

**2-Deoxy-D-Ribonic acid-1,4-lactone**

Version No. 002, Revision Date: 23.02.202

**1. IDENTIFICATION OF THE SUBSTANCE AND OF THE COMPANY**

Product name : 2-Deoxy-D-Ribonic acid-1,4-lactone

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**2. HAZARDS IDENTIFICATION**

Harmful (Xn) **PERMITTED FOR TRANSPORT BY AIR - IATA : Not dangerous goods**

**3. COMPOSITION / INFORMATION ON INGREDIENTS**

Synonyms : (4S,5R)-4-hydroxy-5-(hydroxymethyl)oxolan-2-one

Formula : C<sub>5</sub>H<sub>8</sub>O<sub>4</sub>

Molecular Weight : 132.11 g/mol

CAS Registry No. : 34371-14-7

**4. FIRST AID MEASURES****If inhaled:**

If breathed in, move person into fresh air. If not breathing give artificial respiration. If symptoms are severe and/or persistent, **SEEK MEDICAL ATTENTION**

**If in case of skin contact:**

Remove all contaminated articles of clothing, shoes, gloves, safety glasses and immediately wash contaminated skin with soap and large amounts of water and continue flushing with water for at least 15 minutes. If symptoms are severe and/or persistent, **SEEK MEDICAL ATTENTION**

**In case of eye contact:**

Immediately flush affected eye(s) with large amounts of water and continue flushing for at least 15 minutes. If symptoms are severe and/or persistent, **SEEK MEDICAL ATTENTION**

**If swallowed:**

Rinse mouth out thoroughly with large amounts of water and continue to do so for at least 15 minutes. Never give anything by mouth to an unconscious person. If symptoms are severe and/or persistent, **SEEK MEDICAL ATTENTION**

## 5. FIRE FIGHTING MEASURES

### **Suitable extinguishing media**

In the event of a fire involving this material, extinguish using carbon dioxide, dry chemical powder, alcohol-resistant chemical foam, sand or similar.

### **Special protective equipment for fire-fighters**

Protective clothing and breathing apparatus should be worn if the fire is large.

## 6. ACCIDENTAL RELEASE MEASURES

### **Personal precautions**

Avoid breathing vapours, mist, or gas

### **Environmental precautions**

Do not allow material to enter drains, water courses or to contaminate soil

### **Methods for cleaning up**

Evacuate area. Absorb on sand, vermiculite, diatomaceous earth or any inert absorbent material then place in a suitable closed container for disposal. Store container containing spillage outdoors in a secure, cool, ventilated area away from people. Contact a licensed hazardous waste disposal company for disposal.

## 7. Handling and Storage

### **Handling**

This material should only be handled by persons suitably qualified and competent in the handling of potentially hazardous chemicals. The toxicological and physiological properties of this material are not known and so normal chemical hygiene precautions should be exercised by all personnel handling this material (see Section 8).

### **Storage**

Store in a tightly closed container in a cool, dry, well-ventilated area

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

We are not aware of any national exposure limit for this material.

### **Personal protective equipment**

#### **Respiratory protection**

This material has a low vapour pressure and respiratory protection is not required when handling small quantities under ambient conditions. Manipulation of small samples of the material should be performed in approved fume cupboards whenever possible. For large quantities, or handling at elevated temperatures, use multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges. Use respirators and components tested and approved under appropriate government standards.

#### **Hand protection**

Wear gloves that are not permeable to the material and any carrier solvent

#### **Eye protection**

Wear approved safety spectacles when handling small quantities and a full face shield for larger quantities.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance</b>	:	Liquid
<b>Odour</b>	:	No data
<b>pH</b>	:	No data
<b>Boiling point</b>	:	No data available
<b>Melting point</b>	:	No data available
<b>Purity</b>	:	>95% (gas chromatography)
<b>Flash point</b>	:	no data available
<b>Ignition temperature</b>	:	no data available
<b>Lower explosion limit</b>	:	no data available
<b>Upper explosion limit</b>	:	no data available
<b>Molecular formula</b>	:	C <sub>5</sub> H <sub>8</sub> O <sub>4</sub>
<b>Molecular weight</b>	:	132.11 g/mol
<b>Density</b>	:	no data available
<b>Solubility in water</b>	:	miscible
<b>Solubility in ethyl acetate</b>	:	miscible

## 10. STABILITY AND REACTIVITY

### **Storage stability**

Stable under the prescribed storage conditions.

### **Conditions to avoid**

No data available.

### **Materials to avoid**

Strong bases, strong acids, oxidizing agents and strong reducing agents

### **Hazardous decomposition products**

Carbon monoxide and carbon dioxide are formed under fire conditions

## 11. TOXICOLOGICAL INFORMATION

<b>Acute toxicity</b>	:	no data available
<b>Irritation and corrosion</b>	:	no data available
<b>Sensitisation</b>	:	no data available
<b>Chronic exposure</b>	:	no data available
<b>Carcinogenicity</b>	:	no data available
<b>Chromasomatic aberrations</b>	:	no data available

## 11. TOXICOLOGICAL INFORMATION (continued)

### Potential Health Effects

**Inhalation** : may be harmful if inhaled.

**Skin** : A single exposure may cause the following adverse effects: Irritation of nose, throat and airway. Difficulty in breathing. Coughing.

**Eyes** : will cause eye irritation

**Ingestion** : will be harmful if swallowed

## 12. ECOLOGICAL INFORMATION

### Elimination information (persistence and degradability)

No data available

### Ecotoxicity effects

No data available

### Further information on ecology

No data available

## 13. DISPOSAL CONSIDERATIONS

### Product

Waste material should be collected and disposed of by a licensed disposal contractor. All waste disposal must be carried out in accord with all national, state, and local environmental regulations.

### Contaminated packaging

Dispose of as for Product

## 14. TRANSPORT INFORMATION

<b>ARD/RID</b>	:	Not dangerous goods
<b>IMDG</b>	:	Not dangerous goods
<b>IATA</b>	:	Not dangerous goods
<b>EINECS Number</b>	:	no data available
<b>UN Number</b>	:	no data available

## 15. REGULATORY INFORMATION

We are not aware of any regulations under any national code governing this material.

**Risk Phrases** : R20/21/22 - Harmful by inhalation in contact with skin and if swallowed

**Safety Phrases** : S23 - Do not breathe gas/fumes/vapour/spray  
S24/25 - Avoid contact with skin and eyes  
S36/37/39 - Wear suitable protective clothing gloves and eye/face protection

## 16. OTHER INFORMATION

Circa Group believes the above information to be correct but does not claim that it is comprehensive. The information provided is intended to be used as a guide only. The information is based on the present state of Circa's 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. Circa Group Pty. Ltd., shall not be held liable for any damage resulting from handling or from contact with the above product.