

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830 and according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Date of issue: 18/07/2012 Revision date: 28/02/2018 Supersedes: 18/07/2012 Version: 2.0

DLM-9088

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form : Substance

Substance name : DL-EPINEPHRINE (RING-D3,1,2,2-D3, 98%)

EC No : 206-347-6 (Unlabeled)

 CAS No
 : 1219803-77-6

 Product code
 : DLM-9088

 Formula
 : C9D6H7NO3

 $Synonyms \\ \hspace*{2.5cm} : \text{ (\pm)-Adrenalin / 4-[1-Hydroxy-2-(methylamino)ethyl]-1,2-benzenediol / (\pm)-3,4-Dihydroxy-α-parameter (\pm)-2. The substitution of th$

(methylaminomethyl)benzyl alcohol / 3,4-Dihydroxy-α-(methylaminomethyl)benzyl alcohol

1.2. Relevant identified uses of the substance or mixture and uses advised against

1.2.1. Relevant identified uses

Main use category : Professional use

Industrial/Professional use spec : For professional use only

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Cambridge Isotope Laboratories, Inc.

50 Frontage Road Andover, MA 01810

USA

USA: 1-800-322-1174 Int: 1-978-749-8000 <u>cilsales@isotope.com</u> www.isotope.com

Emergency telephone number

Emergency numbers:

Chemtrec: 1-800-424-9300 (24 hours) International: 1-703-741-5970 (24 hours)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Acute Tox. 3 (Dermal) H311 Skin Irrit. 2 H315 Eye Irrit. 2 H319 STOT SE 3 H335

Full text of hazard classes and H-statements : see section 16

Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]

T; R24 Xi; R36/37/38

Full text of R-phrases: see section 16

GHS-US classification

Acute Tox. 3 (Dermal) H311 Skin Irrit. 2 H315 Eye Irrit. 2A H319 STOT SE 3 H335

Full text of H statements : see section 16

Adverse physicochemical, human health and environmental effects

Heart, Smooth muscle.

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2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP)



GHS06

Signal word (CLP) : Danger

Hazard statements (CLP) : H311 - Toxic in contact with skin

H315 - Causes skin irritation H319 - Causes serious eye irritation H335 - May cause respiratory irritation

Precautionary statements (CLP) : P261 - Avoid breathing dust, fume, mist, gas, spray, vapours

P264 - Wash hands, forearms and face thoroughly after handling

P271 - Use only outdoors or in a well-ventilated area P280 - Wear protective clothing, protective gloves P302+P352 - IF ON SKIN: Wash with plenty of water

P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove

contact lenses, if present and easy to do. Continue rinsing P312 - Call a doctor, a POISON CENTER if you feel unwell

GHS-US labelling

Hazard pictograms (GHS-US)



GHS06

Signal word (GHS-US) : Danger

Hazard statements (GHS-US) : H311 - Toxic in contact with skin

H315 - Causes skin irritation

H319 - Causes serious eye irritation H335 - May cause respiratory irritation

Precautionary statements (GHS-US) : P261 - Avoid breathing dust, fume, gas, mist, spray, vapours

P264 - Wash Both hands thoroughly after handling P271 - Use only outdoors or in a well-ventilated area P280 - Wear protective clothing, protective gloves

P302+P352 - If on skin: Wash with plenty of water

P304+P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing

P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact

lenses, if present and easy to do. Continue rinsing

P312 - Call a doctor if you feel unwell

P321 - Specific treatment (see Hazard pictograms (CLP) on this label)
P332+P313 - If skin irritation occurs: Get medical advice/attention
P337+P313 - If eye irritation persists: Get medical advice/attention

P361 - Take off immediately all contaminated clothing P362 - Take off contaminated clothing and wash before reuse

P363 - Wash contaminated clothing before reuse

P403+P233 - Store in a well-ventilated place. Keep container tightly closed

P405 - Store locked up

P501 - Dispose of contents/container to Comply with applicable regulations

2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substances

Name	Product identifier	%	Classification according to Directive 67/548/EEC
DL-EPINEPHRINE (RING-D3,1,2,2-D3, 98%)	(CAS No) 1219803-77-6 (EC No) 206-347-6 (Unlabeled)	100	T; R24 Xi; R36/37/38

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Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
DL-EPINEPHRINE (RING-D3,1,2,2-D3, 98%)	(CAS No) 1219803-77-6 (EC No) 206-347-6 (Unlabeled)	100	Acute Tox. 3 (Dermal), H311 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335

Full text of R- and H-statements: see section 16

Name	Product identifier	%	GHS-US classification
DL-EPINEPHRINE (RING-D3,1,2,2-D3, 98%) (Main constituent)	(CAS No) 1219803-77-6	100	Acute Tox. 3 (Dermal), H311 Skin Irrit. 2, H315 Eye Irrit. 2A, H319 STOT SE 3, H335

Full text of H-statements: see section 16

3.2. Mixtures

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general

- : If you feel unwell, seek medical advice (show the label where possible). Evacuate danger area.
- First-aid measures after inhalation
- : When symptoms occur: go into open air and ventilate suspected area. If not breathing, give artificial respiration. Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.

