1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product Identifier

Chemical Name: (R)-Rivastigmine Tartrate Salt

Catalogue #: R540990

1.2 Relevant Identified Uses of the Substance or Mixture and Uses Advised Against

Product Uses: To be used only for scientific research and development. Not for use in humans or animals.

1.3 Details of the Supplier of the Safety Data Sheet

Company: Toronto Research Chemicals
2 Brisbane Road
Toronto, ON M3J 2J8
CANADA

Telephone: +14166659696
FAX: +14166654439
Email: orders@trc-canada.com

1.4 Emergency Telephone Number

Emergency#: +14166659696 between 0800-1700 (GMT-5)

2. HAZARDS IDENTIFICATION

WHMIS Classification (Canada)

D1A Very Toxic Material Causing Immediate and Serious Toxic Effects

Toxic by Ingestion

WHMIS Symbols (Canada)

2.1/2.2 Classification of the Substance or Mixture and Label Elements

GHS Hazards Classification (According to EU Regulation 1272/2008 and US OSHA 1910.1200)

Acute Toxicity, Oral (Category 2)

EU Classification (According to EU Regulation 67/548/EEC)

Toxic if swallowed.

EU Risk and Safety Statements (According to EU Regulation 67/548/EEC)

Hazard Statements

Toxic

Hazard Codes

T

Risk Codes and Phrases

R25 Toxic if swallowed.

Safety Precaution Codes and Phrases

S36/37/39 Wear suitable protective clothing, gloves and eye/face protection.

S45 In case of accident or if you feel unwell, seek medical advice immediately (show label where possible).

GHS Hazards Identification (According to EU Regulation 1272/2008 and US OSHA 1910.1200)

Signal Word: Danger

GHS Hazard Statements

H300 Fatal if swallowed.
2.3 Unclassified Hazards/Hazards Not Otherwise Classified

No data available

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Molecular Formula: $\text{C}_{18}\text{H}_{28}\text{N}_{2}\text{O}_{8}$  
Molecular Weight: 400.42

CAS Registry #:  
EC#:  
Synonyms

N-Ethyl-N-methylcarbamic Acid 3-[(1R)-1-(Dimethylamino)ethyl]phenyl Ester (2R,3R)-2,3-Dihydroxybutanedioate;  
SDZ 212712 Tartrate; USP Rivastigmine Tartrate R-Isomer

3.2 Mixtures

Not a mixture

4. FIRST AID MEASURES

4.1 Description of First Aid Measures

General Advice
If medical attention is required, show this safety data sheet to the doctor.

If Inhaled
If inhaled, move casualty to fresh air. If not breathing, give artificial respiration and consult a physician.

In Case of Skin Contact
Remove contaminated clothing and shoes. Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.

In Case of Eye Contact
Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician. Continue rinsing eyes during transport to hospital.

If Swallowed
Never give anything by mouth to an unconscious person. Rinse mouth with water. Do NOT induce vomiting unless advised to do so by a physician or Poison Control Center. Seek medical attention.

4.2 Most Important Symptoms and Effects, Both Acute and Delayed

No data available

4.3 Indication of any Immediate Medical Attention and Special Treatment Needed

No data available

5. FIREFIGHTING MEASURES

5.1 Extinguishing Media

Suitable Extinguishing Media
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Special Hazards Arising from the Substance or Mixture

Carbon oxides, Nitrogen oxides

5.3 Advice for Firefighters

Wear self contained breathing apparatus for fire fighting if necessary.

5.4 Further Information

No data available

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal Precautions, Protective Equipment and Emergency Procedures

Use recommended personal protective equipment (see Section 8). Prevent the formation of dusts and mists. Adequate ventilation must be provided to ensure dusts or mists are not inhaled.
6.2 Environmental Precautions
Material should not be allowed to enter the environment. Prevent further spillage or discharge into drains, if safe to do so.

