

SAFETY DATA SHEETS

According to the UN GHS revision 8

Version: 1.0

Creation Date: July 15, 2019

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1. Identification

1.1 GHS Product identifier

Product name Salicylic acid

1.2 Other means of identification

Other names

1.3 Recommended use of the chemical and restrictions on use

Identified uses Food additives -> Flavoring Agents

Uses advised against no data available

1.4 Supplier's details

Company Target Molecule Corp.

Address Suite 260, 36 Washington Street, Wellesley Hills, Massachusetts, USA

Tel/Fax +1 (857) 239-0968

1.5 Emergency phone number

Emergency phone number 400-821-2233

Service hours Monday to Friday, 9am-5pm (Standard time zone: UTC/GMT +8 hours).

2. Hazard identification

2.1 Classification of the substance or mixture

Acute toxicity - Oral, Category 4

Serious eye damage, Category 1

2.2 GHS label elements, including precautionary statements

Pictogram(s)



Signal word Danger

Hazard statement(s)
H302 Harmful if swallowed
H318 Causes serious eye damage

Precautionary statement(s)

Prevention
P264 Wash ... thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P280 Wear protective gloves/protective clothing/eye protection/face protection.

Response
P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor/...if you feel unwell.
P330 Rinse mouth.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 Immediately call a POISON CENTER/doctor/...

Storage none

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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.

2.3 Other hazards which do not result in classification

no data available

3. Composition/information on ingredients

3.1 Substances

Chemical name	Common names and synonyms	CAS number	EC number	Concentration
Salicylic acid	Salicylic acid	69-72-7	200-712-3	100%

4. First-aid measures

4.1 Description of necessary first-aid measures

General advice

Medical attention is required. Consult a doctor. Show this safety data sheet (SDS) to the doctor in attendance.

If inhaled

Fresh air, rest. Refer for medical attention.

Following skin contact

Remove contaminated clothes. Rinse and then wash skin with water and soap.

Following eye contact

First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then refer for medical attention.

Following ingestion

Rinse mouth. Induce vomiting (ONLY IN CONSCIOUS PERSONS!). Refer for medical attention .

4.2 Most important symptoms/effects, acute and delayed

Inhalation of dust irritates nose and throat. Vomiting may occur spontaneously if large amounts are swallowed. Contact with eyes causes irritation, marked pain, and corneal injury which should heal. Prolonged or repeated skin contact may cause marked irritation or even a mild burn. (USCG, 1999)

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

Management of acute salicylic acid poisoning includes prevention of absorption, correction of acid-base, fluid and electrolyte imbalance and enhancing of the drug elimination. Respiratory alkalosis needs no specific treatment, but severe acidosis requires at least a partial correction with sodium bicarbonate. Hypokalemia may be aggravated by administration of sodium bicarbonate. Thus, potassium may need repletion. However, if large amounts of water and electrolytes are given to the patient, the sodium and water load may precipitate pulmonary edema. Sedative and depressive drugs must be avoided. Tetany may be corrected with the use of calcium gluconate. Due to the delayed effects of salicylate overdose, the patient must be kept under observation for at least 24 hours.

5. Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media

Water, foam, carbon dioxide, dry chem

5.2 Specific hazards arising from the chemical

Special Hazards of Combustion Products: Irritating vapors of unburned material and phenol may form in fire. Behavior in Fire: Sublimes and forms vapor or dust that may explode (USCG, 1999)

5.3 Special protective actions for fire-fighters

Use water spray, carbon dioxide, powder. In case of fire: keep drums, etc., cool by spraying with water.

6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal protection: particulate filter respirator adapted to the airborne concentration of the substance. Sweep spilled substance into covered containers. If appropriate, moisten first to prevent dusting.

6.2 Environmental precautions

Personal protection: P2 filter respirator for harmful particles. Sweep spilled substance into covered containers. If appropriate, moisten first to prevent dusting.

6.3 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.

7. Handling and storage

7.1 Precautions for safe handling

NO open flames. Closed system, dust explosion-proof electrical equipment and lighting. Prevent deposition of dust. 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.

