SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND THE COMPANY/UNDERTAKING

1.1 Product Identifier
Product Name: RNAscope® Protease Plus
Product No: 322331

1.2 Relevant identified uses of the substance or mixture and uses advised against
Identified uses: For Research Use Only. Not for use in diagnostic procedures.

1.3 Details of the supplier of the safety data sheet
Company: Advanced Cell Diagnostics
Address: 7707 Gateway Blvd.
Newark, CA 94560
Telephone: +1 510-576-8800
Fax: +1 510-576-8798
Internet: www.acdbio.com
Email address: info.acd@bio-techne.com

Canada: 21 Canmotor Avenue
Toronto, Ontario M8Z4E6
Fax: +1 905-827-6402
Email address: Canada.inquiries@bio-techne.com

United Kingdom: 19 Barton Lane
Abingdon Science Park
Abingdon, OX14 3NB
Telephone: +44 (0)1235 529449
Fax: +44 (0)1235 533420
Email address: info.emea@bio-techne.com

China: 1193 Changning Road
Unit 1901, Raffles Changning
Shanghai, China
Telephone: +86 400-821-3475
Fax: +76 (021)52371001
Email address: techsupport.cn@bio-techne.com

1.4 Emergency Telephone Number
Emergency Tel: For chemical emergency, spill, leak, fire, exposure, or accident call CHEMTREC day or night:
Within U.S. 1-800-424-9300 Worldwide +1 703-527-3887
Bio-Techne Tel: US: +1 612-379-2956 or +1 800-343-7475 / Europe: +44 (0)1235-529449 / China +86 400-821-3475

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture
Sensitization, skin - Category 1

2.2 Label elements
Labeling according to Regulation (EC) No 1272/2006 [GHS/CLP]

Signal Word: Warning

Hazard Statements
H317 May cause an allergic skin reaction.

Precautionary Statements
P261 Avoid breathing vapor/spray.
P272 Contaminated work clothing should not be allowed out of the workplace.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P302+P352 IF ON SKIN: Wash with plenty of soap and water.
P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
P362+P364 Take off contaminated clothing and wash it before reuse.
2.3 Other Hazards
None

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Mixtures

<table>
<thead>
<tr>
<th>Mixture of 5-Chloro-2-methyl-4-isothiazolin-3-one and 2-Methyl-2H-isothiazol-3-one (3:1)</th>
<th>≤ 0.0025%</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAS # 55965-84-9</td>
<td>EC: 613-167-00-5</td>
</tr>
<tr>
<td>Classification (EC 1272/2008)</td>
<td>Skin Sens. 1 – H317</td>
</tr>
</tbody>
</table>

SECTION 4: FIRST AID AND MEASURES

4.1 Description of first aid measures

General information
Consult a doctor and show this safety data sheet.

If Inhaled
Remove to fresh air and monitor breathing. If breathing becomes difficult, give oxygen. If breathing stops, give artificial respiration. Consult a doctor.

In Case of Skin Contact
Immediately wash skin with copious amounts of soap and water for at least 15 minutes. Remove contaminated clothing and shoes and wash before reuse. Consult a doctor.

If Swallowed
Rinse mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Consult a doctor.

In case of Eye Contact
Flush with copious amounts of water for at least 15 minutes. Consult a doctor.

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

To the best of our knowledge, the chemical, physical and toxicological properties have not been thoroughly investigated. Indication of any immediate medical attention and special treatment needed.

4.3 Indication of immediate medical attention and special treatment needed.

Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.

SECTION 5: FIRE FIGHTING MEASURES

5.1 Extinguishing Media

Suitable extinguishing media
Use water spray, alcohol-resistant foam, dry chemical, or carbon dioxide.

5.2 Special hazards arising from the substance or mixture.

In combustion, may emit toxic fumes.

5.3 Precautions for fire fighters

No specific firefighting procedure given.

Protective equipment for fire fighters
Wear suitable protective clothing to prevent contact with skin and eyes and self-contained breathing apparatus.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Do not act without suitable protective clothing - see section 8 of SDS. Evacuate personnel to safe areas. Ensure adequate ventilation. Avoid breathing vapors, mist, dust or gas.

6.2 Environmental Precautions

Do not let product enter drains.

6.3 Methods and material for containment and cleaning up

Cover spillage with suitable absorbent material. Hold all material for appropriate disposal as described under section 13 of SDS.

6.4 Reference to other sections

For required PPE see section 8. For disposal see section 13.
SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling
Avoid inhalation, contact with eyes, skin and clothing. Avoid the formation of dust and aerosols. Use in a well-ventilated area. Keep away from sources of ignition. Avoid prolonged or repeated exposure.

7.2 Conditions for safe storage, including any incompatibilities
Store in cool, well-ventilated area. Keep away from direct sunlight. Keep container tightly sealed until ready for use.

Specific end user(s)
Not applicable.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control Parameters
Components with workplace control parameters
Contains no substances with occupational exposure limit values.

8.2 Exposure controls
Engineering measures
Use in a fume hood where applicable. Ensure all engineering measures described under section 7 of SDS are in place. Ensure laboratory is equipped with a safety shower and eye wash station.

Protective equipment

Eye Protection
Use appropriate safety glasses.

Skin Protection
Use appropriate chemical resistant gloves (minimum requirement use standard BS EN 374:2003). Gloves should be inspected before use. Wash and dry hands thoroughly after handling.

Eye Protection
If risk of splashing, wear safety goggles or face shield.

Body Protection
Wear appropriate protective clothing.

