

**Kit SDS Cover Sheet**

Doc. ID: 476831-75: Rev. AF  
Revised (year/month/day) 2015/05/12

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**Product Information**

|                     |                                    |
|---------------------|------------------------------------|
| <b>Product Name</b> | Aspartate Aminotransferase Reagent |
| <b>Part Number</b>  | 476831                             |
| <b>Series Name</b>  | SYNCHRON Systems                   |

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**Components**

|                    |                                                                                                                             |
|--------------------|-----------------------------------------------------------------------------------------------------------------------------|
| <b>Description</b> | Aspartate Aminotransferase Reagent (Compartment A)<br>Aspartate Aminotransferase Reagent (Compartment B)<br>AST (A-Reagent) |
|--------------------|-----------------------------------------------------------------------------------------------------------------------------|

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**Transport Information**

Transportation of this product is not regulated under ICAO, IMDG, US DOT, European ADR or Canadian TDG.



## SAFETY DATA SHEET

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### Section 1 Identification of the Substance/mixture and of the Company/undertaking

#### 1.1 Product Identifier

**Product Name** Aspartate Aminotransferase Reagent (Compartment A)  
**Part Number** Component of P/N 476831  
**Series Name** SYNCHRON Systems

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

**Product Use** For In Vitro Diagnostic Use. See product literature for details.

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

##### Manufacturer

Beckman Coulter, Inc.  
250 S. Kraemer Blvd  
Brea, CA 92821, U.S.A.  
Tel: 800-854-3633

##### EC REP Address

Beckman Coulter Eurocenter S.A.  
22, rue Juste-Oliver, Case Postale 1044,  
CH-1260 Nyon 1, Switzerland.  
Telephone +41 (0)22 365 36 11  
Monday through Friday, 9:00 am to  
7:00pm)

**e-mail address** SDSNT@beckman.com

#### 1.4 Emergency telephone number

**Telephone number (24H)** Chemtrec Emergency Tel No. U.S.A. 800-424-9300, International (001) 703-527-3887

##### Distributor and Emergency Phone No.

Refer to attached list, Document ID: [472050](#), for local distributor and emergency phone numbers.

### Section 2 Hazards Identification

#### 2.1 Classification of substance or mixture

**Product Description** Mixture  
Colorless; Clear; Liquid; Odorless

##### Classification according to EC 1272/2008 (CLP/GHS)

Not classified as hazardous per EC 1272/2008 (CLP/GHS)

##### Classification according to EC Directives 1999/45/EC and 67/548/EEC

Not classified as dangerous per EC Directives (1999/45/EC and 67/548 EEC)

##### Classification according to US-OSHA (HCS 29 CFR 1910.1200) and UN GHS

Skin Irritation Category 3

## Section 2 Hazards Identification (Continued)

### 2.2 Label Elements

According to EC 1272/2008 (CLP/GHS), US-OSHA and UN GHS

#### Hazardous Ingredients

Tris(hydroxymethyl)– aminomethane

#### Pictogram

None

#### Signal Word

WARNING

#### Hazard Statements

H316 Causes mild skin irritation.

#### Precautionary Statements

P332+P313 If skin irritation occurs: Get medical advice/attention.

### 2.3 Other hazards

This product contains concentrations of azide below the hazardous level which with repeated contact with lead and copper commonly found in plumbing drains may result in the build up of shock sensitive compounds. Sodium azide forms explosive compounds with heavy metals.

Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

See Section 11 Toxicological Information for more detailed health information.

## Section 3 Composition and Information on Ingredients

### 3.2 Mixtures

| Hazardous Ingredients:                                                                           |          | Hazard Classification of Pure Ingredients |                                                                                |                                                                                |      |
|--------------------------------------------------------------------------------------------------|----------|-------------------------------------------|--------------------------------------------------------------------------------|--------------------------------------------------------------------------------|------|
| Chemical Name                                                                                    | % by wt. | EU-67/548/EEC                             | EU 1272/2008 CLP/GHS                                                           | GHS                                                                            |      |
| Tris(hydroxymethyl)–aminomethane<br>CAS # 77-86-1<br>EINECS # 201-064-4<br>Index # Not available | 1 - 5    | Xi;R36/37/38                              | Eye Irrit. 2<br>STOT SE 3<br>Skin Irrit. 2<br>H315; H319; H335                 | Eye Irrit. 2<br>STOT SE 3<br>Skin Irrit. 2<br>H315; H319; H335                 |      |
| Sodium Azide<br>CAS # 26628-22-8<br>EINECS # 247-852-1<br>Index # 011-004-00-7                   | < 0.1    | T+;R28-32<br>N;R50/53                     | Acute Tox. Oral 2<br>Aquatic Acute 1<br>Aquatic Longterm 1<br>H300; H400; H410 | Acute Tox. Oral 2<br>Aquatic Acute 1<br>Aquatic Longterm 1<br>H300; H400; H410 | 2, 8 |

2 - Substance with Community workplace exposure limits

8 - Present at concentration below the cut-off limits.

See section 8 for available Occupational exposure limits

See Section 15 for additional regulatory information

See Section 16 for hazard class, hazard statements and risk phrase description

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### Section 4 First Aid Measures

#### 4.1 Description of first aid measures

|                     |                                                                                                                                                                                           |
|---------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Inhalation</b>   | If product is inhaled, move exposed individual to fresh air. If individual is not breathing, begin artificial respiration immediately and obtain medical attention.                       |
| <b>Eye Contact</b>  | If product enters eyes, wash eyes gently under running water for 15 minutes or longer, making sure that the eyelids are held open. If pain or irritation occur, obtain medical attention. |
| <b>Skin Contact</b> | In case of skin contact, flush with copious amounts of water for at least 15 minutes. If pain or irritation occur, obtain medical attention.                                              |
| <b>Ingestion</b>    | If ingested, wash mouth out with water. If irritation or discomfort occurs, seek medical attention.                                                                                       |

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

Exposure may result in irritation of skin and eyes.  
See Section 11 Toxicological Information for more detailed health information.

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

No specific medical attention or treatment required.

### Section 5 Fire Fighting Measures

**Flammable Properties** Nonflammable aqueous solution.

**5.1 Extinguishing Media** In case of fire use carbon dioxide (CO<sub>2</sub>), dry chemical, water spray or foam.  
For large fires use extinguishing media suitable for surrounding fire.

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

##### Special Fire and Explosion Hazards

No special hazards determined.

##### Hazardous Combustion Products

No combustion products posing significant hazards are expected from this product (an aqueous solution).

#### 5.3 Advice for fire fighters

**Protective Equipment** Self-contained breathing apparatus is recommended for firefighters in all chemical fire situations.

**5.4 Additional information** No further relevant information available.

### Section 6 Accidental Release Measures

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

**Personal Precautions** Observe general safety guidelines for protection; avoid eye and skin contact.  
Wear protective gloves, protective clothing and eye/face protection.

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### Section 6 Accidental Release Measures (Continued)

- 6.2 Environmental Precautions** Contain spill to prevent migration.  
Do not allow the undiluted product to enter sewers/surface or ground water.  
Dispose of contents/container in accordance with local regulations
- 6.3 Methods and material for containment and cleaning up**
- Spill and Leak Procedures** Absorb spilled material with an appropriate inert, non-flammable absorbent and dispose according to local regulations.
- 6.4 Reference to other sections** Refer sections 8 and 13.