First-aid measures after skin contact

Wash with plenty of soap and water. Immediately call a POISON CENTER or doctor/physician. Remove/Take off immediately all contaminated clothing. Wash with plenty of soap and water. Specific measures (see Hazard pictograms (CLP) on this label). Wash contaminated clothing before reuse. If skin irritation occurs: Get medical advice/attention. Get immediate medical advice/attention. Specific treatment (see Hazard pictograms (CLP) on this label).

First-aid measures after eye contact

: Rinse cautiously with water for several minutes.

First-aid measures after ingestion

: Never give anything by mouth to an unconscious person. Rinse mouth out with water. Get medical advice/attention.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries after inhalation

- : May be harmful if inhaled. May cause respiratory irritation.
- Symptoms/injuries after skin contact
- Toxic in contact with skin. Causes skin irritation. Repeated exposure to this material can result in absorption through skin causing significant health hazard.
- Symptoms/injuries after eye contact Symptoms/injuries after ingestion
- : Causes serious eye irritation.: May be harmful if swallowed.

4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

SECTION 5: Fire-fighting measures

5.1. Extinguishing media

Suitable extinguishing media

: Water spray. dry chemical powder, alcohol-resistant foam, carbon dioxide (CO2).

5.2. Special hazards arising from the substance or mixture

No additional information available

5.3. Advice for firefighters

Firefighting instructions

: Fight fire with normal precautions from a reasonable distance. Wear a self contained breathing apparatus. Do not enter fire area without proper protective equipment, including respiratory

Protection during firefighting

: Do not enter fire area without proper protective equipment, including respiratory protection. Wear recommended personal protective equipment.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures

 Use personal protective equipment as required. Avoid breathing vapours, mist, gas. Avoid dust formation. Ensure adequate air ventilation. Evacuate unnecessary personnel. Evacuate danger area.

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6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information

refer to section 8: "Exposure controls/personal protection".

Environmental precautions

Prevent entry to sewers and public waters. Do not allow to enter drains or water courses. Avoid release to the environment.

Methods and material for containment and cleaning up 6.3.

: Take up mechanically (sweeping, shovelling) and collect in suitable container for disposal. For containment : This material and its container must be disposed of in a safe way, and as per local legislation. Methods for cleaning up

Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

Precautions for safe handling

Precautions for safe handling : Provide adequate ventilation to minimize dust and/or vapour concentrations. Avoid breathing

dust/fume/gas/mist/vapours/spray. Use only outdoors or in a well-ventilated area

Handle in accordance with good industrial hygiene and safety practice. Wash hands, forearms Hygiene measures

and face thoroughly after handling.

Conditions for safe storage, including any incompatibilities

: Store in a well-ventilated place. Keep container tightly closed. Technical measures

Storage conditions : Store refrigerated (-5 C to 5 C). Protect from light.

Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

Control parameters

No additional information available

Exposure controls

Appropriate engineering controls Wash hands and other exposed areas with mild soap and water before eating, drinking or

smoking and when leaving work.

Gloves. Protective clothing. Protective goggles. Self-contained breathing apparatus. Personal protective equipment









: Wear suitable protective clothing and gloves. Materials for protective clothing

Hand protection : Wear suitable protective clothing and gloves.

: Wear eye protection. Chemical goggles or face shield with safety glasses. Eve protection

Wear suitable protective clothing, gloves and eye/face protection. Wear suitable protective Skin and body protection

Respiratory protection : In case of inadequate ventilation wear respiratory protection. Approved supplied air respirator.

Environmental exposure controls : Avoid release to the environment.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

Physical state : Solid **Appearance** : Solid

Molecular mass : 189.24 g/mol (Labeled) : Off-white to brown Colour Odour : No data available Odour threshold No data available рΗ : No data available Relative evaporation rate (butylacetate=1) : No data available : 197 °C (387 °F) - dec. Melting point Freezing point No data available **Boiling** point : No data available Flash point : No data available

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: No data available Auto-ignition temperature Decomposition temperature : No data available Flammability (solid, gas) : No data available : No data available Vapour pressure Relative vapour density at 20 °C : No data available Relative density : No data available Solubility : No data available Log Pow : No data available Log Kow : No data available Viscosity, kinematic : No data available : No data available Viscosity, dynamic Explosive properties : No data available : No data available Oxidising properties Explosive limits : No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

Stable if stored under recommended conditions.