7.2 Conditions for safe storage, including any incompatibilities

Separated from strong oxidants. Salicylic acid should be stored in well-closed containers. Salicylic acid collodion should be stored in tight containers at 15-30 deg C. Because the collodion is flammable, it should not be stored near heat or an open flame.

Salicylic acid plaster should be stored in well-closed containers, preferably at 15-30 deg C. The Trans-Ver-Sal plaster should be stored at a temperature less than 37.8 deg C.

Recommended storage temperature: Store at -20°C

8. Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure limit values

no data available

8.2 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.

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

Eye/face protection

Wear safety goggles or eye protection in combination with breathing protection.

Skin protection

Protective gloves.

Respiratory protection

Use local exhaust or breathing protection.

Thermal hazards

no data available

9. Physical and chemical properties

Physical state	Solid. Powder.
Colour	White.
Odour	SYNTHETIC ACID IS ODORLESS
Melting point/ freezing point	159 °C.
Boiling point or initial boiling point and boiling range	256 °C. Remarks:No data on atm pressure.
Flammability	Combustible.
Lower and upper explosion limit / flammability limit	Lower 1.1% @ 392 deg F (200 deg C)
Flash point	157°C

Auto-ignition temperature	549 °C. Remarks:Atm. press. unknown.
Decomposition temperature	no data available
pH	pH of saturated solution: 2.4
Kinematic viscosity	no data available
Solubility	In water: 1 800 mg/L. Temperature:20 °C. Remarks:PH unknown..Diethylether.
Partition coefficient n-octanol/water	log Pow = 2.25. Temperature:25 °C. Remarks:PH unknown.
Vapour pressure	0 hPa. Temperature:25 °C. Remarks:From Stephenson and Malanowski 1987.
Density and/or relative density	1.44. Temperature:20 °C.
Relative vapour density	4.8 (vs air)
Particle characteristics	no data available

10. Stability and reactivity

10.1 Reactivity

The solution in water is a weak acid. Reacts with strong oxidants.

10.2 Chemical stability

Gradually discolors in sunlight

10.3 Possibility of hazardous reactions

SLIGHT WHEN EXPOSED TO HEAT OF FLAME; CAN REACT WITH OXIDIZING MATERIALSDust explosion possible if in powder or granular form, mixed with air.SALICYLIC ACID is a carboxylic acid. Carboxylic acids donate hydrogen ions if a base is present to accept them. They react in this way with all bases, both organic (for example, the amines) and inorganic. Their reactions with bases, called "neutralizations", are accompanied by the evolution of substantial amounts of heat. Neutralization between an acid and a base produces water plus a salt. Carboxylic acids with six or fewer carbon atoms are freely or moderately soluble in water; those with more than six carbons are slightly soluble in water. Soluble carboxylic acid dissociate to an extent in water to yield hydrogen ions. The pH of solutions of carboxylic acids is therefore less than 7.0. Many insoluble carboxylic acids react rapidly with aqueous solutions containing a chemical base and dissolve as the neutralization generates a soluble salt. Carboxylic acids in aqueous solution and liquid or molten carboxylic acids can react with active metals to form gaseous hydrogen and a metal salt. Such reactions occur in principle for solid carboxylic acids as well, but are slow if the solid acid remains dry. Even "insoluble" carboxylic acids may absorb enough water from the air and dissolve sufficiently in it to corrode or dissolve iron, steel, and aluminum parts and containers. Carboxylic acids, like other acids, react with cyanide salts to generate gaseous hydrogen cyanide. The reaction is slower for dry, solid carboxylic acids. Insoluble carboxylic acids react with solutions of cyanides to cause the release of gaseous hydrogen cyanide. Flammable and/or toxic gases and heat are generated by the reaction of carboxylic acids with diazo compounds, dithiocarbamates, isocyanates, mercaptans, nitrides, and sulfides. Carboxylic acids, especially in aqueous solution, also react with sulfites, nitrites, thiosulfates (to give H₂S and SO₃), dithionites (SO₂), to generate flammable and/or toxic gases and heat. Their reaction with carbonates and bicarbonates generates a harmless gas (carbon dioxide) but still heat. Like other organic compounds, carboxylic acids can be oxidized by strong oxidizing agents and reduced by strong reducing agents. These reactions generate heat. A wide variety of products is possible. Like other acids, carboxylic acids may initiate polymerization reactions; like other acids, they often catalyze (increase the rate of) chemical reactions.