### Section 7 Handling and Storage

- 7.1 Precautions for safe handling** Use good laboratory procedures; avoid eye and skin contact.
- 7.2 Conditions for safe storage, including any incompatibilities**  
Store at 2 to 8°C , as directed on the product label.  
To maintain product quality, store according to the instructions in the product labeling.  
Store away from strong acids, strong bases, strong oxidizers and incompatible materials (section 10).
- 7.3 Specific end uses** No further relevant information available.

### Section 8 Exposure Controls and Personal Protection

- 8.1 Control parameters**
- Exposure Limits**
- US OSHA** None established
- ACGIH**
- Sodium Azide  
CAS # 26628-22-8 0.29 mg/m3 Ceiling (as NaN<sub>3</sub>); 0.11 ppm Ceiling (as Hydrazoic acid) (vapor)
- DFG MAK**
- Sodium Azide  
CAS # 26628-22-8 0.4 mg/m3 Peak (inhalable fraction); 0.2 mg/m3 TWA MAK (inhalable fraction)
- Ireland**
- Sodium Azide  
CAS # 26628-22-8 0.1 mg/m3 TWA (as NaN<sub>3</sub>); 0.3 mg/m3 STEL (as NaN<sub>3</sub>); Potential for cutaneous absorption
- IOELVs**
- Sodium Azide  
CAS # 26628-22-8 Possibility of significant uptake through the skin; 0.1 mg/m3 TWA; 0.3 mg/m3 STEL
- NIOSH** None established
- Japan** None established

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### Section 8 Exposure Controls and Personal Protection (Continued)

#### 8.2 Exposure controls

|                               |                                                                                                                                                                                         |
|-------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Engineering Controls</b>   | No special engineering controls are required. Use with good general ventilation.                                                                                                        |
| <b>Eye Protection</b>         | Safety glasses or chemical goggles should be worn to prevent eye contact. Refer U.S. OSHA 29 CFR 1910.133, European Standard EN166 or appropriate government standards.                 |
| <b>Skin Protection</b>        | Impervious gloves, such as Nitrile or equivalent, should be worn to prevent skin contact. Refer U.S. OSHA 29 CFR 1910.138, European Standard EN374 or appropriate government standards. |
| <b>Respiratory Protection</b> | Under normal conditions, the use of this product should not require respiratory protection.                                                                                             |

### Section 9 Physical and Chemical Properties

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

|                                  |                 |                                               |                 |
|----------------------------------|-----------------|-----------------------------------------------|-----------------|
| <b>Physical State</b>            | Liquid          | <b>Specific Gravity (Water=1.0)</b>           | ≈1.018 @22-26°C |
| <b>Color</b>                     | Colorless       | <b>Solubility</b>                             |                 |
| <b>Transparency</b>              | Clear           | <b>Water</b>                                  | Miscible        |
| <b>Odor</b>                      | Odorless        | <b>Organic</b>                                | Not applicable  |
| <b>pH</b>                        | 7.7 - 7.9 @25°C | <b>Partition coefficient: n-octanol/water</b> | Not determined  |
| <b>Freezing Point</b>            | Not determined  | <b>Auto-ignition Temp.</b>                    | Not applicable  |
| <b>Boiling Point</b>             | Not determined  | <b>Decomposition Temperature</b>              | Not determined  |
| <b>Flash Point</b>               | Not applicable  | <b>Percent Volatiles</b>                      | Not applicable  |
| <b>Evaporation Rate</b>          | Not determined  | <b>Vapor Pressure</b>                         | Not determined  |
| <b>Flammability (Solid, Gas)</b> | Not applicable  | <b>Viscosity</b>                              | Not determined  |
| <b>Flammability Limits</b>       | Not applicable  | <b>Explosive Properties</b>                   | Not applicable  |
| <b>Vapor Density</b>             | Not determined  | <b>Oxidizing Properties</b>                   | Not applicable  |
| <b>Odor Threshold</b>            | Not applicable  |                                               |                 |

**9.2 Other Information** No further relevant information available.

### Section 10 Stability and Reactivity

|                                |                                                                          |
|--------------------------------|--------------------------------------------------------------------------|
| <b>10.1 Reactivity</b>         | No further relevant information available.                               |
| <b>10.2 Chemical Stability</b> | The product is stable in accordance with recommended storage conditions. |

## Section 10 Stability and Reactivity (Continued)

### 10.3 Possibility of hazardous reactions

Sodium azide forms explosive compounds with heavy metals. Repeated contact of low concentrations of azide with lead and copper commonly found in plumbing drains may result in the build up of shock sensitive compounds.

### 10.4 Conditions to Avoid

Avoid contact with incompatible materials.  
Avoid exposure to heat and direct sunlight.

### 10.5 Incompatible materials

Metals and metallic compounds

### 10.6 Hazardous Decomposition Products

No decomposition products posing significant hazards would be expected from this product (an aqueous solution).

## Section 11 Toxicological Information

### 11.1 Information on toxicological effects

#### Toxicity Data for Hazardous Ingredients

Sodium Azide  
CAS # 26628-22-8

Oral LD50 Rat 27 mg/kg; Dermal LD50 Rat 50 mg/kg; Dermal LD50 Rabbit 20 mg/kg

#### Primary Routes of Exposure

Eye contact, ingestion, inhalation, and skin contact.

#### Skin Corrosion/Irritation

May cause skin irritation.

#### Serious eye damage/eye irritation

May cause eye irritation.

#### Respiratory/skin sensitization

No data available.

#### Carcinogenicity

No ingredients in this product are listed as carcinogens by ACGIH, IARC, NTP, OSHA or 1272/2008 EC regulation.

#### Germ cell mutagenicity

No data available.

#### Reproductive Toxicity

No data available.

#### Specific target organ toxicity – single exposure

No data available.

#### Specific target organ toxicity – repeated exposure

No data available.

#### Aspiration hazard

No data available.

#### Other Information

No further relevant information available.

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### Section 12 Ecological Information

#### 12.1 Ecotoxicity

##### Fresh Water Species

Sodium Azide  
CAS # 26628-22-8

96 h LC50 Oncorhynchus mykiss: 0.8 mg/L; 96 h LC50 Lepomis macrochirus:  
0.7 mg/L; 96 h LC50 Pimephales promelas: 5.46 mg/L [flow-through]

##### Microtox

No information available.

##### Water Flea

No information available.

##### Fresh Water Algae

No information available.

#### 12.2 Persistence and degradability

Not determined for the product.

#### 12.3 Bioaccumulation

Not determined for the product.

#### 12.4 Mobility in soil

Not determined for the product.

#### 12.5 Results of PBT and vPvB assessment

Not determined for the product. PBT: Not applicable, vPvB: Not applicable.

#### 12.6 Other Adverse Effects

This product contains environmentally hazardous substance below the cutoff level. Refer section 3 for ingredient information. Do not allow undiluted product to enter sewer/surface or ground water.

