

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 Isodrin

1.2 Other means of identification

Product number CCPD102141
Other names -

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

Acute toxicity - Category 2, Oral
Acute toxicity - Category 1, Dermal
Acute toxicity - Category 2, Inhalation
Hazardous to the aquatic environment, short-term (Acute) - Category Acute 1
Hazardous to the aquatic environment, long-term (Chronic) - Category Chronic 1

2.2 GHS label elements, including precautionary statements

Pictogram(s)



Signal word

Danger

Hazard statement(s)

H300 Fatal if swallowed
H310 Fatal in contact with skin
H330 Fatal if inhaled
H410 Very toxic to aquatic life with long lasting effects

Precautionary statement(s)

Prevention

P264 Wash ... thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P262 Do not get in eyes, on skin, or on clothing.
P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection/...
P260 Do not breathe dust/fume/gas/mist/vapours/spray.
P271 Use only outdoors or in a well-ventilated area.
P284 [In case of inadequate ventilation] wear respiratory protection.
P273 Avoid release to the environment.

Response	P301+P316 IF SWALLOWED: Get emergency medical help immediately. P321 Specific treatment (see ... on this label). P330 Rinse mouth. P302+P352 IF ON SKIN: Wash with plenty of water/... P316 Get emergency medical help immediately. P361+P364 Take off immediately all contaminated clothing and wash it before reuse. P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing. P320 Specific treatment is urgent (see ... on this label). P391 Collect spillage.
Storage	P405 Store locked up. P403+P233 Store in a well-ventilated place. Keep container tightly closed.
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

SECTION 3: Composition/information on ingredients

3.1 Substances

Chemical name	Common names and synonyms	CAS number	EC number	Concentration
Isodrin	(1 α ,4 α ,4a β ,5 β ,8 β 8a β)-1,2,3,4,10,10-hexachloro-1,4,4a,5,8,8a-hexahydro-1,4:5,8-dimethanonaphthalene	465-73-6	207-366-2	100%

SECTION 4: First-aid measures

4.1 Description of necessary first-aid measures

If inhaled

Fresh air, rest. Refer for medical attention.

Following skin contact

Remove contaminated clothes. Rinse and then wash skin with water and soap. Refer for medical attention.

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

Give a slurry of activated charcoal in water to drink. Do NOT induce vomiting. Rest. Refer for medical attention.

4.2 Most important symptoms/effects, acute and delayed

Excerpt from ERG Guide 131 [Flammable Liquids - Toxic]: TOXIC; may be fatal if inhaled, ingested or absorbed through skin. Inhalation or contact with some of these materials will irritate or burn skin and eyes. Fire will produce irritating, corrosive and/or toxic gases. Vapors may cause dizziness or suffocation. Runoff from fire control or dilution water may cause pollution. (ERG, 2016)

Poisoning by aldrin usually involves convulsions due to its effects on the central nervous system. Reproductive effects and liver effects have also been reported. It is classified as an extremely toxic chemical. Probable oral lethal dose for humans is between 7 drops and one oz. for a 150 lb. adult human. Conflicting reports of carcinogenicity of this compound remain an area of controversy. Similar chemically and toxicologically to dieldrin. (EPA, 1998)

It is classified as extremely toxic. Probable oral lethal dose for humans is 5-50 mg/kg or between 7 drops and 1 teaspoonful for a 70 kg (150 lb.) person. It causes renal damage and hyperactivity of sympathetic nervous system. (EPA, 1998)

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

Treatment is symptomatic and supportive. Oils should not be used as either cathartics or dermal cleansing agents, as they increase absorption. Gastric lavage and use of activated charcoal and sodium sulfate are indicated for ingestion. If dermal exposure occurred, contaminated clothes should be removed, and the skin should be thoroughly cleansed with soap and water. Management of seizures in both children and adults is with Valium or phenobarbital. Respiratory depression and even respiratory arrest especially with concomitant use of Valium and phenobarbital in children, may occur. These drugs preferably should be used only in critical care areas where emergency endotracheal intubation can be performed. ... Epinephrine can not be utilized in patients with organochlorine poisoning, as the organochlorines induce myocardial irritability and ventricular arrhythmias may occur. However, dopamine may be necessary in the event of hypotension unresponsive to fluid administration, and epinephrine may be necessary in the event of cardiopulmonary arrest. ... In a critically ill patient with unknown insecticide exposure, a trial of atropine and pralidoxime should not be withheld until the etiologic agent is discovered, for the use of these agents may prove life-saving in organophosphate poisoning. Atropine must be used with caution, as it can cause ventricular irritability, especially when a myocardial irritant such as an organochlorine is present. ... Hematologic, hepatic (especially with endrin, which is markedly hepatotoxic), and renal studies as well as cardiopulmonary monitoring should be carried out in acute intoxication from lindane or other organochlorines for at least 48 to 72 hr. Long term hematologic follow-up is necessary for the patient with lindane intoxication. As the carrier for these agents may be xylene or a petroleum distillate, management also must include observation and treatment for these entities. Organochlorine pesticides

