

### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1. Product identifier

Trade name : SEQUEL™ NE, PART A, CONCENTRATE  
 Product code : AB13021

#### 1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture : Laboratory use/Manufacturing component/Research

#### 1.3. Details of the supplier of the safety data sheet

AmericanBio, Inc.  
 15 Erie Dr.  
 Natick, MA 01760 - USA  
 T 800.443.0600 - F 508.655.2754  
[info@americanbio.com](mailto:info@americanbio.com) - [www.americanbio.com](http://www.americanbio.com)

#### 1.4. Emergency telephone number

Emergency number : 855.835.2572 (U.S.) :: 760.602.8703 (Outside U.S.)

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

##### Classification (GHS-US)

Acute Tox. 4 (Oral)	H302
Acute Tox. 4 (Dermal)	H312
Skin Irrit. 2	H315
Skin Sens. 1	H317
Muta. 1B	H340
Carc. 1B	H350
STOT RE 1	H372

#### 2.2. Label elements

##### GHS-US labeling

Hazard pictograms (GHS-US) :



Signal word (GHS-US) :

Danger

Hazard statements (GHS-US) :

H302+H312 - Harmful if swallowed or in contact with skin  
 H315 - Causes skin irritation  
 H317 - May cause an allergic skin reaction  
 H340 - May cause genetic defects  
 H350 - May cause cancer  
 H372 - Causes damage to organs through prolonged or repeated exposure

Precautionary statements (GHS-US) :

P201 - Obtain special instructions before use  
 P202 - Do not handle until all safety precautions have been read and understood  
 P260 - Do not breathe vapors, mist  
 P261 - Avoid breathing mist, vapors  
 P264 - Wash hands, forearms and face thoroughly after handling  
 P270 - Do not eat, drink or smoke when using this product  
 P272 - Contaminated work clothing should not be allowed out of the workplace  
 P280 - Wear eye protection, protective clothing, protective gloves  
 P301+P312 - IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell  
 P302+P352 - IF ON SKIN: Wash with plenty of soap and water  
 P308+P313 - IF exposed or concerned: Get medical advice/attention  
 P312 - Call a POISON CENTER/doctor/physician if you feel unwell  
 P314 - Get medical advice and attention if you feel unwell  
 P321 - Specific treatment (see SECTION 4 on this label)  
 P330 - If swallowed, rinse mouth  
 P332+P313 - If skin irritation occurs: Get medical advice/attention  
 P333+P313 - If skin irritation or rash occurs: Get medical advice/attention

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P362 - Take off contaminated clothing and wash before reuse  
P362+P364 - Take off contaminated clothing and wash it before reuse  
P405 - Store locked up  
P501 - Dispose of contents/container to Collect all waste in suitable and labeled containers and dispose according to local legislation

### 2.3. Other hazards

No additional information available

### 2.4. Unknown acute toxicity (GHS-US)

No data available

## SECTION 3: Composition/information on ingredients

### 3.1. Substance

Not applicable

Full text of H-phrases: see section 16

### 3.2. Mixture

Name	Product identifier	%	Classification (GHS-US)
water, reagent grade, usp purified	(CAS No) 7732-18-5	> 50	Not classified
urea	(CAS No) 57-13-6	40 - 50	Not classified
acrylamide	(CAS No) 79-06-1	< 20	Acute Tox. 3 (Oral), H301 Acute Tox. 3 (Dermal), H311 Acute Tox. 4 (Inhalation:dust,mist), H332 Skin Irrit. 2, H315 Skin Sens. 1, H317 Muta. 1B, H340 Carc. 1B, H350 STOT RE 1, H372
tris(hydroxymethyl)aminomethane	(CAS No) 77-86-1	< 2	Skin Irrit. 2, H315 Eye Irrit. 2A, H319 STOT SE 3, H335
bisacrylamide	(CAS No) 110-26-9	< 1	Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Eye Irrit. 2A, H319 STOT SE 3, H335
boric acid	(CAS No) 10043-35-3	< 1	Not classified

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

First-aid measures general	: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).
First-aid measures after inhalation	: Assure fresh air breathing. Allow the victim to rest.
First-aid measures after skin contact	: Immediately call a POISON CENTER or doctor/physician. Wash with plenty of soap and water. Wash contaminated clothing before reuse. Get medical advice/attention. If skin irritation or rash occurs: Get immediate medical advice/attention.
First-aid measures after eye contact	: Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persist.
First-aid measures after ingestion	: Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention. Call a POISON CENTER/doctor/physician if you feel unwell.

### 4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries	: May cause genetic defects. May cause cancer. Causes damage to organs through prolonged or repeated exposure.
Symptoms/injuries after inhalation	: May cause an allergic skin reaction.
Symptoms/injuries after skin contact	: Repeated exposure to this material can result in absorption through skin causing significant health hazard. Harmful in contact with skin. Causes skin irritation.
Symptoms/injuries after ingestion	: Swallowing a small quantity of this material will result in serious health hazard.

