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

1.1 Product identifier
   - Product Name: RSV-A (A2 Strain) Purified Virus
   - Catalog Number: 10-247-000

1.2 Relevant identified uses of the substance or mixture and uses advised against
   - SU24 Scientific research and development

1.3 Details of the supplier of the safety data sheet
   - Manufacturing Supplier: Advanced Biotechnologies, Inc
     1545 Progress Way
     Eldersburg, MD 21784
     Telephone (410) 792-9779

1.4 Emergency telephone number
   - 24 Hour Emergency Number: ChemTel, Inc 1-800-255-3924

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture
   - Classification according to Regulation (EC) No 1272/2008
     This product is not classified as hazardous according to the Regulation (EC) No 1272/2008 and subsequent amendments.
   - Classification according to the Globally Harmonized System (GHS)
   - Classification according to OSHA GHS regulations within the U.S.

2.2 Label elements
   - Labelling according to Regulation (EC) No 1272/2008
     This product does not have a classification according to the CLP regulation.
   - GHS Elements: Not Regulated
   - Hazard Pictograms: Not Regulated
   - Signal Word: Not Regulated
   - Hazard-determining components of labelling: None
   - Hazard statements: Not Regulated

2.3 Other hazards
   - Hazards Not Otherwise Classified (HNOC) or covered by GHS
     This preparation of RSV-A is a BIOHAZARDOUS material containing ACTIVE VIRUS and should be handled in accordance with biosafety guidelines defined in the BMBL, NIH-CDC HHS Publication No. (CDC) 21-1112.
   - Category: WHO Risk Group 2
   - Emergency Overview: Biohazardous
   - Pathogenicity: RSV primarily infects human epithelial cells within the nasopharynx; however, it can also infect other types of cells, including cell lines, but with much lower efficacy. Infection may lead to the formation of syncytia within the infected cell. Primary infection with RSV is generally exhibited as lower respiratory tract disease, pneumonia, bronchiolitis, tracheobronchitis, or upper respiratory tract illness. Common clinical symptoms include rhinorrhea, sneezing, cough, pharyngitis, bronchitis, headache, fatigue, and fever. In some cases, otitis media may occur. RSV infections usually begin with upper respiratory tract disease, which has the tendency to progress to lower respiratory tract disease (in ~50% cases). Severe infections (involving pneumonia) may develop among elderly patients with underlying respiratory conditions. Children and immunocompromised individuals are more susceptible to developing severe disease. (Original Pathogen Safety Data Sheet and Risk Assessment located at publichealth.gc.ca)
   - Host Range: Humans; however various animal species can be experimentally infected with RSV including cotton rats, mice, ferrets, guinea pigs, hamsters, marmosets, lambs, and nonhuman primates.
Safety Data Sheet

Results of PBT and vPvB assessment

PBT  Not applicable
vPvB  Not applicable

SECTION 3: Composition/information on ingredients

3.2 Mixtures
Description: Mixture consisting of the following chemicals with Respiratory Syncytial Virus

<table>
<thead>
<tr>
<th>Components</th>
<th>Concentration/Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tris Base</td>
<td>10 mM</td>
</tr>
<tr>
<td>Synonyms:</td>
<td></td>
</tr>
<tr>
<td>Tris(hydroxymethyl)aminomethane, Trometamol</td>
<td></td>
</tr>
<tr>
<td>Sodium Chloride</td>
<td>150 mM</td>
</tr>
<tr>
<td>Ethylenediaminetetraacetic acid, (EDTA)</td>
<td>1 mM</td>
</tr>
<tr>
<td>Synonyms:</td>
<td></td>
</tr>
<tr>
<td>Edetic Acid</td>
<td></td>
</tr>
<tr>
<td>Respiratory Syncytial Virus</td>
<td></td>
</tr>
</tbody>
</table>

SECTION 4: First aid measures

4.1 Description of first aid measures

After inhalation  Supply fresh air and seek medical advice.
After skin contact  Immediately wash with water and soap and rinse thoroughly. Seek medical advice.
After eye contact  Rinse immediately with plenty of water and seek medical advice.
After swallowing  If swallowed, seek medical advice immediately and show the container/label/SDS.