Respiratory Equipment
No specific recommendation made, but respiratory protection may still be required under exceptional circumstances when excessive air contamination exists.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Clear liquid</td>
<td></td>
</tr>
<tr>
<td>Odor</td>
<td>Little to none</td>
<td></td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>No data available</td>
<td></td>
</tr>
<tr>
<td>pH</td>
<td>No data available</td>
<td></td>
</tr>
<tr>
<td>Melting / Freezing Point</td>
<td>No data available</td>
<td></td>
</tr>
<tr>
<td>Boiling Point / Range</td>
<td>No data available</td>
<td></td>
</tr>
<tr>
<td>Flash Point</td>
<td>No data available</td>
<td></td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>No data available</td>
<td></td>
</tr>
<tr>
<td>Flammability (Solid, Gas)</td>
<td>No data available</td>
<td></td>
</tr>
<tr>
<td>Upper/Lower Flammability or</td>
<td>No data available</td>
<td></td>
</tr>
<tr>
<td>Explosive Limits</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>No data available</td>
<td></td>
</tr>
<tr>
<td>Vapor Density</td>
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<td></td>
</tr>
<tr>
<td>Relative Density</td>
<td>No data available</td>
<td></td>
</tr>
<tr>
<td>Solubility</td>
<td>No data available</td>
<td></td>
</tr>
<tr>
<td>Partition Coefficient</td>
<td>No data available</td>
<td></td>
</tr>
<tr>
<td>Autoignition Temperature</td>
<td>No data available</td>
<td></td>
</tr>
<tr>
<td>Decomposition Temperature</td>
<td>No data available</td>
<td></td>
</tr>
<tr>
<td>Viscosity</td>
<td>No data available</td>
<td></td>
</tr>
</tbody>
</table>

9.2 Other information
Not available

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity
Stable under recommended transport or storage conditions.
10.2 **Chemical stability**
Stable under recommended storage conditions.

10.3 **Possibility of hazardous reactions**
Hazardous reactions will not occur under normal transport or storage conditions. Decomposition may occur on exposure to conditions or materials listed below.

10.4 **Conditions to avoid**
Heat, moisture.

10.5 **Incompatible Materials**
Strong acids/alkalis, strong oxidizing/reducing agents.

10.6 **Hazardous decomposition products**
Strong acids/alkalis, strong oxidizing/reducing agents.

### SECTION 11: TOXICOLOGICAL INFORMATION

11.1 **Information on toxicological effects**

**Acute Toxicity**
Classified based on available data.

**Skin Corrosion / Irritation**
Classified based on available data.

**Serious Eye Damage/Irritation**
Classified based on available data.

**Cell Mutagenicity**
Classified based on available data.

**Carcinogenicity**
Classified based on available data.

**Reproductive Toxicity**
Classified based on available data.

**Specific Target Organ Toxicity – Single Exposure**
Classified based on available data.

**Specific Target Organ Toxicity – Repeated Exposure**
Classified based on available data.

**Aspiration Hazard**
Classified based on available data.

**Symptoms/Routes of Exposure**
- **Inhalation:** There may be irritation of the throat with a feeling of tightness in the chest.
- **Ingestion:** There may be irritation of the throat.
- **Skin:** There may be mild irritation at the site of contact.
- **Eyes:** There may be irritation and redness.

**Delayed/Immediate Effects:** No known symptoms.

**Additional Information**
Classified based on available data.

### SECTION 12: ECOLOGICAL INFORMATION

12.1 **Toxicity**
No data available

12.2 **Persistence and degradability**
No data available

12.3 **Bioaccumulative potential**
No data available on bioaccumulation

12.4 **Mobility in soil**
No data available

12.5 **Results of PBT and vPvB assessment**
No data available

12.6 **Endocrine disrupting properties**
No data available

12.7 **Other adverse effects**
SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product
Transfer to a suitable container and arrange for collection by specialized disposal company in accordance with national, regional, or local legislation.

Contaminated Packaging
Dispose of in a regulated landfill site or other method for hazardous or toxic wastes in accordance with national, regional, or local legislation.

SECTION 14: TRANSPORT INFORMATION

Classified according to the criteria of the UN Model Regulations as reflected in the IMDG Code, ADR, RID, DOT and IATA

14.1 UN Number
Does not meet the criteria for classification as hazardous for transport.

14.2 UN proper shipping name
Does not meet the criteria for classification as hazardous for transport.

14.3 Transport hazard class(es)
Does not meet the criteria for classification as hazardous for transport.

14.4 Packing group
Does not meet the criteria for classification as hazardous for transport.

14.5 Environmental hazards
Does not meet the criteria for classification as hazardous for transport.

14.6 Special precautions for user
Does not meet the criteria for classification as hazardous for transport.

14.7 Maritime transport in bulk according to IMO instruments
Not applicable.

SECTION 15: REGULATORY INFORMATION

This safety datasheet complies with the requirements of Regulation (EC) No. 453/2010.

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

Statutory Instruments
TSCA (Toxic Substances Control Act): Not applicable.
SARA 313: Not applicable.
SARA 311/312: Not applicable.
CERCLA Reportable Quantity: Not applicable.
California Proposition 65: Not applicable

15.2 Chemical Safety Assessment
A Chemical Safety Assessment has not been made for this product.

SECTION 16: OTHER INFORMATION

Further Information

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This company shall not be held liable for any damage resulting from handling or from contact with the above product. This material must only be handled by suitably qualified experienced scientists in appropriately equipped and authorized facilities. The above information is believed to be correct but does not purport to be all inclusive and should be used as a guide only for experienced personnel. Always consult your safety advisor and follow appropriate local and national safety legislature. The absence of warning must not, under any circumstance, be taken to mean that no hazard exists.

End of safety data sheet