### Section 13 Disposal Considerations

#### 13.1 Waste treatment methods

##### Product Waste Disposal

Chemical residues and remains should be routinely handled as special waste. This must be disposed of in compliance with anti-pollution and other laws of the country concerned. To ensure compliance we recommend that you contact the relevant (local) authorities and/or an approved waste-disposal company for information. Sodium azide preservative may form explosive compounds in metal drain lines. See NIOSH Bulletin: Explosive Azide Hazard (8/16/76). To avoid the possible build-up of azide compounds, flush wastepipes with water after the disposal of undiluted reagent. Sodium azide disposal must be in accordance with appropriate local regulations.

##### Package disposal

Dispose of waste product, unused product and contaminated packaging in compliance with federal, state and local regulations. If unsure of the applicable requirements, contact the authorities for information.

#### 13.2 Additional information

Suggested European waste catalogue 18 01 07 - chemicals other than those mentioned in 18 01 06. Dispose in accordance with national, state and local waste regulations.

### Section 14 Transport Information

Transportation of this product is not regulated under ICAO, IMDG, US DOT, European ADR or Canadian TDG.

### Section 15 Regulatory Information

#### 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

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## Section 15 Regulatory Information (Continued)

### US Federal and State Regulations

|                                            |                                                                                                                     |
|--------------------------------------------|---------------------------------------------------------------------------------------------------------------------|
| <b>SARA 313</b>                            | Sodium Azide is subject to reporting requirements of Section 313, Title III of SARA. 1.0 % de minimis concentration |
| <b>CERCLA RG's, 40 CFR 302.4</b>           | Sodium Azide is listed.                                                                                             |
| <b>California Proposition 65</b>           | No ingredients listed.                                                                                              |
| <b>Massachusetts MSL</b>                   | Sodium Azide is listed.                                                                                             |
| <b>New Jersey Dept. of Health RTK List</b> | Sodium Azide is listed.                                                                                             |
| <b>Pennsylvania RTK</b>                    | Sodium Azide is listed.                                                                                             |

### EU Regulations

This SDS complies with EC Regulations 1907/2006 (REACH) and amendments.

**Water Hazard Class (Germany)** WGK 1, low water endangering

**REACH 1907/2006 EC - Annex XIV - list of substances subject to authorization.**

No ingredients listed.

**According to EC Directives (1999/45/EC and 67/548 EEC)**

Not classified as dangerous per EC Directives (1999/45/EC and 67/548 EEC)

### Canada

This product is exempt from WHMIS label and SDS requirements.

**PIN** Not applicable

### **Ingredients on Ingredient Disclosure List**

Sodium Azide

### **Ingredients with unknown toxicological properties**

Product is exempt

**15.2 Chemical Safety Assessment** A Chemical Safety Assessment has not been carried out.

*Some hazardous ingredients listed in Section 15 are below OSHAs and WHMIS' 1.0% w/w (0.1% for carcinogens) or EU's ingredient specific concentrations required for reporting in Section 3.*

## Section 16 Other Information

|                                      |                                                                                                    |                                                     |
|--------------------------------------|----------------------------------------------------------------------------------------------------|-----------------------------------------------------|
| <b>Beckman Coulter Safety Rating</b> | <b>Flammability: 0</b><br><b>Health: 1</b><br><b>Reactivity with Water: 0</b><br><b>Contact: 1</b> | Code<br>0=None<br>1=Slight<br>2=Caution<br>3=Severe |
|--------------------------------------|----------------------------------------------------------------------------------------------------|-----------------------------------------------------|

**Revision Changes** Updated to GHS.

### **Hazard Class, hazard statements and risk phrase description from section 3**

N - Dangerous for the environment

T+ - Very toxic

Xi - Irritant

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## Section 16 Other Information (Continued)

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R28 Very toxic if swallowed.  
R32 Contact with acids liberates very toxic gas.  
R36/37/38 Irritating to eyes, respiratory system and skin.  
R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.  
Aquatic Acute 1 - Aquatic Hazard Acute, Category 1  
Acute Tox. Oral 2 - Acute Toxicity Oral, Category 2  
Eye Irrit. 2 - Eye Irritation Category 2  
Aquatic Longterm 1 - Aquatic Hazard Long term, Category 1  
Skin Irrit. 2 - Skin Irritation Category 2  
STOT SE 3 - Specific Target Organ Toxicity Single Exposure Category 3  
H300 - Fatal if swallowed.  
H315 - Causes skin irritation.  
H319 - Causes serious eye irritation.  
H335 - May cause respiratory irritation.  
H400 - Very toxic to aquatic life.  
H410 - Very toxic to aquatic life with long lasting effects.

### Abbreviations and Acronyms

ACGIH - American Conference of Governmental Industrial Hygienists  
ADR - European Agreement Concerning The International Carriage Of Dangerous Goods By Road  
CERCLA - The Comprehensive Environmental Response, Compensation, and Liability Act  
CLP - Classification, Labeling and Packaging  
DFGMAK - Republic Germany's maximum exposure limit  
GHS - Globally Harmonized System  
HCS - Hazard Communication Standard  
IARC - International Agency for Research on Cancer  
IATA - International Air Transport Association  
ICAO - International Civil Aviation Organization  
IMDG - International Maritime Dangerous Goods  
IOELVs - European Unions' Indicative Occupational Exposure Limit Values  
NIOSH - National Institute for Occupational Safety and Health  
NTP - National Toxicology Program  
OSHA - Occupational Safety and Health Administration  
PBT - Persistent bioaccumulative and toxic substances  
SARA - Superfund Amendments and Reauthorization Act  
TDG - Canadian Transportation Of Dangerous Goods Regulations.  
UN GHS - United Nations Globally Harmonized System  
US DOT - United States Department of Transportation  
WHMIS - Workplace Hazardous Material Information System  
vPvB - Very persistent and very bioaccumulative substances  
LC50 - Lethal Concentration, 50%

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## Section 16 Other Information (Continued)

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### LD50 - Lethal Dose, 50%

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### Section 1 Identification of the Substance/mixture and of the Company/undertaking

#### 1.1 Product Identifier

**Product Name** Aspartate Aminotransferase Reagent (Compartment B)  
**Part Number** Component of P/N 476831  
**Series Name** SYNCHRON Systems

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

**Product Use** For In Vitro Diagnostic Use. See product literature for details.

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

##### Manufacturer

Beckman Coulter, Inc.  
250 S. Kraemer Blvd  
Brea, CA 92821, U.S.A.  
Tel: 800-854-3633

##### EC REP Address

Beckman Coulter Eurocenter S.A.  
22, rue Juste-Oliver, Case Postale 1044,  
CH-1260 Nyon 1, Switzerland.  
Telephone +41 (0)22 365 36 11  
Monday through Friday, 9:00 am to 7:00pm)

**e-mail address** SDSNT@beckman.com

#### 1.4 Emergency telephone number

**Telephone number (24H)** Chemtrec Emergency Tel No. U.S.A. 800-424-9300, International (001) 703-527-3887

##### Distributor and Emergency Phone No.

Refer to attached list, Document ID: [472050](#), for local distributor and emergency phone numbers.

