Chemical Safety Data Sheet MSDS / SDS

Methyldopa SDS

Revision Date:2024-04-25 Revision Number:1

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

Product identifier

Product name: Methyldopa

CAS: 555-30-6

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

Relevant identified uses: For R&D use only. Not for medicinal, household or other use.

Uses advised against: none

Company Identification

Company: Chemicalbook.in

Address: 5 vasavi Layout Basaveswara Nilayam Pragathi Nagar Hyderabad, India -500090

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SECTION 2: Hazards identification

Classification of the substance or mixture

Reproductive toxicity, Category 2

GHS label elements, including precautionary statements

Pictogram(s)

Signal word Warning

Hazard statement(s)

H361 Suspected of damaging fertility or the unborn child

Precautionary statement(s)

Prevention

P203 Obtain, read and follow all safety instructions before use.
P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection/...

Response

P318 IF exposed or concerned, get medical advice.

Storage

P405 Store locked up.

Disposal

P501 Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

Other hazards which do not result in classification

no data available

SECTION 3: Composition/information on ingredients

Substance

Chemical name: Methyldopa

Common names and synonyms: Methyldopa

CAS number:	555-30-6
EC number:	209-089-2
Concentration:	100%

SECTION 4: First aid measures

Description of necessary first-aid measures

If inhaled

Move the victim into fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration and consult a doctor immediately. Do not use mouth to mouth resuscitation if the victim ingested or inhaled the chemical.

Following skin contact

Take off contaminated clothing immediately. Wash off with soap and plenty of water. Consult a doctor.

Following eye contact

Rinse with pure water for at least 15 minutes. Consult a doctor.

Following ingestion

Rinse mouth with water. Do not induce vomiting. Never give anything by mouth to an unconscious person. Call a doctor or Poison Control Center immediately.

Most important symptoms/effects, acute and delayed

SYMPTOMS: Symptoms of exposure to this compound include edema (fluid retention), fever, diarrhea, mental depression, hepatic toxicity, arthralgia (with or without joint swelling), leukopenia, breast enlargement, amenorrhea, pancreatitis, myocarditis and hemolytic anemia. Parkinsonism, hypertension and galactorrhea (lactation) may occur. Reversible keratitis may also occur. Other symptoms include sedation (usually transient), asthenia, congestive heart failure, weight gain, vomiting, sialadenitis, sore or "black" tongue, distention, flatus, hyperprolactinemia, bone marrow depression, rheumatoid factor, abnormal liver function tests, pericarditis, decreased mental acuity, symptoms of cerebrovascular insufficiency, psychic disturbances including nightmares and reversible mild psychoses, rise in BUN, toxic epidermal necrosis and decreased libido. Exposure can cause headache, weakness, aggravation of angina pectoris, prolonged carotid sinus hypersensitivity, postural hypotension, bradycardia, colitis, nausea, constipation, dryness of the mouth, granulocytopenia, thrombocytopenia, positive tests for antinuclear antibody, LE cells, positive Coombs test, liver disorders including hepatitis and jaundice, lupus-like syndrome, Bell's palsy, involuntary choreoathetotic movements, dizziness, lightheadedness, paresthesias, myalgia, nasal stuffiness, skin rash and impotence. Exposure can also cause drowsiness, gastrointestinal upset, disorders of sexual function, salivary gland inflammation, uremia, liver damage (including cirrhosis), darkened urine, eosinophilia, syncope, cholestasis, eczema, oral ulceration, hyperpyrexia, ocular disturbances, febrile

reaction, joint pain, nodular skin lesions, retroperitoneal fibrosis and biliary carcinoma. There has been a case of reversible malabsorption with partial villous atrophy, inflammatory infiltrate of the mucosa and giant-cell granuloma. Other symptoms may include sleep disturbances, anxiety, blurred vision, hepatic necrosis and lichenoid and granulomatous skin reactions. It may also cause menstrual cycle changes or disorders and effects on the newborn including abnormal neonatal measures, growth statistics and biochemical and metabolic changes. ACUTE/CHRONIC HAZARDS: When heated to decomposition this compound emits toxic fumes of nitrogen oxides. (NTP, 1992)

Indication of immediate medical attention and special treatment needed, if necessary

After discontinuation of methyldopa... hemolytic anemia usually resolves within a matter of weeks. severe hemolysis may be attenuated by treatment with glucocorticoids.

