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

1.1 Product Identifier
   - **Product Name**: RNAscope™ ISH Probe UBC (Positive Control)
   - **Product No**: 200460

1.2 Relevant identified uses of the substance or mixture and uses advised against
   - **Identified uses**: This product is CE-marked and labeled IVD “For In Vitro Diagnostic Use”.

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

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture
   - **Classification according to Regulation (EC) No 1272/2008 [GHS/CLP] or 29 CFR 1910.1200 [OSHA]**
   - **Carcinogen** – Category 2
   - **Reproductive Toxicity** – Category 1B
   - **STOT RE** – Category 2

2.2 Label Elements
   - **Labeling according to Regulation (EC) No. 1272/2008 (GHS/CLP)**
   - **Signal Word**: Danger
   - **Statement(s):**
     - **Hazard Statement(s)**:
       - H351 Suspected of causing cancer.
       - H360 May damage fertility or the unborn child.
       - H373 May cause damage to liver, kidney, and blood.
     - **Precautionary Statement(s)**:
       - P201 Obtain special instructions before use.
       - P202 Do not handle until all safety precautions have been read and understood.
       - P281 Use personal protective equipment as required.
       - P308+P313 IF exposed or concerned: Get medical advice/attention.
       - P314 Get medical advice/attention if you feel unwell.
       - P405 Store locked up.
       - P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.2 Mixtures
   - **Formamide** ≤ 50%
   - **CAS-No**: 75-12-7
   - **EC No**: 200-842-0

SECTION 4: FIRST AID AND MEASURES

4.1 Description of first aid measures
   - **General information**
RNAscope™ ISH Probe UBC (Positive Control)

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.

**In Case of Eye Contact**
Flush with copious amounts of water for at least 15 minutes. Remove contact lenses if easy to do so. 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.

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

**Inhalation**
Vapors may be irritating to the eyes and the respiratory tract.

**Ingestion**
Potential for aspiration if swallowed. Aspiration may cause pulmonary edema and pneumonitis.

**Skin**
May cause skin irritation.

**Eyes**
Will cause eye discomfort and redness.

4.3 **Indication of any 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. For large fires, apply water from as far as possible.

Use large quantities of water applied as a mist or spray. Solid streams of water may be ineffective. Cool affected containers with flooding quantities of water.

5.2 **Special hazards arising from the substance or mixture**
Thermal decomposition can lead to release of irritating gases and vapors. Keep product and empty container away from heat and sources of ignition.

5.3 **Precautions 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 take action without suitable protective clothing - see section 8 of SDS. Evacuate personnel to safe areas. Ensure adequate ventilation. Avoid breathing vapors, mist, dust or gas. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.

6.2 **Environmental Precautions**
Do not let product enter drains.

6.3 **Methods and material for containment and cleaning up**
Stop leak if possible, without risk. Absorb in vermiculite, dry sand or earth and place into containers. Flush with plenty of water to clean spillage area. Do not contaminate water sources or sewer.

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. Use in a well-ventilated area. Do not eat, drink, or smoke in laboratory areas. Wash thoroughly after handling. Wash contaminated clothing before reuse. Use personal protective equipment as required.

7.2 Conditions for safe storage, including any incompatibilities.
Store in cool, well-ventilated area. Store locked up. Containers, which are opened, must be carefully resealed and kept upright to prevent leakage. Keep away from heat, sparks, flame, and other sources of ignition.

7.3 Specific end user(s)
Not applicable.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control Parameters
ACGIH TLV TWA – 10 ppm
OSHA PEL TWA – 20 ppm
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. Prevent dispersion of dust. Avoid contact with skin, eyes, and clothing. Wash hands before breaks and immediately after handling product.

8.2 Personal Protective Equipment
Eye/Face 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.
Body Protection
Wear appropriate protective clothing.
Respiratory Equipment
If risk assessment indicates necessary, use a suitable respirator.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties
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<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
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<tr>
<td>Evaporation Rate</td>
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<tr>
<td>Flammability (Solid, Gas)</td>
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<tr>
<td>Upper/Lower Flammability or Explosive Limits</td>
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</tr>
</tbody>
</table>

9.2 Other safety information
Not data available

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity
Stable under normal conditions.

10.2 Chemical stability
Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions
No data available

10.4 Conditions to avoid.
Heat, flames, sparks

10.5 Incompatible Materials

10.6 Hazardous decomposition products
Nitrogen oxides, carbon monoxide, carbon dioxide, hydrogen cyanide, ammonia.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute Toxicity
LD50 Oral (rat) – 5577 mg/kg
LC50 Inhalation (rat) - >3900 ppm

Skin Corrosion/Irritation
May cause skin irritation and/or dermatitis.

Serious Eye Damage/Irritation
Will cause eye discomfort, redness, and tearing of the eye.

Respiratory or Skin Sensitization
May be irritating to the respiratory tract.

Germ Cell Mutagenicity
Classified based on available data.

Carcinogenicity
Possible cancer hazard. May cause cancer based on animal data.

Reproductive Toxicity
May cause harm to the unborn child. Developmental effects have occurred in experimental animals.

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

Specific Target Organ Toxicity – Repeated Exposure
Liver, kidney, blood.

Aspiration Hazard
Classified based on available data.

Symptoms/Routes of Exposure

Inhalation: May cause respiratory tract irritation.
Ingestion: Harmful if swallowed.
Skin: May be harmful if absorbed through skin. May cause skin irritation.
Eyes: Causes serious eye irritation.

Delayed/Immediate Effects
To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicity
Not regarded as dangerous for the environment.

12.1 Toxicity
LC50 – 9135 mg/L, 96h (brachydanio rerio)

12.2 Persistence and degradability
No data available

12.3 Bioaccumulative potential
No data available

12.4 Mobility in soil
No data available

12.5 Results of PBT and vPvB assessment
No data available.

12.6 Other adverse effects
No data available.
SECTION 13: DISPOSAL CONSIDERATIONS

General Information
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 Packaging 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.

Additional Transport Information
Does not meet the criteria for classification as hazardous for transport.

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
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 professionals 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