

SAFETY DATA SHEETS

According to the UN GHS revision 9

Version: 1.2
Creation Date: July 15, 2019
Revision Date: August 08, 2025

SECTION 1: Identification

1.1 GHS Product identifier

Product name 2,4,5-T-1-Butyl Ester

1.2 Other means of identification

Product number CCPD100904

Other names butyl (2,4,5-trichlorophenoxy)acetate; Acetic acid, (2,4,5-trichlorophenoxy)-, butyl ester; butyl 2-(2,4,5-trichlorophenoxy)acetate

1.3 Recommended use of the chemical and restrictions on use

Identified uses For laboratory and Industrial use only.

Uses advised against no data available

1.4 Supplier's details

Company CATO Research Chemicals Inc.

Address 3/F,Building B,No.179 BASIGO, Guangpu Rd East,Huangpu Dist,Guangzhou

Telephone +86-20-81960175

1.5 Emergency phone number

Emergency phone number +86-20-81960175

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

SECTION 2: Hazard identification

2.1 Classification of the substance or mixture

no data available

2.2 GHS label elements, including precautionary statements

Pictogram(s) no data available

Signal word no data available

Hazard statement(s) no data available

Precautionary statement(s)

Prevention no data available

Response no data available

Storage no data available

Disposal no data available

2.3 Other hazards which do not result in classification

no data available

SECTION 3: Composition/information on ingredients

3.1 Substances

Chemical name	Common names and synonyms	CAS number	EC number	Concentration
2,4,5-T-1-Butyl Ester	Butyl 2,4,5-trichlorophenoxyacetate	93-79-8	202-277-5	100%

SECTION 4: First-aid measures

4.1 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.

4.2 Most important symptoms/effects, acute and delayed

SYMPTOMS: Symptoms of exposure to this compound may include skin and eye irritation. ACUTE/CHRONIC HAZARDS: This compound may cause irritation on contact. When heated to decomposition it emits toxic fumes. (NTP, 1992)

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

Absorption, Distribution and Excretion

The chlorophenoxy compounds are absorbed across the gut wall, lung, & the skin. they are not significantly fat storable. excretion occurs within hours, or at most days, primarily in the urine. chlorophenoxy cmpd

SECTION 5: Fire-fighting measures

5.1 Suitable extinguishing media

Extinguish fire using agent suitable for type of surrounding fire. 2,4,5-T amine, ester, or salt

5.2 Specific hazards arising from the chemical

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

5.3 Special protective actions for fire-fighters

Wear self-contained breathing apparatus for firefighting if necessary.

SECTION 6: Accidental release measures

6.1 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.

6.2 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.

6.3 Methods and materials for containment and cleaning up

Land spill: Dig a pit, pond, lagoon, holding area to contain liquid or solid material. /SRP: If time permits, pits, ponds, lagoons, soak holes, or holding areas should be sealed with an impermeable flexible membrane liner. / Cover solids with a plastic sheet to prevent dissolving in rain or fire fighting water. 2,4,5-T amine, ester, or salt

SECTION 7: Handling and storage

7.1 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.

7.2 Conditions for safe storage, including any incompatibilities

Store the container tightly closed in a dry, cool and well-ventilated place. Store apart from foodstuff containers or incompatible materials.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure limit values

no data available

Biological 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 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: Clear colorless liquid or white solid. (NTP, 1992)
Colour	no data available
Odour	no data available
Melting point/freezing point	82 to 86° F (NTP, 1992)
Boiling point or initial boiling point and boiling range	371.9°C at 760 mmHg
Flammability	no data available
Lower and upper explosion limit/flammability limit	no data available
Flash point	142.2°C
Auto-ignition temperature	no data available
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 Kow= 4.81.
Vapour pressure	no data available
Density and/or relative density	1.324g/cm ³
Relative vapour density	no data available
Particle characteristics	no data available

SECTION 10: Stability and reactivity

10.1 Reactivity

no data available

10.2 Chemical stability

no data available

10.3 Possibility of hazardous reactions

They will burn, though they may take some effort to ignite. /2,4,5-T amine, ester, or salt/2,4,5-T, N-BUTYL ESTER is an ester of a chlorinated organic acid. May react exothermically with acids to generate butyl alcohol and 2,4,5-trichlorophenoxyacetic. Strong oxidizing acids may cause a reaction that is sufficiently exothermic to ignite the reaction products. Heat may also be generated with caustic solutions.

