SIGMA-ALDRICH

Material Safety Data Sheet

1. PRODUCT AND COMPANY IDENTIFICATION

Product name: (+)-cis-Diltiazem hydrochloride
Product Number: D251
Brand: Sigma
Supplier: Sigma-Aldrich
3000 Spruce Street
SAINT LOUIS MO 63103
USA
Telephone: +1 800-325-5632
Fax: +1 800-325-5652
Emergency Phone # (For both supplier and manufacturer): (314) 776-6555
Preparation Information: Sigma-Aldrich Corporation
Product Safety - Americas Region
1-800-521-8556

2. HAZARDS IDENTIFICATION

Emergency Overview
OSHA Hazards
Target Organ Effect, Harmful by ingestion.

Target Organs
Cardiovascular system, Liver

GHS Classification
Acute toxicity, Oral (Category 4)

GHS Label elements, including precautionary statements
Pictogram
Signal word: Warning
Hazard statement(s): Harmful if swallowed.
Precautionary statement(s): P264: Wash skin thoroughly after handling.
P270: Do not eat, drink or smoke when using this product.
P301 + P312: IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
P330: Rinse mouth.
P501: Dispose of contents/container to an approved waste disposal plant.

HMIS Classification
Health hazard: 1
Chronic Health Hazard: 1
Flammability: 0
Physical hazards: 0
NFPA Rating
Health hazard: 1

3. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms: CRD-491
(2S,3S)-(+)-cis-3-Acetoxy-5-[2(dimethylaminomethyl)-2,3-dihydro-2-(4-methoxyphenyl)-1,5-benzothiazepin-4(5H)-one monohydrochloride

Formula: C29H39N2O5.HCl
Molecular Weight: 450.56 g/mol

Component | Concentration
-----------|--------------
(2S,3S)-(+)-cis-3-Acetoxy-5-[2(dimethylaminomethyl)-2,3-dihydro-2-(4-methoxyphenyl)-1,5-benzothiazepin-4(5H)-one monohydrochloride
CAS No.: 33588-22-5
EC-No.: 251-443-3

4. FIRST AID MEASURES

General advice
Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

If Inhaled
If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact
Wash off with soap and plenty of water. Consult a physician.

In case of eye contact
Flush eyes with water as a precaution.

If swallowed
Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

5. FIREFIGHTING MEASURES

Conditions of flammability
Not flammable or combustible.

Suitable extinguishing media
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special protective equipment for firefighters
Wear self-contained breathing apparatus for fire fighting if necessary.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions
Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Avoid breathing dust.

Environmental precautions
Do not let product enter drains.

Material Safety Data Sheet
Version: 4.5
Revision Date: 01/29/2013
Print Date: 07/17/2013

Fire: 0
Reactivity Hazard: 0
Potential Health Effects
Inhalation: May be harmful if inhaled. May cause respiratory tract irritation.
Skin: Harmful if absorbed through skin. May cause skin irritation.
Eyes: May cause eye irritation.
Ingestion: Harmful if swallowed.
7. HANDLING AND STORAGE

Precautions for safe handling
Avoid contact with skin and eyes. Avoid formation of dust and aerosols.
Provide appropriate exhaust ventilation at places where dust is formed.

Conditions for safe storage
Keep container tightly closed in a dry and well-ventilated place.
Recommended storage temperature: 2 - 8 °C
Keep in a dry place.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance
Form          powder
Colour         white

Safety data
pH             no data available
Melting point/freezing point: 212°C (414°F)
Boiling point
Flash point
Ignition temperature
Auto-ignition temperature
Lower explosion limit
Upper explosion limit
Vapour pressure
Density
Water solubility
Partition coefficient: n-octanol/water
Relative vapour density
Odour
Odour Threshold
Evaporation rate

10. STABILITY AND REACTIVITY

Chemical stability
Stable under recommended storage conditions.

Possibility of hazardous reactions
no data available

Conditions to avoid
no data available

Materials to avoid
Strong oxidising agents

Hazardous decomposition products
Hazardous decomposition products formed under fire conditions: Carbon oxides, nitrogen oxides (NOx), Sulphur oxides, Hydrogen chloride gas
Other decomposition products - no data available

11. TOXICOLOGICAL INFORMATION

Acute toxicity
Oral LD50
LD50 Oral - rat: 560 mg/kg
Remarks: Behavioral/Anxiolytic.

Inhalation LC50
no data available

Dermal LD50
no data available

Other information on acute toxicity
no data available

Skin corrosion/irritation
no data available

Serious eye damage/eye irritation
no data available

Respiratory or skin sensitisation
no data available

Genotoxicity
no data available

Carcinogenicity
IARC: No component of this product present at levels greater than or equal to 0.1% is identified as
probable, possible or confirmed human carcinogen by IARC.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity

no data available

Teratogenicity

no data available

Specific target organ toxicity - single exposure (Globally Harmonized System)

no data available

Specific target organ toxicity - repeated exposure (Globally Harmonized System)

no data available

Aspiration hazard

no data available

Potential health effects

Inhalation: May be harmful if inhaled. May cause respiratory tract irritation.

Ingestion: Harmful if swallowed.

Skin: Harmful if absorbed through skin. May cause skin irritation.

Eyes: May cause eye irritation.

Signs and Symptoms of Exposure

Gastrointestinal disturbance

Synergistic effects

no data available

Additional Information

RTECS: DL0310000

12. ECOLOGICAL INFORMATION

Toxicity

no data available

Persistence and degradability

no data available

Bioaccumulative potential

no data available

Mobility in soil

no data available

PBT and vPvB assessment

no data available

Other adverse effects

no data available

13. DISPOSAL CONSIDERATIONS

Product

Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging

Disposal of as unused product.

14. TRANSPORT INFORMATION

DOT (US)

Not dangerous goods

IMDG

Not dangerous goods

IATA

Not dangerous goods

15. REGULATORY INFORMATION

OSHA Hazards

Target Organ Effect, Harmful by ingestion.

SARA 302 Components

SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components

SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (0eMinimis) reporting levels established by SARA Title II, Section 313.

SARA 311/312 Hazards

Acute Health Hazard, Chronic Health Hazard

Massachusetts Right To Know Components

No components are subject to the Massachusetts Right to Know Act.

Pennsylvania Right To Know Components

CAS-No. 3288-22-5
Revision Date: 2009-07-17

New Jersey Right To Know Components

CAS-No. 3288-22-5
Revision Date: 2009-07-17

California Prop. 65 Components

WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

CAS-No. 3288-22-5
Revision Date: 2007-09-28

16. OTHER INFORMATION

Further Information

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