10.3. Possibility of hazardous reactions

No additional information available

10.4. Conditions to avoid

Avoid: Light.

10.5. Incompatible materials

Acids. Acid chlorides. Acid anhydrides. Oxidizing agent.

10.6. Hazardous decomposition products

Carbon oxides (CO, CO2). Nitrogen oxides.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Dermal: Toxic in contact with skin.

DL-EPINEPHRINE (RING-D3,1,2,2-D3, 98%) (1219803-77-6)		
ATE CLP (dermal)	300.000 mg/kg bodyweight	
LD50 Intravenous - rat - 0.07 mg/kg Remarks	Behavioral: Somnolence (general depressed activity). Behavioral: Muscle weakness. Lungs, Thorax, or Respiration: Dyspnea.	
Skin corrosion/irritation	: Causes skin irritation.	
	No data available	
Serious eye damage/irritation	: Causes serious eye irritation.	
	No data available	
Respiratory or skin sensitisation	: Not available	
	No data available	
Germ cell mutagenicity	: Not available	
Carcinogenicity	: Not classified	
Reproductive toxicity	: Laboratory experiments have shown teratogenic effects.	
STOT-single exposure	: May cause respiratory irritation.	
STOT-repeated exposure	: Not classified	
Aspiration hazard	: Not classified	
Potential adverse human health effects and symptoms	: This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product. Laboratory experiments have	

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with skin.

shown fetotoxic results. Stomach - Irregularities - Based on Human Evidence. Toxic in contact

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Symptoms/injuries after inhalation : May be harmful if inhaled. May cause respiratory irritation.

Symptoms/injuries after skin contact : Toxic in contact with skin. Causes skin irritation. Repeated exposure to this material can result

in absorption through skin causing significant health hazard.

Symptoms/injuries after eye contact : Causes serious eye irritation.
Symptoms/injuries after ingestion : May be harmful if swallowed.

SECTION 12: Ecological information

12.1. Toxicity

No additional information available

12.2. Persistence and degradability

DL-EPINEPHRINE (RING-D3,1,2,2-D3, 98%) (1219803-77-6)		219803-77-6)
	Persistence and degradability	Not available.

12.3. Bioaccumulative potential

DL-EPINEPHRINE (RING-D3,1,2,2-D3, 98%) (1219803-77-6)	
Bioaccumulative potential	Not available.

12.4. Mobility in soil

DL-EPINEPHRINE (RING-D3,1,2,2-D3, 98%) (1219803-77-6)	
Ecology - soil	Not available.

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Other adverse effects

Other adverse effects : Not available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Regional legislation (waste) : Waste materials should be disposed of under conditions which meet Federal, State, and Local

environmental control regulations.

Product/Packaging disposal recommendations: : Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed

professional waste disposal service to dispose of this material.

Ecology - waste materials : Dispose of as unused product.

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / AND

14.1. UN number

UN-No.(DOT) : 2811 DOT NA no. UN2811

14.2. UN proper shipping name

Proper Shipping Name (DOT) : DL-EPINEPHRINE

DL-EPINEPHRINE

Class (DOT) : 6.1 - Class 6.1 - Poisonous materials 49 CFR 173.132

Hazard labels (DOT) : 6.1 - Poison

POISON 6

DOT Symbols : G - Identifies PSN requiring a technical name

Packing group (DOT) : II - Medium Danger

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DOT Special Provisions (49 CFR 172.102)

: IB8 - Authorized IBCs: Metal (11A, 11B, 11N, 21A, 21B, 21N, 31A, 31B and 31N); Rigid plastics (11H1, 11H2, 21H1, 21H2, 31H1 and 31H2); Composite (11HZ1, 11HZ2, 21HZ1 21HZ2, 31HZ1 and 31HZ2); Fiberboard (11G); Wooden (11C, 11D and 11F); Flexible (13H1, 13H2, 13H3, 13H4, 13H5, 13L1, 13L2, 13L3, 13L4, 13M1 or 13M2).

IP2 - When IBCs other than metal or rigid plastics IBCs are used, they must be offered for transportation in a closed freight container or a closed transport vehicle.

IP4 - Flexible, fiberboard or wooden IBCs must be sift-proof and water-resistant or be fitted with a sift-proof and water-resistant liner.

