SAFETY DATA SHEET

1. Identification

Product Name: Ribonuclease A (From Bovine Pancreas)
Cat No.: BP2539, BP2539-1, BP2539-100, BP2539-250
Synonyms: E.C. 2.7.7.16.; Pancreatic Ribonuclease; RNase A
Recommended Use: Laboratory chemicals
Uses advised against: No Information available

2. Hazard(s) identification

Classification:
Based on available data, the classification criteria are not met

Label Elements:
None required

Hazards not otherwise classified (HNOC):
None identified

3. Composition / information on ingredients

<table>
<thead>
<tr>
<th>Haz/Non-haz</th>
<th>Component</th>
<th>CAS-No</th>
<th>Weight %</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Nuclease, ribo-</td>
<td>9001-99-4</td>
<td>100</td>
</tr>
</tbody>
</table>
4. First-aid measures

Eye Contact
Rinse with plenty of water. Get medical attention if symptoms occur.

Skin Contact
Rinse with plenty of water. Get medical attention if symptoms occur.

Inhalation
Move to fresh air. If breathing is difficult, give oxygen. Get medical attention if symptoms occur.

Ingestion
Do not induce vomiting. Get medical attention if symptoms occur.

Most important symptoms/effects
No information available

Notes to Physician
Treat symptomatically.

5. Fire-fighting measures

Unsuitable Extinguishing Media
No information available.

Flash Point
No information available.

Method -
No information available

Autoignition Temperature
No information available.

Explosion Limits
Upper
No data available
Lower
No data available

Sensitivity to Mechanical
Impact
No information available

Sensitivity to Static Discharge
No information available

Specific Hazards Arising from the Chemical
None known.

Hazardous Combustion Products
None known

Protective Equipment and Precautions for Firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear

NFPA

<table>
<thead>
<tr>
<th>Health</th>
<th>Flammability</th>
<th>Instability</th>
<th>Physical hazards</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
<td>0</td>
<td>N/A</td>
</tr>
</tbody>
</table>

6. Accidental release measures

Personal Precautions
Use personal protective equipment. Ensure adequate ventilation. Avoid dust formation.

Environmental Precautions
Avoid release to the environment.

Methods for Containment and Clean Up
Sweep up or vacuum up spillage and collect in suitable container for disposal. Avoid dust formation.

7. Handling and storage

Handling
Wear personal protective equipment. Ensure adequate ventilation. Avoid contact with skin, eyes and clothing. Avoid ingestion and inhalation. Avoid dust formation.

Storage
Keep containers tightly closed in a dry, cool and well-ventilated place.
8. Exposure controls / personal protection

Exposure Guidelines
This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Engineering Measures
Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal Protective Equipment

<table>
<thead>
<tr>
<th>Eye/face Protection</th>
<th>Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin and body protection</td>
<td>Wear appropriate protective gloves and clothing to prevent skin exposure</td>
</tr>
<tr>
<td>Respiratory Protection</td>
<td>Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced</td>
</tr>
<tr>
<td>Hygiene Measures</td>
<td>Handle in accordance with good industrial hygiene and safety practice</td>
</tr>
</tbody>
</table>
11. Toxicological information

Acute Toxicity

Component Information
Toxicologically Synergistic Products
No information available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Irritation
No information available.

Sensitization
No information available.

Carcinogenicity
The table below indicates whether each agency has listed any ingredient as a carcinogen

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No</th>
<th>IARC</th>
<th>NTP</th>
<th>ACGIH</th>
<th>OSHA</th>
<th>Mexico</th>
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</thead>
<tbody>
<tr>
<td>Nuclease, ribo-</td>
<td>9001-99-4</td>
<td>Not listed</td>
<td>Not listed</td>
<td>Not listed</td>
<td>Not listed</td>
<td>Not listed</td>
</tr>
</tbody>
</table>

Mutagenic Effects
No information available.

Reproductive Effects
No information available.

Developmental Effects
No information available.

Teratogenicity
No information available.

STOT - single exposure
None known.

STOT - repeated exposure
None known.

Aspiration hazard
No information available.

Symptoms / effects, both acute and delayed
No information available

Endocrine Disruptor Information
No information available

Other Adverse Effects
The toxicological properties have not been fully investigated.