### Section 2 Hazards Identification

#### 2.1 Classification of substance or mixture

**Product Description** Mixture  
Colorless; Clear; Liquid; Odorless

##### Classification according to EC 1272/2008 (CLP/GHS)

Acute Toxicity Oral, Category 4

##### Classification according to EC Directives 1999/45/EC and 67/548/EEC

Xn;R22

##### Classification according to US-OSHA (HCS 29 CFR 1910.1200) and UN GHS

Acute Toxicity Oral, Category 4

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### Section 2 Hazards Identification (Continued)

#### 2.2 Label Elements

According to EC 1272/2008 (CLP/GHS), US-OSHA and UN GHS

##### Hazardous Ingredients

Ethylene Glycol

##### Pictogram



##### Signal Word

WARNING

##### Hazard Statements

H302 Harmful if swallowed.

##### Precautionary Statements

P264 Wash hands thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P301+P312 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.

P330 Rinse mouth.

P501 Dispose of contents/container in accordance with local/national regulations

Product label will display most significant precautionary statements.

#### 2.3 Other hazards

Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

See Section 11 Toxicological Information for more detailed health information.

### Section 3 Composition and Information on Ingredients

#### 3.2 Mixtures

| Hazardous Ingredients:                                                          |          | Hazard Classification of Pure Ingredients |                           |                           |  |
|---------------------------------------------------------------------------------|----------|-------------------------------------------|---------------------------|---------------------------|--|
| Chemical Name                                                                   | % by wt. | EU-67/548/EEC                             | EU 1272/2008<br>CLP/GHS   | GHS                       |  |
| Ethylene Glycol<br>CAS # 107-21-1<br>EINECS # 203-473-3<br>Index # 603-027-00-1 | > 90     | Xn;R 22                                   | Acute Tox. Oral 4<br>H302 | Acute Tox. Oral 4<br>H302 |  |

See section 8 for available Occupational exposure limits

See Section 15 for additional regulatory information

See Section 16 for hazard class, hazard statements and risk phrase description

### Section 4 First Aid Measures

#### 4.1 Description of first aid measures

##### Inhalation

If product is inhaled, move exposed individual to fresh air. If individual is not breathing, begin artificial respiration immediately and obtain medical attention.

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### Section 4 First Aid Measures (Continued)

- |                     |                                                                                                                                                                                           |
|---------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Eye Contact</b>  | If product enters eyes, wash eyes gently under running water for 15 minutes or longer, making sure that the eyelids are held open. If pain or irritation occur, obtain medical attention. |
| <b>Skin Contact</b> | In case of skin contact, flush with copious amounts of water for at least 15 minutes. If pain or irritation occur, obtain medical attention.                                              |
| <b>Ingestion</b>    | If ingested, wash mouth out with water. If irritation or discomfort occurs, seek medical attention.                                                                                       |
- 4.2 Most important symptoms and effects, both acute and delayed**  
May be harmful if swallowed  
See Section 11 Toxicological Information for more detailed health information.
- 4.3 Indication of any immediate medical attention and special treatment needed**  
No specific medical attention or treatment required.

### Section 5 Fire Fighting Measures

- |                             |                        |
|-----------------------------|------------------------|
| <b>Flammable Properties</b> | Nonflammable solution. |
|-----------------------------|------------------------|
- 5.1 Extinguishing Media**  
In case of fire use carbon dioxide (CO<sub>2</sub>), dry chemical, water spray or foam.  
For large fires use extinguishing media suitable for surrounding fire.
- 5.2 Special hazards arising from the substance or mixture**  
**Special Fire and Explosion Hazards**  
No special hazards determined.
- Hazardous Combustion Products**  
No combustion products posing significant hazards are expected from this product.
- 5.3 Advice for fire fighters**  
**Protective Equipment**  
Self-contained breathing apparatus is recommended for firefighters in all chemical fire situations.
- 5.4 Additional information**  
No further relevant information available.

### Section 6 Accidental Release Measures

- 6.1 Personal precautions, protective equipment and emergency procedures**  
**Personal Precautions**  
Observe general safety guidelines for protection; avoid eye and skin contact.  
Wear protective gloves, protective clothing and eye/face protection.
- 6.2 Environmental Precautions**  
Contain spill to prevent migration.  
Do not allow the undiluted product to enter sewers/surface or ground water.

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### Section 6 Accidental Release Measures (Continued)

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

**Spill and Leak Procedures** Absorb spilled material with an appropriate inert, non-flammable absorbent and dispose according to local regulations.

#### 6.4 Reference to other sections

Refer sections 8 and 13.

### Section 7 Handling and Storage

**7.1 Precautions for safe handling** Use good laboratory procedures; avoid eye and skin contact.

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

Store at 2 to 8°C , as directed on the product label.

To maintain product quality, store according to the instructions in the product labeling.

Store away from strong acids, strong bases, strong oxidizers and incompatible materials (section 10).

**7.3 Specific end uses** No further relevant information available.

### Section 8 Exposure Controls and Personal Protection

#### 8.1 Control parameters

##### Exposure Limits

**US OSHA** None established

##### ACGIH

Ethylene Glycol  
CAS # 107-21-1 100 mg/m3 Ceiling (aerosol only)

##### DFG MAK

Ethylene Glycol  
CAS # 107-21-1 20 ppm Peak; 52 mg/m3 Peak; skin notation; 10 ppm TWA MAK; 26 mg/m3 TWA MAK

##### Ireland

Ethylene Glycol  
CAS # 107-21-1 10 mg/m3 TWA (particulate); 20 ppm TWA (vapour); 52 mg/m3 TWA (vapour); 40 ppm STEL (vapour); 104 mg/m3 STEL (vapour); Potential for cutaneous absorption

##### IOELVs

Ethylene Glycol  
CAS # 107-21-1 Possibility of significant uptake through the skin; 20 ppm TWA; 52 mg/m3 TWA; 40 ppm STEL; 104 mg/m3 STEL

##### NIOSH

None established

##### Japan

None established

#### 8.2 Exposure controls

**Engineering Controls** No special engineering controls are required. Use with good general ventilation.

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### Section 8 Exposure Controls and Personal Protection (Continued)

|                               |                                                                                                                                                                                                                                                                                                       |
|-------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Eye Protection</b>         | Safety glasses or chemical goggles should be worn to prevent eye contact. Refer U.S. OSHA 29 CFR 1910.133, European Standard EN166 or appropriate government standards.                                                                                                                               |
| <b>Skin Protection</b>        | Impervious gloves, such as Nitrile or equivalent, should be worn to prevent skin contact. Refer U.S. OSHA 29 CFR 1910.138, European Standard EN374 or appropriate government standards.                                                                                                               |
| <b>Respiratory Protection</b> | Under normal conditions, the use of this product should not require respiratory protection. If overexposure should occur and ventilation is not adequate to maintain airborne concentrations at acceptable levels, the use of respiratory protection should be evaluated by a qualified professional. |