T3 - 2.65 178.274(d)(2) Normal..... 178.275(d)(2)

TP33 - The portable tank instruction assigned for this substance applies for granular and powdered solids and for solids which are filled and discharged at temperatures above their melting point which are cooled and transported as a solid mass. Solid substances transported or offered for transport above their melting point are authorized for transportation in portable tanks conforming to the provisions of portable tank instruction T4 for solid substances of packing group III or T7 for solid substances of packing group II, unless a tank with more stringent requirements for minimum shell thickness, maximum allowable working pressure, pressure-relief devices or bottom outlets are assigned in which case the more stringent tank instruction and special provisions shall apply. Filling limits must be in accordance with portable tank special provision TP3. Solids meeting the definition of an elevated temperature material must be transported in accordance with the applicable requirements of this subchapter.

DOT Packaging Exceptions (49 CFR 173.xxx) DOT Packaging Non Bulk (49 CFR 173.xxx) . 212 DOT Packaging Bulk (49 CFR 173.xxx) : 242 Marine pollutant : No

Additional information 14.3.

Other information : No supplementary information available.

Overland transport

Packing group (ADR) : 11

Class (ADR) : 6.1 - Toxic substances

Hazard identification number (Kemler No.) : 60 Classification code (ADR) : T2

Danger labels (ADR) : 6.1 - Toxic substances



Orange plates

2811

Tunnel restriction code (ADR) : D/E Limited quantities (ADR) 500c EAC code : 2X Excepted quantities (ADR) : E4

Transport by sea

DOT Vessel Stowage Location : B - (i) The material may be stowed "on deck" or "under deck" on a cargo vessel and on a

passenger vessel carrying a number of passengers limited to not more than the larger of 25 passengers, or one passenger per each 3 m of overall vessel length; and (ii) "On deck only" on passenger vessels in which the number of passengers specified in paragraph (k)(2)(i) of this

section is exceeded.

MFAG-No : 154

Air transport

DOT Quantity Limitations Passenger aircraft/rail : 25 kg

(49 CFR 173.27)

DOT Quantity Limitations Cargo aircraft only (49 : 100 kg

CFR 175.75)

Civil Aeronautics Law : Toxic and infectious substances/Toxic substances(Hazardous materials notice Appended Table

1 Article 194 of the Enforcement Regulations)

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14.4. Environmental hazards

Other information : No supplementary information available.

14.5. Special precautions for user

14.6. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15: Regulatory information

15.1. US Federal regulations

DL-EPINEPHRINE (RING-D3,1,2,2-D3, 98%) (1219803-77-6)	
SARA Section 302 Threshold Planning Quantity (TPQ)	SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard Delayed (chronic) health hazard
SARA Section 313 - Emission Reporting	Not subject to reporting requirements of the United States SARA Section 313

15.2. International regulations

CANADA

DL-EPINEPHRINE (RING-D3,1,2,2-D3, 98%) (1219803-77-6)

Listed on the Canadian DSL (Domestic Substances List)

15.2.1. National regulations

No additional information available

15.3. US State regulations

DL-EPINEPHRINE (RING-D3,1,2,2-D3, 98%)(1219803-77-6)	
U.S California - Proposition 65 - Carcinogens List	No
U.S California - Proposition 65 - Developmental Toxicity	No
U.S California - Proposition 65 - Reproductive Toxicity - Female	No
U.S California - Proposition 65 - Reproductive Toxicity - Male	No
State or local regulations	U.S Pennsylvania - RTK (Right to Know) List U.S New Jersey - Right to Know Hazardous Substance List

SECTION 16: Other information

Other information

: This product is not radioactive. The data given for this product are those of the corresponding unlabeled compound, unless specifically indicated otherwise. Health and safety data for labeled compounds are generally not available, but are assumed to be similar or identical to the corresponding unlabeled compound.

Full text of R-, H- and EUH-statements:

Acute Tox. 3 (Dermal)	Acute toxicity (dermal), Category 3
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Skin Irrit. 2	Skin corrosion/irritation, Category 2
STOT SE 3	Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation
H311	Toxic in contact with skin
H315	Causes skin irritation
H319	Causes serious eye irritation
H335	May cause respiratory irritation
R24	Toxic in contact with skin
R36/37/38	Irritating to eyes, respiratory system and skin
T	Toxic
Xi	Irritant

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NFPA health hazard : 2 - Materials that, under emergency conditions, can cause

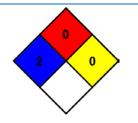
temporary incapacitation or residual injury.

: 0 - Materials that will not burn under typical dire conditions, including intrinsically noncombustible materials such as

concrete, stone, and sand.

NFPA reactivity : 0 - Material that in themselves are normally stable, even

under fire conditions.



HMIS III Rating

NFPA fire hazard

Health : 2 Moderate Hazard - Temporary or minor injury may occur

Flammability : 0 Minimal Hazard
Physical : 0 Minimal Hazard

CIL Multi-Solvent Mixture SDS

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product

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