### 4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

suitable extinguishing media : Foam. Dry powder. Carbon dioxide. Water spray. Sand.

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Unsuitable extinguishing media : Do not use a heavy water stream.

### 5.2. Special hazards arising from the substance or mixture

No additional information available

### 5.3. Advice for firefighters

Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Avoid (reject) fire-fighting water to enter environment.

Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

#### 6.1.1. For non-emergency personnel

Emergency procedures : Evacuate unnecessary personnel.

#### 6.1.2. For emergency responders

Protective equipment : Equip cleanup crew with proper protection.

Emergency procedures : Ventilate area.

### 6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

### 6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.

### 6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Precautions for safe handling : Wash hands and other exposed areas with mild soap and water before eat, drink or smoke and when leaving work. Provide good ventilation in process area to prevent formation of vapor. Avoid breathing mist/vapours/spray. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Eliminate all ignition sources if safe to do so. Do not breathe mist/vapours/spray.

Hygiene measures : Do not eat, drink or smoke when using this product. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse.

### 7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep only in the original container in a cool, well ventilated place away from : Direct sunlight. Keep container closed when not in use.

Incompatible products : Strong bases. strong acids.

Incompatible materials : Sources of ignition. Direct sunlight.

### 7.3. Specific end use(s)

No additional information available

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

acrylamide (79-06-1)		
USA ACGIH	ACGIH TWA (mg/m <sup>3</sup> )	0.03 mg/m <sup>3</sup>

  

boric acid (10043-35-3)		
USA ACGIH	ACGIH TWA (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
USA ACGIH	ACGIH STEL (mg/m <sup>3</sup> )	6 mg/m <sup>3</sup>

### 8.2. Exposure controls

Personal protective equipment : Avoid all unnecessary exposure.

Hand protection : Wear protective gloves.

Eye protection : Chemical goggles or safety glasses.

Skin and body protection : Wear suitable protective clothing.

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Respiratory protection : Wear approved mask.  
Other information : When using, do not eat, drink or smoke.

### SECTION 9: Physical and chemical properties

#### 9.1. Information on basic physical and chemical properties

Physical state : Liquid  
Color : Colorless.  
Odor : characteristic.  
Odor threshold : No data available  
pH : No data available  
Relative evaporation rate (butyl acetate=1) : No data available  
Melting point : No data available  
Freezing point : No data available  
Boiling point : No data available  
Flash point : No data available  
Self ignition temperature : No data available  
Decomposition temperature : No data available  
Flammability (solid, gas) : No data available  
Vapor pressure : No data available  
Relative vapor density at 20 °C : No data available  
Relative density : No data available  
Solubility : No data available  
Log Pow : No data available  
Log Kow : No data available  
Viscosity, kinematic : No data available  
Viscosity, dynamic : No data available  
Explosive properties : No data available  
Oxidizing properties : No data available  
Explosive limits : No data available

#### 9.2. Other information

No additional information available

### SECTION 10: Stability and reactivity

#### 10.1. Reactivity

No additional information available

#### 10.2. Chemical stability

Not established.

#### 10.3. Possibility of hazardous reactions

Not established.

#### 10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures.

#### 10.5. Incompatible materials

strong acids. Strong bases.

#### 10.6. Hazardous decomposition products

fume. Carbon monoxide. Carbon dioxide.

### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects

Acute toxicity : Harmful if swallowed. Harmful in contact with skin.

#### acrylamide (79-06-1)

LD50 oral rat	124 mg/kg (Rat)
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<b>acrylamide (79-06-1)</b>	
LD50 dermal rat	400 mg/kg (Rat)
LD50 dermal rabbit	1885 mg/kg (Rabbit)

<b>bisacrylamide (110-26-9)</b>	
LD50 oral rat	390 mg/kg (Rat)

<b>tris(hydroxymethyl)aminomethane (77-86-1)</b>	
LD50 oral rat	5900 mg/kg (Rat)

<b>boric acid (10043-35-3)</b>	
LD50 oral rat	2660 mg/kg (>2600 mg/kg bodyweight; Rat; Rat; Experimental value)
LD50 dermal rabbit	> 2000 mg/kg (Rabbit; Experimental value, Rabbit; Experimental value)

<b>urea (57-13-6)</b>	
LD50 oral rat	8471 mg/kg (Rat)
LD50 dermal rat	> 3200 mg/kg (Rat)
LD50 dermal rabbit	> 21000 mg/kg (Rabbit)

Skin corrosion/irritation	: Causes skin irritation.
Serious eye damage/irritation	: Not classified
Respiratory or skin sensitization	: May cause an allergic skin reaction.
Germ cell mutagenicity	: May cause genetic defects.
Carcinogenicity	: May cause cancer.