### Section 9 Physical and Chemical Properties

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

|                                  |                |                                               |                 |
|----------------------------------|----------------|-----------------------------------------------|-----------------|
| <b>Physical State</b>            | Liquid         | <b>Specific Gravity (Water=1.0)</b>           | ≈1.106 @22-26°C |
| <b>Color</b>                     | Colorless      | <b>Solubility</b>                             |                 |
| <b>Transparency</b>              | Clear          | <b>Water</b>                                  | Miscible        |
| <b>Odor</b>                      | Odorless       | <b>Organic</b>                                | Not determined  |
| <b>pH</b>                        | 6.6            | <b>Partition coefficient: n-octanol/water</b> | Not determined  |
| <b>Freezing Point</b>            | Not determined | <b>Auto-ignition Temp.</b>                    | Not applicable  |
| <b>Boiling Point</b>             | Not determined | <b>Decomposition Temperature</b>              | Not determined  |
| <b>Flash Point</b>               | Not applicable | <b>Percent Volatiles</b>                      | Not applicable  |
| <b>Evaporation Rate</b>          | Not determined | <b>Vapor Pressure</b>                         | Not determined  |
| <b>Flammability (Solid, Gas)</b> | Not applicable | <b>Viscosity</b>                              | Not determined  |
| <b>Flammability Limits</b>       | Not applicable | <b>Explosive Properties</b>                   | Not applicable  |
| <b>Vapor Density</b>             | Not determined | <b>Oxidizing Properties</b>                   | Not applicable  |
| <b>Odor Threshold</b>            | Not applicable |                                               |                 |

**9.2 Other Information** No further relevant information available.

### Section 10 Stability and Reactivity

|                                |                                                                          |
|--------------------------------|--------------------------------------------------------------------------|
| <b>10.1 Reactivity</b>         | No further relevant information available.                               |
| <b>10.2 Chemical Stability</b> | The product is stable in accordance with recommended storage conditions. |

## Section 10 Stability and Reactivity (Continued)

### 10.3 Possibility of hazardous reactions

No further relevant information available.

### 10.4 Conditions to Avoid

To maintain product performance keep away from strong acids, strong bases, strong oxidizers.

Avoid exposure to heat and direct sunlight.

### 10.5 Incompatible materials

No further relevant information available.

### 10.6 Hazardous Decomposition Products

When stored as labeled, no known hazardous decomposition products are formed during the shelf-life of this product.

## Section 11 Toxicological Information

### 11.1 Information on toxicological effects

#### Toxicity Data for Hazardous Ingredients

Ethylene Glycol  
CAS # 107-21-1

Oral LD50 Rat 4000 mg/kg; Dermal LD50 Rabbit 9530 µL/kg

#### Primary Routes of Exposure

Eye contact, ingestion, inhalation, and skin contact.

#### Skin Corrosion/Irritation

No data available.

#### Serious eye damage/eye irritation

No data available.

#### Respiratory/skin sensitization

No data available.

#### Carcinogenicity

This product does not contain a reportable concentration ( $\geq 0.1\%$ ) of any ingredient listed as carcinogen by ACGIH, IARC, NTP, OSHA or 1272/2008 EC regulation.

#### Germ cell mutagenicity

No data available.

#### Reproductive Toxicity

No data available.

#### Specific target organ toxicity – single exposure

No data available.

#### Specific target organ toxicity – repeated exposure

No data available.

#### Aspiration hazard

No data available.

#### Other Information

May be harmful if swallowed

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**Section 12 Ecological Information**

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**12.1 Ecotoxicity****Fresh Water Species**Ethylene Glycol  
CAS # 107-21-1

96 h LC50 Oncorhynchus mykiss: 41000 mg/L; 96 h LC50 Oncorhynchus mykiss: 14 - 18 mL/L [static]; 96 h LC50 Lepomis macrochirus: 27540 mg/L [static]; 96 h LC50 Oncorhynchus mykiss: 40761 mg/L [static]; 96 h LC50 Pimephales promelas: 40000 - 60000 mg/L [static]; 96 h LC50 Poecilia reticulata: 16000 mg/L [static]

**Microtox**

No information available.

**Water Flea**Ethylene Glycol  
CAS # 107-21-1

48 h EC50 Daphnia magna: 46300 mg/L

**Fresh Water Algae**Ethylene Glycol  
CAS # 107-21-1

96 h EC50 Pseudokirchneriella subcapitata: 6500 - 13000 mg/L

**12.2 Persistence and degradability** Not determined for the product.**12.3 Bioaccumulation** Not determined for the product.**12.4 Mobility in soil** Not determined for the product.**12.5 Results of PBT and vPvB assessment**

Not determined for the product. PBT: Not applicable, vPvB: Not applicable.

**12.6 Other Adverse Effects** No further relevant information available.

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**Section 13 Disposal Considerations**

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**13.1 Waste treatment methods****Product Waste Disposal**

Chemical residues and remains should be routinely handled as special waste. This must be disposed of in compliance with anti-pollution and other laws of the country concerned. To ensure compliance we recommend that you contact the relevant (local) authorities and/or an approved waste-disposal company for information.

**Package disposal**

Dispose of waste product, unused product and contaminated packaging in compliance with federal, state and local regulations. If unsure of the applicable requirements, contact the authorities for information.

**13.2 Additional information**

Suggested European waste catalogue 18 01 06\* - chemicals consisting of or containing dangerous substances. Dispose in accordance with national, state and local waste regulations.

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**Section 14 Transport Information**

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Transportation of this product is not regulated under ICAO, IMDG, US DOT, European ADR or Canadian TDG.

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**Section 15 Regulatory Information**

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**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

## Section 15 Regulatory Information (Continued)

### US Federal and State Regulations

**SARA 313**

Acetaldehyde is subject to reporting requirements of Section 313, Title III of SARA. 0.1 % de minimis concentration  
Ethylene Glycol is subject to reporting requirements of Section 313, Title III of SARA. 1.0 % de minimis concentration  
1,4-Dioxane is subject to reporting requirements of Section 313, Title III of SARA. 0.1 % de minimis concentration

**CERCLA RG's, 40 CFR 302.4**

Acetaldehyde is listed.  
Ethylene Glycol is listed.  
1,4-Dioxane is listed.

**California Proposition 65**

Acetaldehyde has been identified by the State of California to cause cancer. The State of California has adopted a regulation which requires a warning be given to individual who may be exposed to chemicals identified by the State to cause cancer or reproductive harm.

**WARNING:** This product contains a chemical known to the State of California to cause cancer.

1,4-Dioxane has been identified by the State of California to cause cancer. The State of California has adopted a regulation which requires a warning be given to individual who may be exposed to chemicals identified by the State to cause cancer or reproductive harm.

**WARNING:** This product contains a chemical known to the State of California to cause cancer.

**Massachusetts MSL**

Acetaldehyde is listed.  
Ethylene Glycol is listed.  
1,4-Dioxane is listed.

**New Jersey Dept. of Health RTK List**

Acetaldehyde is listed.  
Ethylene Glycol is listed.  
1,4-Dioxane is listed.

**Pennsylvania RTK**

Acetaldehyde is listed.  
Ethylene Glycol is listed.  
1,4-Dioxane is listed.

### EU Regulations

This SDS complies with EC Regulations 1907/2006 (REACH) and amendments.

**Water Hazard Class (Germany)** WGK 1, low water endangering

**REACH 1907/2006 EC - Annex XIV - list of substances subject to authorization.**

No ingredients listed.