SECTION 5: Fire-fighting measures

5.1 Suitable extinguishing media

Fire Fighting: Self-contained breathing apparatus with a full facepiece operated in pressure-demand or other positive pressure mode.
Endrin

5.2 Specific hazards arising from the chemical

Excerpt from ERG Guide 131 [Flammable Liquids - Toxic]: HIGHLY FLAMMABLE: Will be easily ignited by heat, sparks or flames. Vapors may form explosive mixtures with air. Vapors may travel to source of ignition and flash back. Most vapors are heavier than air. They will spread along ground and collect in low or confined areas (sewers, basements, tanks). Vapor explosion and poison hazard indoors, outdoors or in sewers. Those substances designated with a (P) may polymerize explosively when heated or involved in a fire. Runoff to sewer may create fire or explosion hazard. Containers may explode when heated. Many liquids are lighter than water. (ERG, 2016)

When heated to decomposition, it emits toxic fumes of chlorine containing compounds. Commercial solutions may contain flammable or combustible liquids. The dry powder will not burn. Container may explode in heat of fire. Avoid concentrated mineral acids, acid catalysts, acid oxidizing agents, phenols, or active metals. (EPA, 1998)

Non-Specific -- Aldrin) This material may burn but may not ignite readily. Container may explode in heat of fire. Fire and runoff from fire control water may produce irritating or poisonous gases. Material is related to aldrin. (Non-Specific -- Aldrin) When heated to decomposition it emits toxic fumes of chlorine. Unstable, reactions induced by light or acid. (EPA, 1998)

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

Do NOT wash away into sewer. Sweep spilled substance into covered sealable containers. If appropriate, moisten first to prevent dusting. Carefully collect remainder. Then store and dispose of according to local regulations. Personal protection: chemical protection suit including self-contained breathing apparatus.

6.3 Methods and materials for containment and cleaning up

A process for removing pollutants from du pont's chambers works plant in deepwater, nj is described. process calls for treatment of wastes from org chem mfr processes by neutralization & settling, followed by a combined powdered carbon-biological process.

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

Provision to contain effluent from fire extinguishing. Separated from food and feedstuffs and incompatible materials. See Chemical Dangers. Well closed. Keep in a well-ventilated room. Store in an area without drain or sewer access. Protect containers against physical damage. Store in well-ventilated, cool, dark place separated from sources of ignition. Outdoor or detached storage is preferred.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure limit values

Component	(1 α ,4 α ,4 α β ,5 β ,8 β 8 α β)-1,2,3,4,10,10-hexachloro-1,4,4a,5,8,8a-hexahydro-1,4:5,8-dimethanonaphthalene
CAS No.	465-73-6
	NIOSH considers aldrin to be a potential occupational carcinogen. NIOSH usually recommends that occupational exposures to carcinogens be limited to the lowest feasible concn. Recommended Exposure Limit: 10-hour Time-Weighted Average: 0.25 mg/cu m. Skin.