<b>acrylamide (79-06-1)</b>	
IARC group	2A - Probably Carcinogenic to Humans
National Toxicology Program (NTP) Status	3 - Reasonably anticipated to be Human Carcinogen

Reproductive toxicity	: Not classified
Specific target organ toxicity (single exposure)	: Not classified

Specific target organ toxicity (repeated exposure)	: Causes damage to organs through prolonged or repeated exposure. Causes damage to organs through prolonged or repeated exposure
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Aspiration hazard	: Not classified
Potential Adverse human health effects and symptoms	: Based on available data, the classification criteria are not met. Harmful if swallowed. Harmful in contact with skin.
Symptoms/injuries after inhalation	: May cause an allergic skin reaction.
Symptoms/injuries after skin contact	: Repeated exposure to this material can result in absorption through skin causing significant health hazard. Harmful in contact with skin. Causes skin irritation.
Symptoms/injuries after ingestion	: Swallowing a small quantity of this material will result in serious health hazard.

## SECTION 12: Ecological information

### 12.1. Toxicity

<b>acrylamide (79-06-1)</b>	
LC50 fish 1	110 mg/l (96 h; Salmo gairdneri (Oncorhynchus mykiss); Flow-through system)
EC50 Daphnia 1	230 mg/l (24 h; Daphnia magna; Flow-through system)
LC50 fish 2	100 mg/l (96 h; Lepomis macrochirus)
EC50 Daphnia 2	98 mg/l (48 h; Daphnia magna; Flow-through system)
Threshold limit other aquatic organisms 1	56 mg/l (96 h; Pimephales promelas)
Threshold limit other aquatic organisms 2	60 mg/l (48 h; Daphnia magna; Flow-through system)

<b>boric acid (10043-35-3)</b>	
LC50 fish 1	100 ppm (96 h; Salmo gairdneri (Oncorhynchus mykiss); Soft water)
EC50 Daphnia 1	658 - 875 mg/l (48 h; Daphnia magna)
LC50 fish 2	79 ppm (96 h; Salmo gairdneri (Oncorhynchus mykiss); Hard water)
EC50 Daphnia 2	19.7 mg/l (336 h; Daphnia magna)
TLM fish 1	1800 ppm (24 h; Gambusia affinis)
Threshold limit algae 1	5 mg/l (672 h; Elodea sp.)
Threshold limit algae 2	0.4 - 0.8, 336 h; Chlorella sp.; Growth

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<b>urea (57-13-6)</b>	
LC50 fish 1	> 6810 mg/l (96 h; Leuciscus idus)
EC50 Daphnia 1	> 10000 mg/l (48 h; Daphnia magna)
LC50 fish 2	17500 mg/l (96 h; Poecilia reticulata)
EC50 Daphnia 2	> 10000 mg/l (24 h; Daphnia magna)
TLM fish 1	17500 ppm (96 h; Poecilia reticulata)
Threshold limit other aquatic organisms 1	120000 mg/l (16 h; Bacteria; Toxicity test)
Threshold limit other aquatic organisms 2	> 10000 mg/l (Pseudomonas putida)
Threshold limit algae 2	> 10000 mg/l (168 h; Scenedesmus quadricauda)

### 12.2. Persistence and degradability

<b>SEQUEL™ NE, PART A, CONCENTRATE</b>	
Persistence and degradability	Not established.

<b>acrylamide (79-06-1)</b>	
Biochemical oxygen demand (BOD)	0.97 g O <sub>2</sub> /g substance
Chemical oxygen demand (COD)	1.3 g O <sub>2</sub> /g substance
ThOD	2.14 g O <sub>2</sub> /g substance
BOD (% of ThOD)	45 % ThOD

<b>bisacrylamide (110-26-9)</b>	
Persistence and degradability	Biodegradability in water: no data available.

<b>tris(hydroxymethyl)aminomethane (77-86-1)</b>	
Persistence and degradability	Biodegradability in water: no data available.

<b>boric acid (10043-35-3)</b>	
Persistence and degradability	Biodegradability: not applicable. Biodegradability in soil: not applicable. No (test) data on mobility of the substance available.
Biochemical oxygen demand (BOD)	Not applicable
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
BOD (% of ThOD)	Not applicable

<b>urea (57-13-6)</b>	
Persistence and degradability	Inherently biodegradable. Hydrolysis in water.
ThOD	0.27 g O <sub>2</sub> /g substance

### 12.3. Bioaccumulative potential

<b>SEQUEL™ NE, PART A, CONCENTRATE</b>	
Bioaccumulative potential	Not established.