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## Section 15 Regulatory Information (Continued)

### According to EC Directives (1999/45/EC and 67/548 EEC)

Harmful

Xn



### Risk and Safety Phrases

R22 Harmful if swallowed.

S37/39 Wear suitable gloves and eye/face protection.

### Canada

This product is exempt from WHMIS label and SDS requirements.

**PIN**

Not applicable

### Ingredients on Ingredient Disclosure List

Acetaldehyde

Ethylene Glycol

1,4-Dioxane

### Ingredients with unknown toxicological properties

Product is exempt

### 15.2 Chemical Safety Assessment A Chemical Safety Assessment has not been carried out.

*Some hazardous ingredients listed in Section 15 are below OSHAs and WHMIS' 1.0% w/w (0.1% for carcinogens) or EU's ingredient specific concentrations required for reporting in Section 3.*

## Section 16 Other Information

### Beckman Coulter Safety Rating

**Flammability: 0**  
**Health: 2**  
**Reactivity with Water: 0**  
**Contact: 2**

Code  
0=None  
1=Slight  
2=Caution  
3=Severe

### Revision Changes

Updated to GHS.

### Hazard Class, hazard statements and risk phrase description from section 3

Xn - Harmful

R 22 Harmful if swallowed.

Acute Tox. Oral 4 - Acute Toxicity Oral, Category 4

H302 - Harmful if swallowed.

### Abbreviations and Acronyms

ACGIH - American Conference of Governmental Industrial Hygienists

ADR - European Agreement Concerning The International Carriage Of Dangerous Goods By Road

CERCLA - The Comprehensive Environmental Response, Compensation, and Liability Act

CLP - Classification, Labeling and Packaging

DFGMAK - Republic Germany's maximum exposure limit

GHS - Globally Harmonized System

HCS - Hazard Communication Standard

IARC - International Agency for Research on Cancer

IATA - International Air Transport Association

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## Section 16 Other Information (Continued)

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ICAO - International Civil Aviation Organization  
IMDG - International Maritime Dangerous Goods  
IOELVs - European Unions' Indicative Occupational Exposure Limit Values  
NIOSH - National Institute for Occupational Safety and Health  
NTP - National Toxicology Program  
OSHA - Occupational Safety and Health Administration  
PBT - Persistent bioaccumulative and toxic substances  
SARA - Superfund Amendments and Reauthorization Act  
TDG - Canadian Transportation Of Dangerous Goods Regulations.  
UN GHS - United Nations Globally Harmonized System  
US DOT - United States Department of Transportation  
WHMIS - Workplace Hazardous Material Information System  
vPvB - Very persistent and very bioaccumulative substances  
LC50 - Lethal Concentration, 50%  
LD50 - Lethal Dose, 50%  
EC50 - Effective Concentration, 50%

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For further information, please contact your local Beckman Coulter, Inc. representative.

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## SAFETY DATA SHEET

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### Section 1 Identification of the Substance/mixture and of the Company/undertaking

#### 1.1 Product Identifier

**Product Name** AST (A-Reagent)  
**Part Number** Component of P/N 476831  
**Series Name** SYNCHRON Systems

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

**Product Use** For In Vitro Diagnostic Use. See product literature for details.

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

##### Manufacturer

Beckman Coulter, Inc.  
250 S. Kraemer Blvd  
Brea, CA 92821, U.S.A.  
Tel: 800-854-3633

##### EC REP Address

Beckman Coulter Eurocenter S.A.  
22, rue Juste-Oliver, Case Postale 1044,  
CH-1260 Nyon 1, Switzerland.  
Telephone +41 (0)22 365 36 11  
Monday through Friday, 9:00 am to  
7:00pm)

**e-mail address** SDSNT@beckman.com

#### 1.4 Emergency telephone number

**Telephone number (24H)** Chemtrec Emergency Tel No. U.S.A. 800-424-9300, International (001) 703-527-3887

##### Distributor and Emergency Phone No.

Refer to attached list, Document ID: [472050](#), for local distributor and emergency phone numbers.

### Section 2 Hazards Identification

#### 2.1 Classification of substance or mixture

**Product Description** Mixture  
Colorless; Clear to slightly cloudy; Liquid; Odorless

##### Classification according to EC 1272/2008 (CLP/GHS)

Eye Irritation Category 2

##### Classification according to EC Directives 1999/45/EC and 67/548/EEC

Not classified as dangerous per EC Directives (1999/45/EC and 67/548 EEC)

##### Classification according to US-OSHA (HCS 29 CFR 1910.1200) and UN GHS

Skin Irritation Category 3  
Eye Irritation Category 2

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## Section 2 Hazards Identification (Continued)

### 2.2 Label Elements

According to EC 1272/2008 (CLP/GHS), US-OSHA and UN GHS

#### Hazardous Ingredients

Tris(hydroxymethyl)- aminomethane

α-Ketoglutaric Acid

#### Pictogram



#### Signal Word

WARNING

#### Hazard Statements

H316 Causes mild skin irritation.

H319 Causes serious eye irritation.

#### Precautionary Statements

P280 Wear protective gloves, protective clothing and eye/face protection.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P332+P313 If skin irritation occurs: Get medical advice/attention.

P337+P313 If eye irritation persists: Get medical advice/attention.

### 2.3 Other hazards

This product contains material(s) of animal origin. Observe general safety guidelines for protection when handling this product.

Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

See Section 11 Toxicological Information for more detailed health information.

## Section 3 Composition and Information on Ingredients

### 3.2 Mixtures

| Hazardous Ingredients:                                                               |          | Hazard Classification of Pure Ingredients |                                                              |                                                              |  |
|--------------------------------------------------------------------------------------|----------|-------------------------------------------|--------------------------------------------------------------|--------------------------------------------------------------|--|
| Chemical Name                                                                        | % by wt. | EU-67/548/EEC                             | EU 1272/2008<br>CLP/GHS                                      | GHS                                                          |  |
| α-Ketoglutaric Acid<br>CAS # 328-50-7<br>EINECS # 206-330-3<br>Index # Not available | < 3      | No                                        | Eye Dam. 1<br>STOT SE 3<br>Skin Irrit. 2<br>H315; H318; H335 | Eye Dam. 1<br>STOT SE 3<br>Skin Irrit. 2<br>H315; H318; H335 |  |

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## Section 3 Composition and Information on Ingredients (Continued)

|                                                                                                          |       |              |                                                                |                                                                |  |
|----------------------------------------------------------------------------------------------------------|-------|--------------|----------------------------------------------------------------|----------------------------------------------------------------|--|
| Tris(hydroxymethyl)-<br>aminomethane<br><br>CAS # 77-86-1<br>EINECS # 201-064-4<br>Index # Not available | 1 - 5 | Xi;R36/37/38 | Eye Irrit. 2<br>STOT SE 3<br>Skin Irrit. 2<br>H315; H319; H335 | Eye Irrit. 2<br>STOT SE 3<br>Skin Irrit. 2<br>H315; H319; H335 |  |
|----------------------------------------------------------------------------------------------------------|-------|--------------|----------------------------------------------------------------|----------------------------------------------------------------|--|

See section 8 for available Occupational exposure limits

See Section 15 for additional regulatory information

See Section 16 for hazard class, hazard statements and risk phrase description

## Section 4 First Aid Measures

### 4.1 Description of first aid measures

|                     |                                                                                                                                                                                           |
|---------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Inhalation</b>   | If product is inhaled, move exposed individual to fresh air. If individual is not breathing, begin artificial respiration immediately and obtain medical attention.                       |
| <b>Eye Contact</b>  | If product enters eyes, wash eyes gently under running water for 15 minutes or longer, making sure that the eyelids are held open. If pain or irritation occur, obtain medical attention. |
| <b>Skin Contact</b> | In case of skin contact, flush with copious amounts of water for at least 15 minutes. Remove contaminated clothing and shoes. If pain or irritation occur, obtain medical attention.      |
| <b>Ingestion</b>    | If ingested, wash mouth out with water. If irritation or discomfort occurs, seek medical attention.                                                                                       |

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

Exposure may result in irritation of skin and eyes.  
See Section 11 Toxicological Information for more detailed health information.

