

Material Safety Data Sheet

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Version 1.4

According to 91/155/EEC

Classified as Hazardous according to the criteria of EU Annex 1 and NOHSC.

1 - Product and Company Information

Product Name (-)-ARTERENOL FREE BASE
 Product Number A7257
 Company Sigma-Aldrich Pty, Ltd
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2 - Composition/Information on Ingredients

Product Name	CAS #	EC no	Annex I Index Number
(-)-ARTERENOL FREE BASE	51-41-2	200-096-6	None

Formula C₈H₁₁NO₃
 Molecular Weight 169.2 AMU
 Synonyms Adrenor * Aktamin *
 1-2-Amino-1-(3,4-dihydroxyphenyl)ethanol *
 (R)-4-(2-Amino-1-hydroxyethyl)-1,2-benzenediol *
 1-alpha-(Aminomethyl)-3,4-dihydroxybenzyl
 alcohol * (-)-alpha-(Aminomethyl)protocatechuyl
 alcohol * Arterenol * l-Arterenol *
 1,2-Benzenediol, 4-(2-amino-1-hydroxyethyl)-,
 (R)- (9CI) *
 1-1-(3,4-Dihydroxyphenyl)-2-aminoethanol *
 1-3,4-Dihydroxyphenylethanolamine * Levarterenol
 * Levoarterenol * Levonoradrenaline *
 Levonorepinephrine * Levophed * (-)-Noradrec *
 Noradrenalin * Noradrenalina (Italian) *
 (-)-Noradrenaline * D-(-)-Noradrenaline *
 l-Noradrenaline * Noradrenline * Norartrinal *
 (-)-Norepinephrine * L-Norepinephrine *
 Norepirenamine * Sympathin E

3 - Hazards Identification

SPECIAL INDICATION OF HAZARDS TO HUMANS AND THE ENVIRONMENT
 Very toxic if swallowed.

4 - First Aid Measures

AFTER INHALATION

If inhaled, remove to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen.

AFTER SKIN CONTACT

In case of skin contact, flush with copious amounts of water for at least 15 minutes. Remove contaminated clothing and shoes. Call a physician.

AFTER EYE CONTACT

In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.

AFTER INGESTION

If swallowed, wash out mouth with water provided person is conscious. Call a physician immediately.

5 - Fire Fighting Measures

EXTINGUISHING MEDIA

Suitable: Carbon dioxide, dry chemical powder, or appropriate foam.

SPECIAL RISKS

Specific Hazard(s): Emits toxic fumes under fire conditions.

SPECIAL PROTECTIVE EQUIPMENT FOR FIREFIGHTERS

Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

6 - Accidental Release Measures

PERSONAL PRECAUTION PROCEDURES TO BE FOLLOWED IN CASE OF LEAK OR SPILL
Evacuate area.

PROCEDURE(S) OF PERSONAL PRECAUTION(S)

Wear self-contained breathing apparatus, rubber boots, and heavy rubber gloves.

METHODS FOR CLEANING UP

Sweep up, place in a bag and hold for waste disposal. Avoid raising dust. Ventilate area and wash spill site after material pickup is complete.

7 - Handling and Storage

HANDLING

Directions for Safe Handling: Do not breathe dust. Do not get in eyes, on skin, on clothing. Avoid prolonged or repeated exposure.

STORAGE

Conditions of Storage: Keep tightly closed.
Store at -20°C

SPECIAL REQUIREMENTS: Light sensitive.

8 - Exposure Controls / Personal Protection

ENGINEERING CONTROLS

Safety shower and eye bath. Use only in a chemical fume hood.

GENERAL HYGIENE MEASURES

Wash contaminated clothing before reuse. Wash thoroughly after handling.

PERSONAL PROTECTIVE EQUIPMENT

Respiratory Protection: Government approved respirator.

Hand Protection: Compatible chemical-resistant gloves.

Eye Protection: Chemical safety goggles.

9 - Physical and Chemical Properties

Appearance	Physical State: Solid	
Property	Value	At Temperature or Pressure
pH	N/A	
BP/BP Range	N/A	
MP/MP Range	220 °C	
Flash Point	N/A	
Flammability	N/A	
Autoignition Temp	N/A	
Oxidizing Properties	N/A	
Explosive Properties	N/A	
Explosion Limits	N/A	
Vapor Pressure	N/A	
SG/Density	N/A	
Partition Coefficient	N/A	
Viscosity	N/A	
Vapor Density	N/A	
Saturated Vapor Conc.	N/A	
Evaporation Rate	N/A	
Bulk Density	N/A	
Decomposition Temp.	N/A	
Solvent Content	N/A	
Water Content	N/A	
Surface Tension	N/A	
Conductivity	N/A	
Miscellaneous Data	N/A	
Solubility	N/A	

10 - Stability and Reactivity

STABILITY

Stable: Stable.

