Chemical Safety Data Sheet MSDS / SDS

5-aminosalicylic acid 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: 5-aminosalicylic acid

CAS: 89-57-6

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

Skin irritation, Category 2
Skin sensitization, Category 1

Eye irritation, Category 2
Specific target organ toxicity – single exposure, Category 3

GHS label elements, including precautionary statements

Pictogram(s)

Signal word Warning

Hazard statement(s)

H315 Causes skin irritation
H317 May cause an allergic skin reaction
H319 Causes serious eye irritation
H335 May cause respiratory irritation

Precautionary statement(s)

Prevention

P264 Wash ... thoroughly after handling.
P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection/...
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
P272 Contaminated work clothing should not be allowed out of the workplace.
P271 Use only outdoors or in a well-ventilated area.

Response

P302+P352 IF ON SKIN: Wash with plenty of water/...
P321 Specific treatment (see ... on this label).
P332+P317 If skin irritation occurs: Get medical help.
P362+P364 Take off contaminated clothing and wash it before reuse.
P333+P317 If skin irritation or rash occurs: Get medical help.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P319 Get medical help if you feel unwell.

Storage

P403+P233 Store in a well-ventilated place. Keep container tightly closed.
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:	5-aminosalicylic acid
Common names and synonyms:	5-aminosalicylic acid
CAS number:	89-57-6
EC number:	201-919-1
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 acute intolerance syndrome characterized by cramping, acute abdominal pain and discomfort, and bloody diarrhea. It may also cause headache, rash, gas (flatulence), nausea, flu, tiredness, weakness, malaise, fatigue, cold, sore throat, leg pain, joint pain, dizziness, bloating, back pain, hemorrhoids, itching, rectal pain, constipation, hair loss, peripheral edema, urinary burning, rectal soreness and burning, asthenia and insomnia. Other symptoms include fever, gastrointestinal problems, anorexia, epigastric pain, skin eruptions of various types, agranulocytosis, leukopenia, eosinophilia, lymphocytosis, atypical mononucleosis syndrome, thrombocytopenia and acute hemolytic anemia. Symptoms of exposure to a related compound include pruritus, erythematous macular or bullous eruptions, acidosis, hypokalemia, crystalluria, vomiting, hepatic necrosis, leukocytosis, laryngeal edema, methemoglobinemia and thyroid suppression. Other symptoms include allergic reactions, gastrointestinal irritation and prolonged prothrombin times. ACUTE/CHRONIC HAZARDS: This compound may be harmful by inhalation, ingestion or skin absorption. It may cause irritation. When heated to decomposition it emits toxic fumes of carbon monoxide, carbon dioxide and nitrogen oxides. (NTP, 1992)

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

To decrease absorption: ... Activated charcoal may also be administered. Supportive care: Fluid and electrolyte imbalance should be corrected by the administration of appropriate intravenous therapy. Vital functions should be monitored and supported.

SECTION 5: Firefighting measures

Suitable extinguishing media

Fires involving this material can be controlled with a dry chemical, carbon dioxide or Halon extinguisher. A water spray may also be used. (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

Commercially available oral mesalamine delayed-release tablets should be stored at a controlled room temperature of 20-25 deg C, while the commercially available oral extended-release capsules should be stored at 25 deg C but may be exposed to temperatures ranging from 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:	Solid. Powder.
Colour:	Purplish-tan.
Odour:	no data available
Melting point/freezing point:	270 °C. Atm. press.:Ca. 1 atm.
Boiling point or initial boiling point and boiling range:	346 °C. Atm. press.:1 atm.
Flammability:	no data available

Lower and upper explosion limit/flammability limit:	no data available
Flash point:	280 °C. Atm. press.: 1 atm.
Auto-ignition temperature:	> 280 °C. Atm. press.: 1 atm.
Decomposition temperature:	no data available
pH:	no data available
Kinematic viscosity:	no data available
Solubility:	less than 1 mg/mL at 70° F (NTP, 1992)
Partition coefficient n-octanol/water:	log Pow = 0.98. Temperature: 25 °C. Remarks: QSAR.
Vapour pressure:	Ca. 0 Pa. Temperature: 25 °C.
Density and/or relative density:	> 1 g/cm3. Temperature: 25 °C.
Relative vapour density:	no data available
Particle characteristics:	no data available

SECTION 10: Stability and reactivity

Reactivity

Sensitive to moisture. Water insoluble.