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

No specific medical attention or treatment required.

## Section 5 Fire Fighting Measures

**Flammable Properties** Nonflammable solution.

**5.1 Extinguishing Media** In case of fire use carbon dioxide (CO<sub>2</sub>), dry chemical, water spray or foam.  
For large fires use extinguishing media suitable for surrounding fire.

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

#### Special Fire and Explosion Hazards

No special hazards determined.

#### Hazardous Combustion Products

No combustion products posing significant hazards are expected from this product.

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### Section 5 Fire Fighting Measures (Continued)

#### 5.3 Advice for fire fighters

##### Protective Equipment

Self-contained breathing apparatus is recommended for firefighters in all chemical fire situations.

#### 5.4 Additional information

No further relevant information available.

### Section 6 Accidental Release Measures

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

##### Personal Precautions

This product contains a material of animal origin. Observe general safety guidelines for protection during clean up procedures.

Wear protective gloves, protective clothing and eye/face protection.

#### 6.2 Environmental Precautions

Contain spill to prevent migration.

Do not allow the undiluted product to enter sewers/surface or ground water.

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

##### Spill and Leak Procedures

As a precautionary measure, treat spilled material with a 1:10 bleach/water solution. Absorb liquid and place in container suitable for disposal. Avoid generation of aerosols during clean up. Comply with applicable waste disposal regulations.

#### 6.4 Reference to other sections

Refer sections 8 and 13.

### Section 7 Handling and Storage

**7.1 Precautions for safe handling** This product should be handled as though capable of transmitting infectious diseases. Universal precautions should be followed when using this product.

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

Store at 2 to 8°C , as directed on the product label.

To maintain product quality, store according to the instructions in the product labeling.

Store away from strong acids, strong bases, strong oxidizers and incompatible materials (section 10).

#### 7.3 Specific end uses

No further relevant information available.

### Section 8 Exposure Controls and Personal Protection

#### 8.1 Control parameters

##### Exposure Limits

##### US OSHA

None established

##### ACGIH

None established

##### DFG MAK

None established

##### Ireland

None established

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## Section 8 Exposure Controls and Personal Protection (Continued)

|                               |                                                                                                                                                                                                                                                                                                       |
|-------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>IOELVs</b>                 | None established                                                                                                                                                                                                                                                                                      |
| <b>NIOSH</b>                  | None established                                                                                                                                                                                                                                                                                      |
| <b>Japan</b>                  | None established                                                                                                                                                                                                                                                                                      |
| <b>8.2 Exposure controls</b>  |                                                                                                                                                                                                                                                                                                       |
| <b>Engineering Controls</b>   | No special engineering controls are required. Use with good general ventilation.                                                                                                                                                                                                                      |
| <b>Eye Protection</b>         | Safety glasses or chemical goggles should be worn to prevent eye contact. Refer U.S. OSHA 29 CFR 1910.133, European Standard EN166 or appropriate government standards.                                                                                                                               |
| <b>Skin Protection</b>        | Impervious gloves, such as Nitrile or equivalent, should be worn to prevent skin contact. Refer U.S. OSHA 29 CFR 1910.138, European Standard EN374 or appropriate government standards.                                                                                                               |
| <b>Respiratory Protection</b> | Under normal conditions, the use of this product should not require respiratory protection. If overexposure should occur and ventilation is not adequate to maintain airborne concentrations at acceptable levels, the use of respiratory protection should be evaluated by a qualified professional. |

## Section 9 Physical and Chemical Properties

|                                                                  |                                            |                                               |                 |
|------------------------------------------------------------------|--------------------------------------------|-----------------------------------------------|-----------------|
| <b>9.1 Information on basic physical and chemical properties</b> |                                            |                                               |                 |
| <b>Physical State</b>                                            | Liquid                                     | <b>Specific Gravity (Water=1.0)</b>           | ≈1.152 @22-26°C |
| <b>Color</b>                                                     | Colorless                                  | <b>Solubility</b>                             |                 |
| <b>Transparency</b>                                              | Clear to slightly cloudy                   | <b>Water</b>                                  | Miscible        |
| <b>Odor</b>                                                      | Odorless                                   | <b>Organic</b>                                | Not applicable  |
| <b>pH</b>                                                        | 7.40 - 7.60                                | <b>Partition coefficient: n-octanol/water</b> | Not determined  |
| <b>Freezing Point</b>                                            | Not determined                             | <b>Auto-ignition Temp.</b>                    | Not applicable  |
| <b>Boiling Point</b>                                             | Not determined                             | <b>Decomposition Temperature</b>              | Not determined  |
| <b>Flash Point</b>                                               | Not applicable                             | <b>Percent Volatiles</b>                      | Not applicable  |
| <b>Evaporation Rate</b>                                          | Not determined                             | <b>Vapor Pressure</b>                         | Not determined  |
| <b>Flammability (Solid, Gas)</b>                                 | Not applicable                             | <b>Viscosity</b>                              | Not determined  |
| <b>Flammability Limits</b>                                       | Not applicable                             | <b>Explosive Properties</b>                   | Not applicable  |
| <b>Vapor Density</b>                                             | Not determined                             | <b>Oxidizing Properties</b>                   | Not applicable  |
| <b>Odor Threshold</b>                                            | Not applicable                             |                                               |                 |
| <b>9.2 Other Information</b>                                     | No further relevant information available. |                                               |                 |

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### Section 10 Stability and Reactivity

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|                                                |                                                                                                                                             |
|------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|
| <b>10.1 Reactivity</b>                         | No further relevant information available.                                                                                                  |
| <b>10.2 Chemical Stability</b>                 | The product is stable in accordance with recommended storage conditions.                                                                    |
| <b>10.3 Possibility of hazardous reactions</b> | No further relevant information available.                                                                                                  |
| <b>10.4 Conditions to Avoid</b>                | To maintain product performance keep away from strong acids, strong bases, strong oxidizers.<br>Avoid exposure to heat and direct sunlight. |
| <b>10.5 Incompatible materials</b>             | No further relevant information available.                                                                                                  |
| <b>10.6 Hazardous Decomposition Products</b>   | When stored as labeled, no known hazardous decomposition products are formed during the shelf-life of this product.                         |