4.2 Most important symptoms and effects, both acute and delayed
No further relevant information available.

4.3 Indication of any immediate medical attention and special treatment needed
No further relevant information available.

SECTION 5: Firefighting measures

5.1 Extinguishing media
Use fire extinguishing methods suitable to surrounding conditions.

5.2 Special hazards arising from the substance or mixture
No further relevant information available.

5.3 Advice for firefighters
Protective equipment: No special measures required.
SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
To minimize contact, wear a laboratory coat, nitrile or latex gloves, and protective glasses.

6.2 Environmental precautions
Disinfect material before disposal.

6.3 Methods and material for containment and cleaning up
Take up with absorbent material. Disinfect area with 3% hydrogen peroxide followed by 70% isopropyl alcohol.

6.4 Reference to other sections
See Section 7 for Safe Handling. See Section 8 for Exposure Controls. See Section 13 for Disposal.

SECTION 7: Handling and storage

7.1 Precautions for safe handling
Biosafety Level-2 (BSL-2) practices, containment equipment, and facilities are recommended for activities involving infected or potentially infected materials, animals, or cultures. Wear appropriate protective equipment (see Section 8). Practice good work hygiene.

7.2 Conditions for safe storage, including any incompatibilities
Storage temperature ≤ -70°C in well-sealed receptacle.

7.3 Specific end use(s)
No further relevant information available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters
Ingredients with limit values that require monitoring at the workplace
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

8.2 Exposure controls
Personal protective equipment
General protective/hygienic measures
The usual precautionary measures are to be adhered to when handling chemicals and biological material.

Ventilation
Work in a biological safety cabinet to reduce the possibility of exposure.

Respiratory protection
Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard, if a risk assessment indicates this is necessary.

Protection of hands
Protective gloves (i.e. nitrile or equivalent).

Eye protection
Safety glasses or safety goggles, as appropriate.

Body protection
Protective work clothing and laboratory coats.
SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

General Information
- **Appearance**: Liquid
- **Color**: Slightly Whitish
- **Odor**: Odorless
- **Odor Threshold**: Does not apply, as substance is odorless.
- **pH**: 7.5
- **Change in condition**: Melting point/Melting range: Not determined
  Boiling point/Boiling range: Not determined
- **Flash point**: Not applicable
- **Evaporation rate**: Not determined
- **Flammability (solid, gaseous)**: Does not apply, substance is a liquid.
- **Auto/Self-ignition temperature**: Not determined
- **Decomposition temperature**: Not determined
- **Self-igniting**: Product is not self-igniting.
- **Danger of explosion**: Product does not present an explosion hazard.
- **Vapor pressure/density**: Not determined
- **Density**: Not determined
- **Viscosity**: Not determined
- **Solubility in/Miscibility with Water**: Soluble

9.2 Other information
No further relevant information available.

SECTION 10: Stability and reactivity

10.1 Reactivity
No further relevant information available.

10.2 Chemical stability
No further relevant information available.

10.3 Possibility of hazardous reactions
No dangerous reactions known.

10.4 Conditions to avoid
No further relevant information available.

10.5 Incompatible materials
No further relevant information available.

10.6 Hazardous decomposition products
No further relevant information available.

SECTION 11: Toxicological information

11.1 Information on toxicological effects
- **Acute toxicity**: Based on available data, the classification criteria are not met.
- **LD/LC50 values relevant for classification**: Unknown
- **Primary irritant effect**: Based on available data, the classification criteria are not met.
- **Skin corrosion/irritation**: Based on available data, the classification criteria are not met.
- **Serious eye damage/irritation**: Based on available data, the classification criteria are not met.
- **Respiratory or skin sensitization**: Based on available data, the classification criteria are not met.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
  - **Germ cell mutagenicity**: Based on available data, the classification criteria are not met.
  - **Carcinogenicity**: Based on available data, the classification criteria are not met.
  - **Reproductive toxicity**: Based on available data, the classification criteria are not met.
  - **STOT-single exposure**: Based on available data, the classification criteria are not met.
  - **STOT-repeated exposure**: Based on available data, the classification criteria are not met.
  - **Aspiration hazard**: Based on available data, the classification criteria are not met.
SECTION 12: Ecological information

12.1 Toxicity
   Aquatic toxicity
   No further relevant information available.

12.2 Persistence and degradability
   No further relevant information available.

12.3 Bioaccumulative potential
   No further relevant information available.

12.4 Mobility in soil
   Other Information
   The ecological effects have not been thoroughly investigated, but none have been identified.