Chemical stability

Mesalamine is unstable in the presence of water and light, since oxidation and, to a lesser extent, light-catalyzed degradation of the drug occur.

Possibility of hazardous reactions

5-AMINOSALICYLIC ACID is incompatible with acids, acid chlorides, acid anhydrides, chloroformates and strong oxidizers. (NTP, 1992)

Conditions to avoid

no data available

Incompatible materials

no data available

Hazardous decomposition products

no data available

SECTION 11: Toxicological information

Acute toxicity

Oral: LD50 - rat (male/female) - 2 800 mg/kg bw.

Inhalation: no data available

Dermal: LD50 - rabbit - > 5 000 mg/kg bw.

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: LC50 - 155 mg/L - 96 h.

Toxicity to daphnia and other aquatic invertebrates: LC50 - Daphnia sp. - 12 mg/L - 48 h.

Toxicity to algae: EC50 - 66 mg/L - 96 h.

Toxicity to microorganisms: IGC50 - Tetrahymena pyriformis - 64.34 mg/L - 48 h.

Persistence and degradability

ANAEROBIC: Mesalamine, present at 250 mg/L, produced 95.6% methane following a lag phase of 65 days using 2-nitrophenol-adapted sludge in batch assays conducted in 120 ml glass serum flasks and is considered completely biodegradable under anaerobic conditions(1). Mesalamine was completely degraded by a mesophilic sludge in 30 days (mesophilic granular sludge from a full-scale UASB reactor treating chemical industry wastewater of Shell Nederland Chemie at Moerdijk, The Netherlands, VSS concn - 25.5 g/L; specific aceticlastic activity - 0.3 COD/L/g VSS, 30 deg C) following a 20-day lag period(2). It was also completely degraded

using a mesophilic floccular sludge from a lab-scale UASB reactor treating cattle manure wastewater - VSS concn 20.5 g/L; specific aceticlastic activity - 0.05 to 0.06 g COD/L/g VSS, so deg C; however, specific incubation and acclimation details were not provided(2). Degradation using a thermophilic sludge was 100% in 48 days following a 34 day lag period - full-scale CSTR reactor digesting primary and secondary sludges at Kur'yanovskaya municipal aeration station, Moscow, Russia - VSS concn 20.5 g/L; specific aceticlastic activity 0.1 g COD/L g VSS, 55 deg C(2).

Bioaccumulative potential

An estimated BCF of 3 was calculated in fish for mesalamine(SRC), using an estimated log Kow of 0.98(1) and a regression-derived equation(2). According to a classification scheme(3), this BCF suggests the potential for bioconcentration in aquatic organisms is low(SRC).

Mobility in soil

Using a structure estimation method based on molecular connectivity indices(1), the Koc of mesalamine can be estimated to be 10(SRC). According to a classification scheme(2), this estimated Koc value suggests that mesalamine is expected to have very high mobility in soil. A predicted Kd value of 1.37 calculated for sludge samples in the UK, suggests that adsorption to sludge is low(3). Estimated pKa values of 2.09, 5.26 and 13.64(4) indicate that this compound will dissociate to the zwitterion form in the environment(SRC).

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: Not dangerous goods. (For reference only, please check.)
IMDG: Not dangerous goods. (For reference only, please check.)
IATA: Not dangerous goods. (For reference only, please check.)

UN Proper Shipping Name

ADR/RID: Not dangerous goods. (For reference only, please check.)
IMDG: Not dangerous goods. (For reference only, please check.)
IATA: Not dangerous goods. (For reference only, please check.)

Transport hazard class(es)

ADR/RID: Not dangerous goods. (For reference only, please check.)
IMDG: Not dangerous goods. (For reference only, please check.)
IATA: Not dangerous goods. (For reference only, please check.)

Packing group, if applicable

ADR/RID: Not dangerous goods. (For reference only, please check.)
IMDG: Not dangerous goods. (For reference only, please check.)
IATA: Not dangerous goods. (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)

Listed.

Vietnam National Chemical Inventory

Listed.

IECSC)

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/