<b>acrylamide (79-06-1)</b>	
BCF fish 1	25.7 mg/kg (480 h; Oryzias latipes)
BCF fish 2	7.4 mg/kg (960 h; Cyprinus carpio)
Log Pow	-0.67

<b>bisacrylamide (110-26-9)</b>	
Bioaccumulative potential	No bioaccumulation data available.

<b>tris(hydroxymethyl)aminomethane (77-86-1)</b>	
Log Pow	-1.56
Bioaccumulative potential	Bioaccumulation: not applicable.

<b>boric acid (10043-35-3)</b>	
BCF fish 1	0 (Salmo gairdneri (Oncorhynchus mykiss); Chronic)
BCF fish 2	< 0.1 (60 days; Oncorhynchus tshawytscha; Fresh weight)
Log Pow	-1.09 (Experimental value; 22 °C, Experimental value; 22 °C)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

<b>urea (57-13-6)</b>	
BCF fish 1	1 (72 h; Brachydanio rerio; Fresh water)

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<b>urea (57-13-6)</b>	
BCF other aquatic organisms 1	11700 (Chlorella sp.)
Log Pow	-2.59 - -1.59
Bioaccumulative potential	Bioaccumulation: not applicable.

### 12.4. Mobility in soil

<b>boric acid (10043-35-3)</b>	
Ecology - soil	May be harmful to plant growth, blooming and fruit formation.

### 12.5. Other adverse effects

Other information : Avoid release to the environment.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Waste disposal recommendations : Dispose in a safe manner in accordance with local/national regulations.  
Ecology - waste materials : Avoid release to the environment.

## SECTION 14: Transport information

In accordance with DOT  
No dangerous good in sense of transport regulations

### Additional information

Other information : No supplementary information available.

### ADR

Transport document description : UN N/A  
Packing group (ADR) : N/A  
Hazard identification number (Kemler No.) : N/A  
Classification code (ADR) : N/A

### Transport by sea

No additional information available

### Air transport

No additional information available

## SECTION 15: Regulatory information

### 15.1. US Federal regulations

<b>acrylamide (79-06-1)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory Listed on SARA Section 313 (Specific toxic chemical listings)	
RQ (Reportable quantity, section 304 of EPA's List of Lists) :	5000 lb

<b>bisacrylamide (110-26-9)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	

<b>water, reagent grade, usp purified (7732-18-5)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	

<b>tris(hydroxymethyl)aminomethane (77-86-1)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	

<b>boric acid (10043-35-3)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	

<b>urea (57-13-6)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	

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### 15.2. International regulations

#### CANADA

No additional information available

#### EU-Regulations

No additional information available

### Classification according to Regulation (EC) No. 1272/2008 [CLP]

#### Classification according to Directive 67/548/EEC or 1999/45/EC

Not classified

#### 15.2.2. National regulations

##### acrylamide (79-06-1)

Listed on IARC (International Agency for Research on Cancer)

Listed as carcinogen on NTP (National Toxicology Program)

### 15.3. US State regulations

#### acrylamide (79-06-1)

U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significance risk level (NSRL)
Yes	Yes		Yes	

#### acrylamide (79-06-1)

U.S. - Massachusetts - Right To Know List

U.S. - New Jersey - Right to Know Hazardous Substance List

U.S. - Pennsylvania - RTK (Right to Know) List

## SECTION 16: Other information

Other information : None.

Full text of H-phrases: see section 16:

Acute Tox. 3 (Dermal)	Acute toxicity (dermal) Category 3
Acute Tox. 3 (Oral)	Acute toxicity (oral) Category 3
Acute Tox. 4 (Dermal)	Acute toxicity (dermal) Category 4
Acute Tox. 4 (Inhalation:dust,mist)	Acute toxicity (inhalation:dust,mist) Category 4
Acute Tox. 4 (Oral)	Acute toxicity (oral) Category 4
Carc. 1B	Carcinogenicity Category 1B
Eye Irrit. 2A	Serious eye damage/eye irritation Category 2A
Muta. 1B	Germ cell mutagenicity Category 1B
Skin Irrit. 2	Skin corrosion/irritation Category 2
Skin Sens. 1	Skin sensitization Category 1
STOT RE 1	Specific target organ toxicity (repeated exposure) Category 1
STOT SE 3	Specific target organ toxicity (single exposure) Category 3
H301	Toxic if swallowed
H302	Harmful if swallowed
H311	Toxic in contact with skin



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H312	Harmful in contact with skin
H315	Causes skin irritation
H317	May cause an allergic skin reaction
H319	Causes serious eye irritation
H332	Harmful if inhaled
H335	May cause respiratory irritation
H340	May cause genetic defects
H350	May cause cancer
H372	Causes damage to organs through prolonged or repeated exposure

SDS US (GHS HazCom 2012)

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