6.3 Methods and Materials for Containment and Cleaning Up
Contain the spill and then collect using non-combustible absorbent material (such as clay, diatomaceous earth, vermiculite or other appropriate material). Place material in a suitable, sealable container and then dispose according to local/national regulations and guidance (see Section 13).

For protective equipment, refer to Section 8. For disposal, see Section 13.

7. HANDLING AND STORAGE

7.1 Precautions for Safe Handling
Avoid contact with skin and eyes. Ventilation and proper handling are to be used to prevent the formation of dusts and mists. Normal measures for preventative fire protection. No smoking, eating or drinking around this material. Wash hands after use.

7.2 Conditions for Safe Storage, Including any Incompatibilities
Ensure container is kept securely closed before and after use. Keep in a well ventilated area and do not store with strong oxidizers or other incompatible materials (see Section 10).

Storage conditions: No Data Available

7.3 Specific End Uses
For scientific research and development only. Not for use in humans or animals.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control Parameters
Contains no components with established occupational exposure levels.

8.2 Exposure Controls

Appropriate Engineering Controls
A laboratory fume hood or other appropriate form of local exhaust ventilation should be used to avoid exposure.

Personal Protective Equipment
All recommendations below are advisory in nature and a risk assessment should be performed by the employer/end user prior to use of this product. The type of protective equipment must be selected based on the amount and concentration of the dangerous material being used in the workplace.

Eye/Face Protection
Safety goggles or face shield. All equipment should have been tested and approved under appropriate standards, such as NIOSH (US), CSA (Canada), or EN 166 (EU).

Skin Protection
Gloves should be used when handling this material. Gloves are to be inspected prior to use. Contaminated gloves are to be removed using proper glove removal technique so that the outer surface of the glove does not contact bare skin. Dispose of contaminated gloves after use in compliance with good laboratory practices and local requirements.

Gloves used for incidental exposures (splash protection) should be designated as “chemical resistant” by EU standard EN 374 with the resistance codes corresponding to the anticipated use of the material. Unrated gloves are not recommended.

Suggested gloves: AnsellPro Sol-Vex nitrile gloves style 37-175, 15 mil thickness.
Penetration time has not been determined.

Gloves used for prolonged direct exposure (immersion) should be designated “chemical resistant” as per EN 734 with the resistance codes corresponding to the anticipated use of the material.

Penetration time has not been determined.

These recommendations may not apply if the material is mixed with any other chemical, or dissolved into a solution. A risk assessment must be performed to ensure the gloves will still offer acceptable protection.

Body Protection
Fire resistant (Nomex) coveralls or chemical-resistant bodysuit (laminated Tychem SL or equivalent).

Respiratory Protection
Recommended respirators are NIOSH-approved N100 or CEN-approved FFP3 particulate respirators. These are to be
only used as a backup to local exhaust ventilation or other engineering controls. If the respirator is the only means of protection, a full-face supplied air respirator must be used.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on Basic Physical and Chemical Properties