12. Ecological information

Ecotoxicity
Do not empty into drains

Persistence and Degradability
No information available.

Bioaccumulation/ Accumulation
No information available

Mobility
No information available

13. Disposal considerations

Waste Disposal Methods
Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification
14. **Transport information**

<table>
<thead>
<tr>
<th></th>
<th>DOT</th>
<th>TDG</th>
<th>IATA</th>
<th>IMDG/IMO</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Not regulated</td>
<td>Not regulated</td>
<td>Not regulated</td>
<td>Not regulated</td>
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</tbody>
</table>

15. **Regulatory information**

**International Inventories**

<table>
<thead>
<tr>
<th>Component</th>
<th>TSCA</th>
<th>DSL</th>
<th>NDSL</th>
<th>EINECS</th>
<th>ELINCS</th>
<th>NLP</th>
<th>PICCS</th>
<th>ENCS</th>
<th>AICS</th>
<th>IECSC</th>
<th>KECL</th>
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</thead>
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<tr>
<td>Nuclease, ribo-</td>
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<td>X</td>
<td>232-646-6</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>

Legend:
- **X** - Listed
- **E** - Indicates a substance that is the subject of a Section 5(e) Consent order under TSCA.
- **F** - Indicates a substance that is the subject of a Section 5(f) Rule under TSCA.
- **N** - Indicates a polymeric substance containing no free-radical initiator in its inventory name but is considered to cover the designated polymer made with any free-radical initiator regardless of the amount used.
- **P** - Indicates a commenced PMN substance
- **R** - Indicates a substance that is the subject of a Section 6 risk management rule under TSCA.
- **S** - Indicates a substance that is identified in a proposed or final Significant New Use Rule
- **T** - Indicates a substance that is the subject of a Section 4 test rule under TSCA.
- **XU** - Indicates a substance exempt from reporting under the Inventory Update Rule, i.e. Partial Updating of the TSCA Inventory Data Base Production and Site Reports (40 CFR 710(B)).
- **Y1** - Indicates an exempt polymer that has a number-average molecular weight of 1,000 or greater.
- **Y2** - Indicates an exempt polymer that is a polyester and is made only from reactants included in a specified list of low concern reactants that comprises one of the eligibility criteria for the exemption rule.

**U.S. Federal Regulations**

- **TSCA 12(b)** Not applicable
- **SARA 313** Not applicable
- **SARA 311/312 Hazardous Categorization**
  - Acute Health Hazard: No
  - Chronic Health Hazard: No
  - Fire Hazard: No
  - Sudden Release of Pressure Hazard: No
  - Reactive Hazard: No
- **Clean Water Act** Not applicable
- **Clean Air Act** Not applicable
- **OSHA** Occupational Safety and Health Administration
  - Not applicable
- **CERCLA** Not applicable
- **California Proposition 65** This product does not contain any Proposition 65 chemicals.
- **State Right-to-Know** Not applicable
### U.S. Department of Transportation
Reportable Quantity (RQ): N  
DOT Marine Pollutant: N  
DOT Severe Marine Pollutant: N

### U.S. Department of Homeland Security
This product does not contain any DHS chemicals.

### Other International Regulations

- **Mexico - Grade**
  No information available

- **Canada**
  This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

- **WHMIS Hazard Class**
  Non-controlled

### 16. Other information

<table>
<thead>
<tr>
<th>Prepared By</th>
<th>Regulatory Affairs</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Thermo Fisher Scientific</td>
</tr>
<tr>
<td></td>
<td>Email: <a href="mailto:EMSDS.RA@thermofisher.com">EMSDS.RA@thermofisher.com</a></td>
</tr>
<tr>
<td>Creation Date</td>
<td>22-Apr-2014</td>
</tr>
<tr>
<td>Revision Date</td>
<td>22-Apr-2014</td>
</tr>
<tr>
<td>Print Date</td>
<td>22-Apr-2014</td>
</tr>
<tr>
<td>Revision Summary</td>
<td>This document has been updated to comply with the US OSHA HazCom 2012 Standard replacing the current legislation under 29 CFR 1910.1200 to align with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS).</td>
</tr>
</tbody>
</table>

### Disclaimer
The information provided on this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

End of SDS