10.4 Conditions to avoid

no data available

10.5 Incompatible materials

no data available

10.6 Hazardous decomposition products

Hydrogen chloride gas and other irritating fumes may form during fires. 2,4,5-T esters

SECTION 11: Toxicological information

Acute toxicity

- Oral: LD50 Rat female oral 481 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

Classification of carcinogenicity: 1) evidence in humans: limited; Overall summary evaluation of carcinogenic risk to humans is Group 2B: The agent is possibly carcinogenic to humans. Chlorophenoxy herbicides; From table

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

12.1 Toxicity

- Toxicity to fish: LC50 *Lepomis macrochirus* (bluegill) 12 mg/l/24 hr (50% emulsion of 2,4,5-T esters) /Conditions of bioassay not given
- Toxicity to daphnia and other aquatic invertebrates: no data available
- Toxicity to algae: no data available
- Toxicity to microorganisms: no data available

12.2 Persistence and degradability

no data available

12.3 Bioaccumulative potential

No data on the bioconcentration of the n-butyl ester of 2,4,5-T could be found in the literature. From the log of its octanol/water partition coefficient, 4.8(1), one would estimate a log BCF of 3.43(2). Because of hydrolysis, this bioconcentration potential must be viewed as an upper limit(SRC).

12.4 Mobility in soil

Concentrations of 2,4-D and 2,4,5-T in soils and leachates ... were monitored for up to 28 months to characterize the patterns of herbicide mobility in soils under climatic conditions of the Palouse region of the Pacific Northwest (USA). ... Soils from Washington, Wyoming, or Mississippi ... treated with 1120 or 5600 kg/ha of a 1:1 mixture of 2,4-D and 2,4,5-T n-butyl esters in 1976, 1977, or 1978. The winter of 1976-1977 was mild and relatively dry, and little leachate could be collected. Subsequent winters were wet and the soil columns were saturated by the following springs. 2,4-D (< 1 ppm) was found in leachates from Washington and Wyoming soils receiving the herbicide application in 1976 or 1977 and > 30 ppm was found in leachates from Washington soil treated in 1978. 2,4-D (> 10 ppm) was found in leachates from the acidic Mississippi soil receiving high rate of herbicide application in 1977 or 1978. Concentrations of 2,4,5-T in the same leachates were higher for the Washington and Wyoming soils, but lower (than corresponding concentrations of 2,4-D) for the Mississippi soil. In all cases, 96-99% of the undegraded herbicides ... remained in the 0-10 cm soil layer after 2-3 winters, and only 0.14-1.65% of the 2,4-D and 0.33-3.7% of the 2,4,5-T remaining ... were present in the 10-30 cm depths. Mobility characterization by soil TLC showed that the ester form of both herbicides was relatively immobile, the acid form was less mobile in the Mississippi soil than in Washington and Wyoming soils and 2,4-D was slightly more mobile than 2,4,5-T under corresponding conditions.

12.5 Other adverse effects

no data available

SECTION 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.

SECTION 14: Transport information

14.1 UN Number

ADR/RID: no data available

IMDG: no data available

IATA: no data available

14.2 UN Proper Shipping Name

ADR/RID: no data available

IMDG: no data available

IATA: no data available

14.3 Transport hazard class(es)

ADR/RID: no data available

IMDG: no data available

IATA: no data available

14.4 Packing group, if applicable

ADR/RID: no data available

IMDG: no data available

IATA: no data available

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 IMO instruments

no data available

SECTION 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
Butyl 2,4,5-trichlorophenoxyacetate	Butyl 2,4,5-trichlorophenoxyacetate	93-79-8	202-277-5
European Inventory of Existing Commercial Chemical Substances (EINECS)			Listed.
EC Inventory			Listed.
United States Toxic Substances Control Act (TSCA) Inventory			Not Listed.
China Catalog of Hazardous chemicals 2015			Not Listed.
New Zealand Inventory of Chemicals (NZIoC)			Not Listed.
Philippines Inventory of Chemicals and Chemical Substances (PICCS)			Not Listed.
Vietnam National Chemical Inventory			Not Listed.
Chinese Chemical Inventory of Existing Chemical Substances (China IECSC)			Not Listed.
Korea Existing Chemicals List (KECL)			Not Listed.

SECTION 16: Other information

Information on revision

Creation Date July 15, 2019
Revision Date August 08, 2025

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/>

Any questions regarding this SDS, Please send your inquiry to info@cato-chem.com



CATO Research Chemicals Inc.

3/F, Building B, No. 179 BASIGO, Guangpu Rd East, Huangpu Dist, Guangzhou

Web: www.cato-chem.com

Tel: +86-20-81960175 Fax: +86-20-81717260 E-mail: info@cato-chem.com

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