A) Appearance
   Solid

B) Odour
   No data available

C) Odour Threshold
   No data available

D) pH
   No data available

E) Melting Point/Freezing Point
   No Data Available

F) Initial Boiling Point/Boiling Range
   No data available

G) Flash point
   No data available

H) Evaporation Rate
   No data available

I) Flammability (Solid/Gas)
   No data available

J) Upper/Lower Flammability/Explosive Limits
   No data available

K) Vapour Pressure
   No data available

L) Vapour Density
   No data available

M) Relative Density
   No data available

N) Solubility
   No Data Available

O) Partition Coefficient: n-octanol/water
   No data available

P) Auto-Ignition Temperature
   No data available

Q) Decomposition Temperature
   No data available

R) Viscosity
   No data available

S) Explosive Properties
   No data available

T) Oxidizing Properties
   No data available

9.2 Other Information
   No data available

10. STABILITY AND REACTIVITY

10.1 Reactivity
   No data available

10.2 Chemical Stability
   Stable under recommended storage conditions.

10.3 Possibility of Hazardous Reactions
   No data available

10.4 Conditions to Avoid
   No data available

10.5 Incompatible Materials
   Strong oxidizing agents.

10.6 Hazardous Decomposition Products
   No data available

11. TOXICOLOGICAL INFORMATION

11.1 Information on Toxicological Effects

A) Acute Toxicity
   No data available

B) Skin Corrosion/Irritation
   No data available

C) Serious Eye Damage/Irritation
   No data available

D) Respiratory or Skin Sensitization
   No data available

E) Germ Cell Mutagenicity
   No data available

F) Carcinogenicity
   No data available

G) Reproductive Toxicity/Teratogenicity
   No data available
H) Single Target Organ Toxicity - Single Exposure
No data available
I) Single Target Organ Toxicity - Repeated Exposure
No data available
J) Aspiration Hazard
No data available
K) Potential Health Effects and Routes of Exposure
   Inhalation
   May be harmful if inhaled. May cause respiratory tract irritation.
   Ingestion
   May be fatal if swallowed.
   Skin
   May be harmful if absorbed through skin. May cause skin irritation.
   Eyes
   May cause eye irritation.
L) Signs and Symptoms of Exposure
No data available
   To the best of our knowledge, the chemical, physical, and toxicological properties of this material have not been thoroughly investigated.

M) Additional Information
   RTECS: Not listed

12. ECOLOGICAL INFORMATION
12.1 Toxicity
No data available
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

13. DISPOSAL CONSIDERATIONS
13.1 Waste Treatment Methods
   A) Product
   Product may be burned in an incinerator equipped with afterburner and scrubber. Excess and expired materials are to be offered to a licensed hazardous material disposal company. Ensure that all Federal and Local regulations regarding the disposal and destruction of this material are followed.
   B) Contaminated Packaging
   Dispose of as above.
   C) Other Considerations
   Product is not to be disposed of in sanitary sewers, storm sewers, or landfills.

14. TRANSPORT INFORMATION
14.1 UN Number
   DOT (US): 2811  IATA: 2811  IMDG: 2811  ADR/RID: 2811
14.2 UN Proper Shipping Name
   DOT (US)/IATA:
   Toxic solids, organic, n.o.s. (Rivastigmine Tartrate Salt)
   IMDG/ARD/RID:
   TOXIC SOLID, ORGANIC, N.O.S. (Rivastigmine Tartrate Salt)
14.3 Transport Hazard Class(es)
14.4 Packing Group
   DOT (US): II  IATA: II  IMDG: II  ADR/RID: II
14.5 Environmental Hazards
DOT (US): None
IATA: None
IMDG: None
ADR/RID: None

14.6 Special Precautions for User
None

15. REGULATORY INFORMATION
This safety data sheet complies with the requirements of WHMIS (Canada), OSHA 1910.1200 (US), and EU Regulation EC No. 1907/2006 (European Union).

15.1 Safety, Health and Environmental Regulations/Legislation Specific for the Substance or Mixture
A) Canada
   DSL/NDSL Status: This product is not listed on the Canadian DSL/NDSL.

B) United States
   TSCA Status: This product is not listed on the US EPA TSCA.

C) European Union
   ECHA Status: This product is not registered with the EU ECHA.

15.2 Chemical Safety Assessment
No data available

16. OTHER INFORMATION

16.1 Revision History
Original Publication Date: 1/5/2015

16.2 List of Abbreviations
LD50  Median lethal dose of a substance required to kill 50% of a test population.
LC50  Medial lethal concentration of a substance required to kill 50% of a test population.
LDLo  Lowest known lethal dose
TDLo  Lowest known toxic dose
IARC  International Agency for Research on Cancer
NTP   National Toxicology Program
RTECS Registry of Toxic Effects of Chemical Substances

16.3 Further Information
Copyright 2013. Toronto Research Chemicals Inc. Copies may be made for internal use only. The above information is believed to be correct to the best of our knowledge, but is to be only used as a guide. To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated. Please take all due care when handling this product.