avoid inhalation of material or combustion by-products. Stay upwind and keep out of low areas.

FLASH POINT: No data available.

HAZARDOUS COMBUSTION PRODUCTS:

Thermal decomposition products or combustion: oxides of carbon, oxides of nitrogen

6. ACCIDENTAL RELEASE MEASURES

WATER RELEASE:

Subject to California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65). Keep out of water supplies and sewers.

OCCUPATIONAL RELEASE:

Stop leak if possible without personal risk. Small spills: Absorb with sand or other non-combustible material. Collect spilled material in appropriate container for disposal. Notify Local Emergency Planning Committee and State Emergency Response Commission for release greater than or equal to RQ (U.S. SARA Section 304). If release occurs in the U.S. and is reportable under CERCLA Section 103, notify the National Response Center at (800)424-8802 (USA) or (202)426-2675 (USA).

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7.	HANDLING AND STORAGE
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STORAGE: Store and handle in accordance with all current regulations and standards. See original container for storage recommendations. Keep separated from incompatible substances.

8.	EXPOSURE CONTROLS, PERSONAL PROTECTION
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EXPOSURE LIMITS:

RNAlater®:

No occupational exposure limits established.

VENTILATION: Provide local exhaust ventilation system. Ensure compliance with applicable exposure limits.

EYE PROTECTION: Wear splash resistant safety goggles with a faceshield. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.

CLOTHING: Wear appropriate chemical resistant clothing.

GLOVES: Wear appropriate chemical resistant gloves.

RESPIRATOR: Under conditions of frequent use or heavy exposure, respiratory protection may be needed. Respiratory protection is ranked in order from minimum to maximum. Consider warning properties before use.

Any chemical cartridge respirator with organic vapor cartridge(s).

Any chemical cartridge respirator with a full facepiece and organic vapor cartridge(s).

Any air-purifying respirator with a full facepiece and an organic vapor canister.

For Unknown Concentrations or Immediately Dangerous to Life or Health -

Any supplied-air respirator with full facepiece and operated in a pressure-demand or other positive-pressure mode in combination with a separate escape supply.

Any self-contained breathing apparatus with a full facepiece.

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9.	PHYSICAL AND CHEMICAL PROPERTIES
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PHYSICAL STATE: liquid
APPEARANCE: clear
PHYSICAL FORM: solution
ODOR: Not available
BOILING POINT: Not available
FREEZING POINT: Not available
VAPOR PRESSURE: Not available
VAPOR DENSITY: Not available
SPECIFIC GRAVITY: Not available
WATER SOLUBILITY: miscible
PH: 4.5
VOLATILITY: Not available
ODOR THRESHOLD: Not available
EVAPORATION RATE: Not available
COEFFICIENT OF WATER/OIL DISTRIBUTION: Not available

10.	STABILITY AND REACTIVITY
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REACTIVITY: Stable at normal temperatures and pressure.

CONDITIONS TO AVOID: Avoid heat, flames, sparks and other sources of ignition.
Avoid contact with incompatible materials.

INCOMPATIBILITIES: acids, bases, chlorates, chlorine, copper alloys, copper, hypochlorite, nitrates, nitrite salts, oxidizing materials, potassium compounds, zinc

HAZARDOUS DECOMPOSITION:
Thermal decomposition products or combustion: oxides of carbon, oxides of nitrogen

POLYMERIZATION: Will not polymerize.

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11.	TOXICOLOGICAL INFORMATION
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TRADE SECRET 00232384:

IRRITATION DATA: 50 percent/5 day(s)-intermittent skin-mammal

TOXICITY DATA: 2840 mg/kg oral-rat LD50

LOCAL EFFECTS:

Irritant: inhalation, skin, eye

ACUTE TOXICITY LEVEL:

Moderately Toxic: ingestion

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: eye disorders, immune system disorders or allergies, respiratory disorders, skin disorders and allergies

TRADE SECRET 00232322:

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: high blood pressure, kidney disorders

Additional toxicological data is available on the component(s) of this product. Please call 650-638-5635 or contact MSDS_Inquiry_CCRM@appliedbiosystems.com for more information.

12.	ECOLOGICAL INFORMATION
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Not available

13.	DISPOSAL CONSIDERATIONS
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Dispose in accordance with all applicable regulations.

14.	TRANSPORT INFORMATION
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U.S. DEPARTMENT OF TRANSPORTATION: No classification assigned.

CANADIAN TRANSPORTATION OF DANGEROUS GOODS: No classification assigned.

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LAND TRANSPORT ADR: No classification assigned.

LAND TRANSPORT RID: No classification assigned.

AIR TRANSPORT IATA: No classification assigned.

AIR TRANSPORT ICAO: No classification assigned.

MARITIME TRANSPORT IMDG: No classification assigned.

15.	REGULATORY INFORMATION
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U.S. REGULATIONS:

SARA TITLE III SECTION 302 EXTREMELY HAZARDOUS SUBSTANCES (40 CFR 355.30):
Not regulated.

SARA TITLE III SECTION 304 EXTREMELY HAZARDOUS SUBSTANCES (40 CFR 355.40):
Not regulated.

SARA TITLE III SARA SECTIONS 311/312 HAZARDOUS CATEGORIES (40 CFR 370.21):

ACUTE: Yes

CHRONIC: No

FIRE: No

REACTIVE: No

SUDDEN RELEASE: No

SARA TITLE III SECTION 313 (40 CFR 372.65): Not regulated.

OSHA PROCESS SAFETY (29CFR1910.119): Not regulated.

STATE REGULATIONS:

California Proposition 65:

Known to the state of California to cause the following:

STRONG INORGANIC ACID MISTS CONTAINING SULFURIC ACID

Cancer (Mar 14, 2003)

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CANADIAN REGULATIONS:

WHMIS CLASSIFICATION: This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all of the information required by the CPR.

NATIONAL INVENTORY STATUS:

U.S. INVENTORY (TSCA): All the components of this substance are listed on or are exempt from the inventory. For purposes of 40 CFR 720.36, this product is for Research and Development (R&D) Use Only.

TSCA 12(b) EXPORT NOTIFICATION: Not listed.

16.	OTHER INFORMATION
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