### Section 11 Toxicological Information

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|                                                           |                                                                                                                                                                                                                                                              |
|-----------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>11.1 Information on toxicological effects</b>          |                                                                                                                                                                                                                                                              |
| <b>Toxicity Data for Hazardous Ingredients</b>            | Not applicable                                                                                                                                                                                                                                               |
| <b>Primary Routes of Exposure</b>                         | Common routes of entry include inhalation, ingestion and eye/skin contact. Specific paths of concern for potentially infectious materials are skin puncture, contact with broken skin, contact with mucous membranes and inhalation of aerosolized material. |
| <b>Skin Corrosion/Irritation</b>                          | May cause skin irritation.                                                                                                                                                                                                                                   |
| <b>Serious eye damage/eye irritation</b>                  | May cause eye irritation.                                                                                                                                                                                                                                    |
| <b>Respiratory/skin sensitization</b>                     | No data available.                                                                                                                                                                                                                                           |
| <b>Carcinogenicity</b>                                    | No ingredients in this product are listed as carcinogens by ACGIH, IARC, NTP, OSHA or 1272/2008 EC regulation.                                                                                                                                               |
| <b>Germ cell mutagenicity</b>                             | No data available.                                                                                                                                                                                                                                           |
| <b>Reproductive Toxicity</b>                              | No data available.                                                                                                                                                                                                                                           |
| <b>Specific target organ toxicity – single exposure</b>   | No data available.                                                                                                                                                                                                                                           |
| <b>Specific target organ toxicity – repeated exposure</b> | No data available.                                                                                                                                                                                                                                           |
| <b>Aspiration hazard</b>                                  | No data available.                                                                                                                                                                                                                                           |

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### Section 11 Toxicological Information (Continued)

#### Other Information

This product contains material of animal origin and should be considered as potentially capable of transmitting infectious diseases.

### Section 12 Ecological Information

#### 12.1 Ecotoxicity

##### Fresh Water Species

No information available.

##### Microtox

No information available.

##### Water Flea

No information available.

##### Fresh Water Algae

No information available.

**12.2 Persistence and degradability** Not determined for the product.

**12.3 Bioaccumulation** Not determined for the product.

**12.4 Mobility in soil** Not determined for the product.

#### 12.5 Results of PBT and vPvB assessment

Not determined for the product. PBT: Not applicable, vPvB: Not applicable.

**12.6 Other Adverse Effects** No further relevant information available.

### Section 13 Disposal Considerations

#### 13.1 Waste treatment methods

##### Product Waste Disposal

Chemical residues and remains should be routinely handled as special waste. This must be disposed of in compliance with anti-pollution and other laws of the country concerned. To ensure compliance we recommend that you contact the relevant (local) authorities and/or an approved waste-disposal company for information.

Dispose of as potentially biohazardous waste and in compliance with anti-pollution and other laws of the country concerned. To ensure compliance we recommend that you contact the relevant (local) authorities and/or an approved waste-disposal company for information.

##### Package disposal

Dispose of waste product, unused product and contaminated packaging in compliance with federal, state and local regulations. If unsure of the applicable requirements, contact the authorities for information.

#### 13.2 Additional information

Suggested European waste catalogue 18 01 07 - chemicals other than those mentioned in 18 01 06. Dispose in accordance with national, state and local waste regulations.

### Section 14 Transport Information

Transportation of this product is not regulated under ICAO, IMDG, US DOT, European ADR or Canadian TDG.

### Section 15 Regulatory Information

#### 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

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## Section 15 Regulatory Information (Continued)

### US Federal and State Regulations

**SARA 313** No ingredients listed.

**California Proposition 65** No ingredients listed.

**Massachusetts MSL** Glycerol is listed.

### **New Jersey Dept. of Health RTK List**

Glycerol is listed.

**Pennsylvania RTK** Glycerol is listed.

### EU Regulations

This SDS complies with EC Regulations 1907/2006 (REACH) and amendments.

**Water Hazard Class (Germany)** WGK 1, low water endangering

**REACH 1907/2006 EC - Annex XIV - list of substances subject to authorization.**

No ingredients listed.

### **According to EC Directives (1999/45/EC and 67/548 EEC)**

Not classified as dangerous per EC Directives (1999/45/EC and 67/548 EEC)

### Canada

This product is exempt from WHMIS label and SDS requirements.

**PIN** Not applicable

### **Ingredients on Ingredient Disclosure List**

None

### **Ingredients with unknown toxicological properties**

Product is exempt

### **15.2 Chemical Safety Assessment** A Chemical Safety Assessment has not been carried out.

*Some hazardous ingredients listed in Section 15 are below OSHAs and WHMIS' 1.0% w/w (0.1% for carcinogens) or EU's ingredient specific concentrations required for reporting in Section 3.*

## Section 16 Other Information

|                                      |                                                                                                    |                                                            |
|--------------------------------------|----------------------------------------------------------------------------------------------------|------------------------------------------------------------|
| <b>Beckman Coulter Safety Rating</b> | <b>Flammability: 0</b><br><b>Health: 2</b><br><b>Reactivity with Water: 0</b><br><b>Contact: 2</b> | <b>Code</b><br>0=None<br>1=Slight<br>2=Caution<br>3=Severe |
|--------------------------------------|----------------------------------------------------------------------------------------------------|------------------------------------------------------------|

**Revision Changes** Updated to GHS.

### **Hazard Class, hazard statements and risk phrase description from section 3**

Xi - Irritant

R36/37/38 Irritating to eyes, respiratory system and skin.

Eye Dam. 1 - Eye Damage Category 1

Eye Irrit. 2 - Eye Irritation Category 2

Skin Irrit. 2 - Skin Irritation Category 2

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### Section 16 Other Information (Continued)

#### Abbreviations and Acronyms

STOT SE 3 - Specific Target Organ Toxicity Single Exposure Category 3  
H315 - Causes skin irritation.  
H318 - Causes serious eye damage.  
H319 - Causes serious eye irritation.  
H335 - May cause respiratory irritation.  
ACGIH - American Conference of Governmental Industrial Hygienists  
ADR - European Agreement Concerning The International Carriage Of Dangerous Goods By Road  
CERCLA - The Comprehensive Environmental Response, Compensation, and Liability Act  
CLP - Classification, Labeling and Packaging  
DFGMAK - Republic Germany's maximum exposure limit  
GHS - Globally Harmonized System  
HCS - Hazard Communication Standard  
IARC - International Agency for Research on Cancer  
IATA - International Air Transport Association  
ICAO - International Civil Aviation Organization  
IMDG - International Maritime Dangerous Goods  
IOELVs - European Unions' Indicative Occupational Exposure Limit Values  
NIOSH - National Institute for Occupational Safety and Health  
NTP - National Toxicology Program  
OSHA - Occupational Safety and Health Administration  
PBT - Persistent bioaccumulative and toxic substances  
SARA - Superfund Amendments and Reauthorization Act  
TDG - Canadian Transportation Of Dangerous Goods Regulations.  
UN GHS - United Nations Globally Harmonized System  
US DOT - United States Department of Transportation  
WHMIS - Workplace Hazardous Material Information System  
vPvB - Very persistent and very bioaccumulative substances

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