10.4 Conditions to avoid

no data available

10.5 Incompatible materials

Incompatibility: Iron salts, spirit nitrous ether, lead acetate, iodine.

10.6 Hazardous decomposition products

When heated to decomp it emits acrid smoke and irritating fumes.

11. Toxicological information

Acute toxicity

- Oral: LD50 - rat (male) - 891 mg/kg bw.
- Inhalation: LCLo - rat (female) - > 700 mg/m³ air (nominal).
- Dermal: LD50 - rat (male/female) - > 2 000 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

The substance is irritating to the eyes, skin and respiratory tract. The substance may cause effects on the central nervous system and acid-base balance in the body. This may result in delirium and tremors.

STOT-repeated exposure

Repeated or prolonged contact with skin may cause dermatitis.

Aspiration hazard

Evaporation at 20°C is negligible; a nuisance-causing concentration of airborne particles can, however, be reached quickly when dispersed.

12. Ecological information

12.1 Toxicity

- Toxicity to fish: LC50 - *Pimephales promelas* - 1 370 mg/L - 96 h.
- Toxicity to daphnia and other aquatic invertebrates: EC50 - *Daphnia magna* - 870 mg/L - 48 h.
- Toxicity to algae: EC50 - *Desmodesmus subspicatus* (previous name: *Scenedesmus subspicatus*) - > 100 mg/L - 72 h.
- Toxicity to microorganisms: EC10 - *Pseudomonas putida* - 140 mg/L - 16 h.

12.2 Persistence and degradability

AEROBIC: Salicylic acid biodegraded rapidly under differing sets of agricultural practices in Pahokee muck soil(1). In October, soil planted to grass, fallow soil, and soil with sugar cane cover at 25 deg C, 43, 17 and 21%, respectively, of the radiolabeled salicylic acid was emitted as CO₂/cu cm of soil/min(1). In January, 26, 7 and 11%, respectively, of the starting material was emitted as CO₂/cu cm of soil/min(1).[(1) Tate RL III; Appl Environ Microbiol 37: 1085-90 (1979)] Full text: PMC243358

12.3 Bioaccumulative potential

An estimated BCF of 3 was calculated for salicylic acid(SRC), using a log Kow of 2.26(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).

12.4 Mobility in soil

The Koc of salicylic acid is estimated as 404(SRC), using a log Kow of 2.26(1) and a regression-derived equation(2). According to a classification scheme(3), this estimated Koc value suggests that salicylic acid is expected to have moderate mobility in soil. The pKa of salicylic acid is 2.98(4), indicating that this compound will primarily exist in anion form in the environment and anions generally do not adsorb more strongly to soils containing organic carbon and clay than their neutral counterparts(5).

12.5 Other adverse effects

no data available

13. Disposal considerations

13.1 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.

14. Transport information

14.1 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.)

14.2 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.)

14.3 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.)

14.4 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.)

14.5 Environmental hazards

ADR/RID: No

IMDG: No

IATA: No

14.6 Special precautions for user

no data available

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

no data available

15. Regulatory information

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

Chemical name	Common names and synonyms	CAS number	EC number
Salicylic acid	Salicylic acid	69-72-7	200-712-3
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.
Philippines Inventory of Chemicals and Chemical Substances (PICCS)			Listed.
Vietnam National Chemical Inventory			Listed.
Chinese Chemical Inventory of Existing Chemical Substances (China IECSC)			Listed.
Korea Existing Chemicals List (KECL)			Listed.

16. Other information

Information on revision

Creation Date

July 15, 2019

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/>

Other Information

Volatility becomes noticeable above 50-60°C. Anyone who has shown aspirin sensitization should never come in contact with this substance.

Disclaimer: 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. We as supplier shall not be held liable for any damage resulting from handling or from contact with the above product.