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	Aldrin, liquid is a solution in oil of aldrin, a noncombustible water-insoluble solid. Used as an insecticide. Mixed with a flammable carrier solvent.
Colour	Colorless needles
Odour	... Mild chemical odor ...
Melting point/freezing point	239-241°C(lit.)
Boiling point or initial boiling point and boiling range	384.9°C at 760 mmHg
Flammability	Noncombustible Solid, but may be dissolved in flammable liquids.
Lower and upper explosion limit/flammability limit	no data available
Flash point	186.1°C
Auto-ignition temperature	no data available
Decomposition temperature	no data available
pH	no data available
Kinematic viscosity	no data available
Solubility	0.003 % (NIOSH, 2016)
Partition coefficient n-octanol/water	Log K_{ow} = 6.50
Vapour pressure	0mmHg at 25°C
Density and/or relative density	1.73 g/cm ³
Relative vapour density	no data available
Particle characteristics	no data available

SECTION 10: Stability and reactivity

10.1 Reactivity

NIOSH considers aldrin to be a potential occupational carcinogen. 25 mg/cu m. Decomposes on heating. This produces toxic and corrosive fumes including hydrogen chloride. Reacts with acids and oxidants. Attacks many metals in the presence of water.

10.2 Chemical stability

Stable in presence of org & inorg bases & stable to action of hydrated metal chlorides and mild acids

10.3 Possibility of hazardous reactions

ALDRIN, LIQUID is a chlorinated diene. May be sensitive to prolonged exposure to light. Stable to heat and in the presence of inorganic and organic bases. Stable with hydrated metal chlorides and mild acids. Reacts with concentrated acids and phenols in the presence of oxidizing agents. Can react with acid catalysts, acid oxidizing agents and active metals (NTP, 1992).

10.4 Conditions to avoid

no data available

10.5 Incompatible materials

Concentrated mineral acids, active metals, acid catalysts, acid oxidizing agents, phenol.

10.6 Hazardous decomposition products

When heated to decomposition it emits toxic fumes of /hydrogen chloride/.

SECTION 11: Toxicological information

Acute toxicity

- Oral: LD50 Rat male oral 39 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

Inadequate evidence of carcinogenicity in humans. Limited evidence of carcinogenicity in animals. OVERALL EVALUATION: Group 3: The agent is not classifiable as to its carcinogenicity to humans.

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 *Anguilla rostrata* (American eel) 5 ppb/96 hr /Static bioassay
- 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

Ability of fungi isolated from soils to degrade (14)c aldrin & its metabolites was assayed in culture growth medium. penicillium metabolized parent compd or one of its metabolites. field studies performed with soils packed into pvc tubes showed that added (14)c aldrin leached fastest in soil poor in organic matter.

12.3 Bioaccumulative potential

Susceptible mosquitofish, *gambusia affinis*, experienced greater accum of aldrin in tissues than resistant mosquitofish. probable causes for resistance in decr orders of importance: implied site insensitivity; barriers to penetration; & biotransformation.

12.4 Mobility in soil

According to a classification scheme(1), a range of Koc values of 400-28,000(2), suggests that aldrin is expected to be moderately mobile to immobile in soil(SRC).

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: UN2996 (For reference only, please check.) IMDG: UN2996 (For reference only, please check.) IATA: UN2996 (For reference only, please check.)

14.2 UN Proper Shipping Name

ADR/RID: ORGANOCHLORINE PESTICIDE, LIQUID, TOXIC (For reference only, please check.) IMDG: ORGANOCHLORINE PESTICIDE, LIQUID, TOXIC (For reference only, please check.) IATA: ORGANOCHLORINE PESTICIDE, LIQUID, TOXIC (For reference only, please check.)

14.3 Transport hazard class(es)

ADR/RID: 6.1 (For reference only, please check.)

IMDG: 6.1 (For reference only, please check.)

IATA: 6.1 (For reference only, please check.)

14.4 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.)

14.5 Environmental hazards

ADR/RID: Yes

IMDG: Yes

IATA: Yes

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
(1 α ,4 α ,4 $\alpha\beta$,5 β ,8 β 8 $\alpha\beta$)-1,2,3,4,10,10-hexachloro-1,4,4a,5,8,8a-hexahydro-1,4:5,8-dimethanonaphthalene	(1 α ,4 α ,4 $\alpha\beta$,5 β ,8 β 8 $\alpha\beta$)-1,2,3,4,10,10-hexachloro-1,4,4a,5,8,8a-hexahydro-1,4:5,8-dimethanonaphthalene	465-73-6	207-366-2
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			Listed.
New Zealand Inventory of Chemicals (NZIoC)			Not Listed.
Philippines Inventory of Chemicals and Chemical Substances (PICCS)			Not Listed.
Vietnam National Chemical Inventory			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

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