SECTION 5: Firefighting measures

Suitable extinguishing media

Fires involving this material can be controlled with a dry chemical, carbon dioxide or Halon extinguisher. (NTP, 1992)

Specific hazards arising from the chemical

Flash point data for this chemical are not available; however, it is probably combustible. (NTP, 1992)

Special protective actions for fire-fighters

Wear self-contained breathing apparatus for firefighting if necessary.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

Avoid dust formation. Avoid breathing mist, gas or vapours.Avoid contacting with skin and eye. Use personal protective equipment.Wear chemical impermeable gloves. Ensure adequate ventilation.Remove all sources of ignition. Evacuate personnel to safe areas.Keep people away from and upwind of spill/leak.

Environmental precautions

Prevent further spillage or leakage if it is safe to do so. Do not let the chemical enter drains. Discharge into the environment must be avoided.

Methods and materials for containment and cleaning up

Collect and arrange disposal. Keep the chemical in suitable and closed containers for disposal. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment. Adhered or collected material should be promptly disposed of, in accordance with appropriate laws and regulations.

SECTION 7: Handling and storage

Precautions for safe handling

Handling in a well ventilated place. Wear suitable protective clothing. Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Use non-sparking tools. Prevent fire caused by electrostatic discharge steam.

Conditions for safe storage, including any incompatibilities

Methyldopa oral suspension should be stored in tight, light-resistant containers at a temperature less than 26 deg C and protected from freezing. Methyldopa tablets should be stored in well-closed containers at a temperature less than 40 deg C, preferably at 15-30 deg C.

SECTION 8: Exposure controls/personal protection

Control parameters

Occupational Exposure limit values

no data available

Biological limit values

no data available

Appropriate engineering controls

Ensure adequate ventilation. Handle in accordance with good industrial hygiene and safety practice. Set up emergency exits and the risk-elimination area.

Individual protection measures, such as personal protective equipment (PPE)

Eye/face protection

Wear tightly fitting safety goggles with side-shields conforming to EN 166(EU) or NIOSH (US).

Skin protection

Wear fire/flame resistant and impervious clothing. Handle with gloves. Gloves must be inspected prior to use. Wash and dry hands. The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Respiratory protection

If the exposure limits are exceeded, irritation or other symptoms are experienced, use a full-face respirator.

Thermal hazards

no data available

SECTION 9: Physical and chemical properties and safety characteristics

Physical state:	PHYSICAL DESCRIPTION: Colorless or almost colorless crystals or white to yellowish-white fine powder. Almost tasteless. In the sesquihydrate form. pH (saturated aqueous solution) about 5.0. (NTP, 1992)
Colour:	Minute, anhyd crystals from methanol
Odour:	ODORLESS
Melting point/freezing point:	182°C(lit.)
Boiling point or initial boiling point and boiling range:	70°C/32mmHg(lit.)
Flammability:	no data available
Lower and upper explosion limit/flammability limit:	no data available
Flash point:	52°C(lit.)
Auto-ignition temperature:	no data available

Decomposition temperature:	no data available
pH:	pH of saturated aq soln about 5.0
Kinematic viscosity:	no data available
Solubility:	Soluble in DMSO (75 mM), water, and dilute hydrochloric acid.
Partition coefficient n-octanol/water:	no data available
Vapour pressure:	no data available
Density and/or relative density:	1.403g/cm3
Relative vapour density:	no data available
Particle characteristics:	no data available

SECTION 10: Stability and reactivity

Reactivity

Very hygroscopic. Slightly water soluble. May be sensitive to prolonged exposure to air and light. The stability of aqueous solutions is markedly dependent on pH, oxygen and the amount of initial reactant. Aqueous solutions are stable for up to 50 hours in acid and neutral pH (6.2). At pH 8.0, decomposition products are formed in 3 to 5 hours. Solutions develop a red tint that becomes progressively darker (eventually forming a black precipitate).

Chemical stability

Relatively stable in both light & air

Possibility of hazardous reactions

METHYL DOPA undergoes catalytic oxygenation in the presence of magnesium, cupric, cobalt, nickel and ferric ions (NTP, 1992). A weakly acidic amino acid.

Conditions to avoid

no data available

Incompatible materials

no data available

Hazardous decomposition products

When heated to decomposition it emits toxic fumes of nitroxides.

