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Printing date 30.03.2011

Safety data sheet according to Regulation (EC) No. 1907/2006

Version number 1



1 Identification of the substance/mixture and of the company/undertaking		
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 Product identifier Trade name: RIBONUCLEIC ACID SODIUM SALT 		
• Article number: 4362		
· CAS Number: 63231-63-0		
· Relevant identified uses of the substance or mixture and uses advised against		
• Application of the substance / the preparation Laboratory chemical		
 Details of the supplier of the safety data sheet Manufacturer/Supplier: Carl Roth GmbH + Co.KG Schoemperlenstraße 3-5 76185 Karlsruhe Telefon: +49/(0)721 5606-0 Telefax: +49/(0)721 5606-149 	e-mail: info@carlroth.de	
• Further information obtainable from: Department Health, Safety and Environment	e-mail. mio@carnoui.de	
• Emergency telephone number: Poison Centre Munich Telefon +49/(0)8	39 19240	
2 Hazards identification		
 Classification of the substance or mixture Classification according to Regulation (EC) No 1272/2008 The substance is not classified according to the CLP regulation. 		
· Classification according to Directive 67/548/EEC or Directive 1999/45/EC Void		
 Label elements Labelling according to Regulation (EC) No 1272/2008 Void Hazard pictograms Void Signal word Void Hazard statements Void Other hazards All chemicals are potentially dangerous. They should only be handled by specially trained personnel. Results of PBT and vPvB assessment PBT: Not applicable. vPvB: Not applicable. 		
3 Composition/information on ingredients		
· Chemical characterization: Substances		
CAS No. Description 63231-63-0 Ribonucleic acid		
· Identification number(s) -		
4 First aid measures		
 Description of first aid measures General information: First Aider: Pay attention to self-protection! After inhalation: Supply fresh air. After skin contact: Immediately rinse with water. If skin irritation continues, consult a doctor. After eye contact: Rinse opened eye for 10 minutes under running water. After swallowing: Rinse out mouth and drink a glass of water. Do not induce vomiting. 		
If symptoms persist consult doctor.	(Contd. on page 2)	
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5 Firefighting measures

- · Extinguishing media
- Suitable extinguishing agents: Water, CO2, powder, foam.
- · Advice for firefighters
- · Protective equipment:
- Wear self-contained respiratory protective device.
- Wear fully protective suit.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** Avoid formation of dust. Do not breathe dust.
- Environmental precautions: Do not allow to enter sewers/ surface or ground water.
- Methods and material for containment and cleaning up: Pick up mechanically.
- **Reference to other sections** See Section 7 for information on safe handling. See Section 8 for information on personal protection equipment. See Section 13 for disposal information.

7 Handling and storage

· Handling:

· Precautions for safe handling

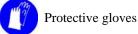
- Keep containers, equipment and working place clean. Handling corresponding to laboratory safety guidelines.
- · Information about fire and explosion protection: No special measures required.
- · Conditions for safe storage, including any incompatibilities

· Storage:

- Requirements to be met by storerooms and receptacles: Store only in the original receptacle.
- · Information about storage in one common storage facility: Store away from foodstuffs.
- · Further information about storage conditions: Store in cool, dry conditions in well sealed receptacles.

8 Exposure controls/personal protection

- Additional information about design of technical facilities: No further data; see item 7.
- · Control parameters
- Ingredients with limit values that require monitoring at the workplace: Not required.
- · Additional information: The lists valid during the making were used as basis.
- · Exposure controls
- · Personal protective equipment:
- General protective and hygienic measures: Keep away from foodstuffs, beverages and feed. Immediately remove all soiled and contaminated clothing. Wash hands before breaks and at the end of work. Avoid contact with the eyes and skin.
- · Respiratory protection: Required when dusts are generated.
- · Protection of hands:



Due to missing tests no recommendation to the glove material can be given for the product.

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· Material of gloves

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The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

· Penetration time of glove material

- The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- · Eye protection:



Tightly sealed goggles

· Body protection: Protective work clothing

9 Physical and chemical properties

Information on basic physical and chemi General Information	cal properties
· Appearance: Form: Colour: · Odour:	Solid White to light beige Characteristic
· pH-value:	Not applicable.
 Change in condition Melting point/Melting range: Boiling point/Boiling range: 	Undetermined. Undetermined.
· Flash point:	Undetermined. Not applicable.
· Flammability (solid, gaseous):	Product is not flammable.
· Danger of explosion:	Product does not present an explosion hazard.
· Explosion limits: Lower: Upper:	Not determined. Not determined.
Vapour pressure:	Not applicable.
Density:	Not determined.
· Solubility in / Miscibility with water:	Soluble.
· Segregation coefficient (n-octanol/water)	: Not determined.
· Viscosity: Dynamic: Kinematic:	Not applicable. Not applicable.

10 Stability and reactivity

· Reactivity

· Chemical stability

• Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.

· Incompatible materials: Strong oxidizing agents.

 \cdot Hazardous decomposition products: No information available.

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11 Toxicological information

· Information on toxicological effects

- · Acute toxicity:
- · LD/LC50 values relevant for classification: Quantitative data on the toxicity of this product are not available.
- · Primary irritant effect:
- \cdot on the skin: No irritating effect.
- \cdot on the eye: No irritating effect.
- after inhalation: No information available.
- \cdot Sensitization: No sensitizing effects known.
- Additional toxicological information: When used and handled according to specifications, the product does not have any harmful effects to our experience and the information provided to us.
- Further information: The product should be handled with the care usual when dealing with chemicals.

12 Ecological information

· Toxicity

- Acquatic toxicity: Quantitative data on the ecological effect of this product are not available.
- Persistence and degradability No further relevant information available.
- · Behaviour in environmental systems:
- · Bioaccumulative potential No further relevant information available.
- Mobility in soil No further relevant information available.
- · Ecotoxical effects:
- · Remark: Do not allow to enter waters, waste water, or soil!
- · Results of PBT and vPvB assessment
- · **PBT:** Not applicable.
- **vPvB:** Not applicable.

13 Disposal considerations

· Waste treatment methods

· Recommendation

The disposal is regionally differently regulated, therefore the kind of disposal is to be inquired at the responsible authorities.

· Uncleaned packaging:

· Recommendation: Disposal according to official regulations.

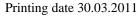
14 Transport information

- · Land transport ADR/RID (cross-border)
- · ADR/RID class:
- **Remarks:** Not subject to transport regulations.
- · Maritime transport IMDG:
- · IMDG Class:
- · Air transport ICAO-TI and IATA-DGR:
- · ICAO/IATA Class: -
- · UN "Model Regulation": -
- \cdot Special precautions for user Not applicable.

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15 Regulatory information

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

- · National regulations:
- · Waterhazard class: Not subject to classification.
- · Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- · Department issuing MSDS: Department: Health, Safety and Environment
- · Contact: Herr Dr. Hagel
- · Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)

ICAO: International Civil Aviation Organization

ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO) GHS: Globally Harmonized System of Classification and Labelling of Chemicals

CAS: Chemical Abstracts Service (division of the American Chemical Society)

• * Data compared to the previous version altered.