12.5 Results of PBT and vPvB assessment
   PBT
   None of the substances present are considered PBT.
   vPvB
   None of the substances present are considered vPvB.

12.6 Other adverse effects
   No further relevant information available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods
   Recommendation
   The user of this product has the responsibility to dispose of unused material, residues and containers in compliance with all relevant local, state, and federal laws and regulations regarding treatment, storage, and disposal for hazardous and nonhazardous wastes.

   Uncleaned packaging recommendation
   Disposal must be made according to official regulations.

   Recommended cleansing agents
   Disinfection with 1:256 Lysol I.C. or 10% bleach.

SECTION 14: Transport information

14.1 UN number
   DOT, ADR, IMDG, IATA
   UN 3373

14.2 UN proper shipping name
   DOT, ADR, IMDG, IATA
   Biological substance Category B

14.3 Transport hazard class(es)
   DOT, ADR, IMDG, IATA Class
   Class 6, Division 6.2

14.4 Packing group
   DOT, ADR, IMDG, IATA
   Not Regulated

14.5 Environmental hazards
   Marine Pollutant
   Mixture Not Classified Marine Pollutant

14.6 Special precautions for user
   Not Applicable

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code
   Not Applicable
SECTION 15: Regulatory information

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

Labelling according to Regulation (EC) No 1272/2008

The product is classified and labelled according to the CLP regulation.

United States (USA)

- SARA Section 355: None of the ingredients are listed.
- SARA Section 302/304/311/312/313: None of the ingredients are listed.
- TSCA (Toxic Substances Control Act): All chemicals are listed.
- Proposition 65 (California): None of the ingredients are listed.
- Chemicals known to cause Cancer: None of the ingredients are listed.
- Chemicals known to cause reproductive toxicity for females: None of the ingredients are listed.
- Chemicals known to cause developmental toxicity: None of the ingredients are listed.
- Carcinogenic Categories
  - EPA (Environmental Protection Agency): None of the ingredients are listed.
  - IARC (International Agency for Research on Cancer): None of the ingredients are listed.
- NIOSH-Ca: None of the ingredients are listed.

Canada - Canadian Domestic Substances List (DSL)

All chemicals are listed.

International Regulations

- WHO/HSE/GCR/2015.2: UN3373

Other regulations, limitations and prohibitive regulations

- Seveso III Directive (2012/18/EU): None of the ingredients are listed.
- Substances of very high concern (SVHC): None of the ingredients are listed.

15.2 Chemical safety assessment

A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

Disclaimer

The above information is believed to be accurate but does not purport to be all inclusive and shall be used only as a guide. Advanced Biotechnologies, Inc. shall not assume any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we can not guarantee that these are the only hazards that exist.

Abbreviations and acronyms

- ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road
- CAS: Chemical Abstracts Service (division of the American Chemical Society)
- DOT: US Department of Transportation
- GHS: Globally Harmonised System of Classification and Labelling of Chemicals
- IATA: International Air Transport Association
- IMDG: International Maritime Code for Dangerous Goods
- LC50/LD50: Lethal concentration, 50 percent/Lethal dose, 50 percent
- NIOSH: National Institute for Occupational Safety and Health
- OSHA: Occupational Safety and Health Administration
- PBT/vPvB: Persistent, Bioaccumulative and Toxic/very Persistent and very Bioaccumulative
- REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals (EC 1907/2006)
- SARA: Superfund Amendments and Reauthorization Act
- STEL: Short Term Exposure Limit
- STOT: Specific Target Organ Toxicity
- SVHC: Candidate List of Substances of Very High Concern
- TWA: Time Weighted Average

Date of Preparation

The effective date in the header of this document is the date of preparation and/or last revision.