SECTION 11: Toxicological information

Acute toxicity

Oral: LD50 Rat oral 5000 mg/kg

Inhalation: no data available

Dermal: no data available

Skin corrosion/irritation

no data available

Serious eye damage/irritation

no data available

Respiratory or skin sensitization

no data available

Germ cell mutagenicity

no data available

Carcinogenicity

no data available

Reproductive toxicity

no data available

STOT-single exposure

no data available

STOT-repeated exposure

no data available

Aspiration hazard

no data available

SECTION 12: Ecological information

Toxicity

Toxicity to fish: no data available

Toxicity to daphnia and other aquatic invertebrates: no data available

Toxicity to algae: no data available

Toxicity to microorganisms: no data available

Persistence and degradability

no data available

Bioaccumulative potential

no data available

Mobility in soil

no data available

Other adverse effects

no data available

SECTION 13: Disposal considerations

Disposal methods

Product

The material can be disposed of by removal to a licensed chemical destruction plant or by controlled incineration with flue gas scrubbing. Do not contaminate water, foodstuffs, feed or seed by storage or disposal. Do not discharge to sewer systems.

Contaminated packaging

Containers can be triply rinsed (or equivalent) and offered for recycling or reconditioning. Alternatively, the packaging can be punctured to make it unusable for other purposes and then be disposed of in a sanitary landfill. Controlled incineration with flue gas scrubbing is possible for combustible packaging materials.

SECTION 14: Transport information

UN Number

ADR/RID: UN1993 (For reference only, please check.)
IMDG: UN1993 (For reference only, please check.)
IATA: UN1993 (For reference only, please check.)

UN Proper Shipping Name

ADR/RID: FLAMMABLE LIQUID, N.O.S. (For reference only, please check.)
IMDG: FLAMMABLE LIQUID, N.O.S. (For reference only, please check.)
IATA: FLAMMABLE LIQUID, N.O.S. (For reference only, please check.)

Transport hazard class(es)

ADR/RID: 3 (For reference only, please check.)
IMDG: 3 (For reference only, please check.)
IATA: 3 (For reference only, please check.)

Packing group, if applicable

ADR/RID: I (For reference only, please check.)
IMDG: I (For reference only, please check.)
IATA: I (For reference only, please check.)

Environmental hazards

ADR/RID: No
IMDG: No
IATA: No

Special precautions for user

no data available

Transport in bulk according to IMO instruments

no data available

SECTION 15: Regulatory information

Safety, health and environmental regulations specific for the product in question

European Inventory of Existing Commercial Chemical Substances (EINECS)

Listed.

EC Inventory

Listed.

United States Toxic Substances Control Act (TSCA) Inventory

Listed.

China Catalog of Hazardous chemicals 2015

Not Listed.

New Zealand Inventory of Chemicals (NZIoC)

Listed.

(PICCS)

Not Listed.

Vietnam National Chemical Inventory

Listed.

IECSC)

Not Listed.

Korea Existing Chemicals List (KECL)

Listed.

SECTION 16: Other information

Abbreviations and acronyms

CAS: Chemical Abstracts Service

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road

RID: Regulation concerning the International Carriage of Dangerous Goods by Rail

IMDG: International Maritime Dangerous Goods

IATA: International Air Transportation Association

TWA: Time Weighted Average

STEL: Short term exposure limit

LC50: Lethal Concentration 50%

LD50: Lethal Dose 50%

EC50: Effective Concentration 50%

References

IPCS - The International Chemical Safety Cards (ICSC), website: http://www.ilo.org/dyn/icsc/showcard.home

HSDB - Hazardous Substances Data Bank, website: https://toxnet.nlm.nih.gov/newtoxnet/hsdb.htm

IARC - International Agency for Research on Cancer, website: http://www.iarc.fr/

eChemPortal - The Global Portal to Information on Chemical Substances by OECD, website: http://www.echemportal.org/echemportal/index?pageID=0&request_locale=en

CAMEO Chemicals, website: http://cameochemicals.noaa.gov/search/simple

ChemIDplus, website: http://chem.sis.nlm.nih.gov/chemidplus/chemidlite.jsp

ERG - Emergency Response Guidebook by U.S. Department of Transportation, website: http://www.phmsa.dot.gov/hazmat/library/erg

Germany GESTIS-database on hazard substance, website: http://www.dguv.de/ifa/gestis/gestis-stoffdatenbank/index-2.jsp

ECHA - European Chemicals Agency, website: https://echa.europa.eu/