Section 1 - Product and Company Information

Product Name: Ribonucleic acid from torula yeast, Type V6.
Product Number: R6625
Brand: Sigma Chemical
Company: Sigma-Aldrich
Street Address: 3650 Spruce Street
City, State, Zip, Country: SAINT LOUIS, MO 63103 LS
Technical Phone: 314 771 5765
Emergency Phone: 414 273 3850 Ext. 5996
Fax: 800 325 5652

Section 2 - Composition/Information on Ingredient

<table>
<thead>
<tr>
<th>Substance Name</th>
<th>CAS No.</th>
<th>SARA 311</th>
<th>EC no</th>
<th>Annex I Index Number</th>
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<tbody>
<tr>
<td>RIBONUCLEIC ACID</td>
<td>63231-03-0</td>
<td>No</td>
<td></td>
<td></td>
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</tbody>
</table>

Formula: Pentosenucleic acids, Ribonucleic acids, RNA

Section 3 - Hazards Identification

HMIS Rating
- Health: 0
- Flammability: 0
- Reactivity: 0

NFPA Rating
- Health: 0
- Flammability: 0
- Reactivity: 0

For additional information on toxicity, please refer to Section 11.

Section 4 - First Aid Measures

Oral Exposure
If swallowed, wash out mouth with water provided person is conscious. Call a physician.

Inhalation Exposure
If inhaled, remove to fresh air. If breathing becomes difficult, call a physician.

Dermal Exposure
In case of contact, immediately wash skin with soap and copious amounts of water.

Eye Exposure
In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.

Section 5 - Fire Fighting Measures

Autoignition Temp: N/A
Extinguishing Media
- Suitable: Water spray.
- Inconclusive: Carbon dioxide, dry chemical powder, or appropriate foam.

Firefighting Protective Equipment
- Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.
- Music hazard(s): Emits toxic fumes under fire conditions.

Section 6 - Accidental Release Measures

Methods for Cleaning Up
Sweep up, place in a bag and hold for waste disposal. Avoid raising dust. Ventilate area and wash spill site after material pickup is complete.

Section 7 - Handling and Storage

Handling
- User Exposure: Avoid inhalation. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure.
- Storage: Suitable
  - Keep tightly closed. Store at: 20°C

Section 8 - Exposure Controls / PPE

Engineering Controls
- Safety shower and eyewash. Mechanical exhaust required.

Personal Protective Equipment
- Respiratory
  - Wear dust mask.
- Hand
  - Protective gloves.
- Eye
  - Chemical safety goggles.
- General Hygiene Measures
  - Wash thoroughly after handling.

Section 9 - Physical/Chemical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
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</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Color: Fairly beige</td>
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<tr>
<td>Molecular Weight</td>
<td>N/A</td>
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<tr>
<td>pH</td>
<td>N/A</td>
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<tr>
<td>BP/BP Range</td>
<td>N/A</td>
</tr>
</tbody>
</table>

Sigma Chemical - R6625 Sigma-Aldrich Corporation
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www.sigma-aldrich.com
Section 10 - Stability and Reactivity

Stability
Stable.

Materials to Avoid
Strong oxidizing agents.

Hazardous Decomposition Products
Carbon monoxide, Carbon dioxide.

Section 11 - Toxicological Information

Routes of Exposure
Skin Contact
May cause skin irritation.

Sensitization
May cause allergic reaction.

Inhalation
May cause respiratory irritation.

Ingestion
May cause irritation of the gastrointestinal tract.

Signs and Symptoms of Exposure
To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Section 12 - Ecological Information

Section 13 - Disposal Considerations

Appropriate Method of Disposal of Substance or Preparation
Contact a licensed professional waste disposal service to dispose of this material.

Section 14 - Transport Information

DOT
Proper Shipping Name: None
Non-Hazardous for Transport: This substance is considered to be non-hazardous for transport.

IATA
Non-Hazardous for Air Transport: Non-hazardous for air transport.

Section 15 - Regulatory Information

United States
SARA Listed: No

TSCA Inventory Item: Yes

Canada Regulatory Information
WHMIS Classification
This product has been classified in accordance with the hazard criteria of the CPR, and the MSDS contains all the information required by the CPR.

Section 16 - Other Information

Disclaimer
For R&D use only. Not for drug, household or other use.

Warranty
The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Inc. shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale. Copyright 2005 Sigma-Aldrich Co. License granted to make unlimited paper copies for internal use only.