Conditions of Instability: Protect from light.

Materials to Avoid: Acids, Bases, Oxidizing agents.

HAZARDOUS DECOMPOSITION PRODUCTS

Hazardous Decomposition Products: Thermal decomposition may produce carbon monoxide, carbon dioxide, and nitrogen oxides.

HAZARDOUS POLYMERIZATION

Hazardous Polymerization: Will not occur

11 - Toxicological Information

RTECS NUMBER: DN5950000

ACUTE TOXICITY

LD50

Intravenous

Rat

100 UG/KG

Remarks: Behavioral: Somnolence (general depressed activity).

Behavioral: Muscle weakness. Lungs, Thorax, or
Respiration: Dyspnea.

LD50
Oral
Mouse
20 mg/kg

LD50
Intraperitoneal
Mouse
6 MG/KG

LD50
Subcutaneous
Mouse
5 MG/KG

LD50
Intravenous
Mouse
550 UG/KG

SIGNS AND SYMPTOMS OF EXPOSURE

Exposure can cause hypertension, headache, anxiety,
palpitations, and respiratory difficulty.

ROUTE OF EXPOSURE

Skin Contact: May cause skin irritation.
Skin Absorption: May be harmful if absorbed through the skin.
Eye Contact: May cause eye irritation.
Inhalation: Material may be irritating to mucous membranes and
upper respiratory tract. May be harmful if inhaled.
Ingestion: May be fatal if swallowed.

TARGET ORGAN INFORMATION

Heart. Smooth muscle.

CHRONIC EXPOSURE - MUTAGEN

Human
5800 NMOL/L
Cell Type: Other cell types
DNA inhibition

Rat
25 UMOL/L
Cell Type: lung
DNA damage

Mouse
5800 NMOL/L
Cell Type: Other cell types
DNA inhibition

CHRONIC EXPOSURE - TERATOGEN

Species: Hamster
Dose: 2 MG/KG
Route of Application: Subcutaneous
Exposure Time: (7-10D PREG)
Result: Specific Developmental Abnormalities: Hepatobiliary

system.

CHRONIC EXPOSURE - REPRODUCTIVE HAZARD

Result: Exposure during pregnancy can provoke uterine contractions which can result in fetal asphyxia.

Species: Rat

Dose: 8 MG/KG

Route of Application: Intraperitoneal

Exposure Time: (7-14D PREG)

Result: Effects on Newborn: Behavioral.

Species: Rat

Dose: 60 UG/KG

Route of Application: Intravenous

Exposure Time: (8D PREG)

Result: Maternal Effects: Uterus, cervix, vagina.

Species: Mouse

Dose: 16 MG/KG

Route of Application: Subcutaneous

Exposure Time: (7-10D PREG)

Result: Effects on Fertility: Other measures of fertility

Species: Guinea pig

Dose: 10 UG/KG

Route of Application: Intravenous

Exposure Time: (63D PREG)

Result: Maternal Effects: Other effects. Vascular: Measurement of regional blood flow. Effects on Embryo or Fetus: Extra embryonic structures (e.g., placenta, umbilical cord).

Species: Hamster

Dose: 2 MG/KG

Route of Application: Subcutaneous

Exposure Time: (7-10D PREG)

Result: Effects on Fertility: Post-implantation mortality (e.g., dead and/or resorbed implants per total number of implants).

Specific Developmental Abnormalities: Musculoskeletal system.

12 - Ecological Information

No data available.

13 - Disposal Considerations

SUBSTANCE DISPOSAL

Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Observe all federal, state, and local environmental regulations.

14 - Transport Information

RID/ADR

UN#: 2811

Class: 6.1

PG: II

Proper Shipping Name: Toxic solid, organic, n.o.s.

IMDG

UN#: 2811
Class: 6.1
PG: II
Proper Shipping Name: Toxic solid, organic, n.o.s.
Marine Pollutant: No
Severe Marine Pollutant: No
Technical Name: Required

IATA

UN#: 2811
Class: 6.1
PG: II
Proper Shipping Name: Toxic solid, organic, n.o.s.
Inhalation Packing Group I: No
Technical Name: Required

15 - Regulatory Information

CLASSIFICATION AND LABELING ACCORDING TO EU DIRECTIVES

INDICATION OF DANGER: T+
Very toxic.
R-PHRASES: 28
Very toxic if swallowed.
S-PHRASES: 36/37 45
Wear suitable protective clothing and gloves. In case of
accident or if you feel unwell, seek medical advice immediately
(show the label where possible).

16 - Other Information

WARRANTY

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our 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. Sigma-Aldrich Inc., shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale.
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