

## Chemical Safety Data Sheet MSDS / SDS

## 4,4'-DDT

Revision Date:2026-03-20 Revision Number:1

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

**Product identifier**

Product name : 4,4'-DDT  
CBnumber : CB5274446  
CAS : 50-29-3  
EINECS Number : 200-024-3  
Synonyms : DDT;P,P'-DDT

**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  
Address : Building 1, Huihuang International, Shangdi 10th Street, Haidian District, Beijing  
Telephone : 010-86108875

## SECTION 2: Hazards identification

**GHS Label elements, including precautionary statements**

Symbol(GHS)



Signal word

Danger

**Precautionary statements**

P301+P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P273 Avoid release to the environment.

P260 Do not breathe dust/fume/gas/mist/vapours/spray.

P202 Do not handle until all safety precautions have been read and understood.

**Hazard statements**

H410 Very toxic to aquatic life with long lasting effects

H372 Causes damage to organs through prolonged or repeated exposure

H351 Suspected of causing cancer

## SECTION 3: Composition/information on ingredients

### Substance

Product name	: 4,4'-DDT
Synonyms	: DDT;P,P'-DDT
CAS	: 50-29-3
EC number	: 200-024-3
MF	: C <sub>14</sub> H <sub>9</sub> Cl <sub>5</sub>
MW	: 354.49

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## SECTION 4: First aid measures

### Description of first aid measures

#### General information

Immediately remove any clothing soiled by the product.

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

In case of irregular breathing or respiratory arrest provide artificial respiration.

#### After inhalation

In case of unconsciousness place patient stably in side position for transportation.

#### After skin contact

Immediately wash with water and soap and rinse thoroughly.

#### After eye contact

Rinse opened eye for several minutes under running water. Then consult a doctor.

#### After swallowing

Do not induce vomiting; immediately call for medical help.

#### Most important symptoms and effects, both acute and delayed

No further relevant information available.

#### Indication of any immediate medical attention and special treatment needed

No further relevant information available.

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## SECTION 5: Firefighting measures

### Extinguishing media

#### Suitable extinguishing agents

CO<sub>2</sub>, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

## Special hazards arising from the substance or mixture

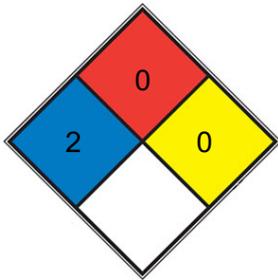
No further relevant information available.

## Advice for firefighters

## Protective equipment

No special measures required.

## NFPA 704



HEALTH 2 Intense or continued but not chronic exposure could cause temporary incapacitation or possible residual injury (e.g. [diethyl ether](#), ammonium phosphate, iodine)

FIRE 0 Materials that will not burn under typical fire conditions, including intrinsically noncombustible materials such as concrete, stone, and sand. Materials that will not burn in air when exposed to a temperature of 820 °C (1,500 °F) for a period of 5 minutes.(e.g. Carbon tetrachloride)

REACT 0 Normally stable, even under fire exposure conditions, and is not reactive with water (e.g. helium,[N2](#))

SPEC.

HAZ.

## SECTION 6: Accidental release measures

### Personal precautions, protective equipment and emergency procedures

Not required.

### Environmental precautions

Inform respective authorities in case of seepage into water course or sewage system.

Do not allow to enter sewers/ surface or ground water.

### Methods and material for containment and cleaning up

Dispose contaminated material as waste according to section 13.

### Protective Action Criteria for Chemicals

#### PAC-1

3 mg/m<sup>3</sup>

#### PAC-2

34 mg/m<sup>3</sup>

### PAC-3

210 mg/m<sup>3</sup>

#### Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

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## SECTION 7: Handling and storage

### Precautions for safe handling

Thorough dedusting.

### Information about protection against explosions and fires

No special measures required.

### Conditions for safe storage, including any incompatibilities

#### Storage

Store in accordance with information listed on the product insert.

### Requirements to be met by storerooms and receptacles

No special requirements.

### Information about storage in one common storage facility

Not required.

### Further information about storage conditions

None.

### Specific end use(s)

No further relevant information available.

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## SECTION 8: Exposure controls/personal protection

### Control parameters

Components with limit values that require monitoring at the workplace:

50-29-3 p,p'-DDT	
PEL	Long-term value: 1 mg/m <sup>3</sup> Skin
	Long-term value: 0.5 mg/m <sup>3</sup>

REL	See Pocket Guide App. A
TLV	Long-term value: 1 mg/m <sup>3</sup> A3

### **Additional information**

The lists that were valid during the creation were used as basis.

### **Exposure controls**

#### **Appropriate engineering controls**

No further data; see section 7.

#### **Personal protective equipment**

#### **General protective and hygienic measures**

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Store protective clothing separately.

Avoid contact with the eyes and skin.

#### **Breathing equipment**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

#### **Protection of hands**

Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

#### **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

#### **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

#### **Eye protection**

Tightly sealed goggles

## **SECTION 9: Physical and chemical properties**

### **Information on basic physicochemical properties**

**Physical State**

Solid

**Color**

Not determined.

**Odor**

Characteristic

**Structural Formula**

C<sub>14</sub>H<sub>9</sub>Cl<sub>5</sub>

**Molecular Weight**

354.5 g/mol

**Storage Buffer****Odor Threshold**

Not determined.

**Formulation****Melting point/Melting range**

105–106 °C (221–222.8 °F)

**Boiling point/Boiling range**

185 °C (365 °F)

**Flammability**

Product is not flammable.

**Explosion limits**

Lower: Not determined.

Upper: Not determined.

**Flash point**

75 °C (167 °F)

**Decomposition temperature**

Not determined.

**pH**

Not applicable.

**Viscosity****Kinematic**

Not applicable.

## **SOLUBILITY**

Chloroform: Slightly Soluble; Methanol: Heated

## **Dynamic**

Not applicable.

## **Solubility in / Miscibility with**

Chloroform: Slightly Soluble; Methanol: Heated

## **Water**

Insoluble.

## **Partition coefficient (n-octanol/water)**

Not determined.

## **Vapor Pressure**

0 hPa

## **Density**

1.556 g/cm<sup>3</sup>

## **Relative Density**

1.556 g/cm<sup>3</sup>

## **Vapor Density**

Not applicable.

## **Particle characteristics**

Not determined.

## **Other information**

## **Appearance**

## **Form**

Solid

## **Important information on protection of health and environment, and on safety.**

## **Ignition temperature**

Not determined.

## **Danger of explosion**

Product does not present an explosion hazard.

## Change in condition

### Evaporation Rate

Not applicable.

### Water solubility

Practically insoluble in water

### Henry's Law Constant

0.188 at 5 °C, 0.513 at 15 °C, 0.681 at 20 °C, 0.957 at 25 °C, 2.76 at 35 °C:in 3% NaCl solution: 1.15 at 5 °C, 1.88 at 15 °C, 3.36 at 25 °C, 5.43 at 35 °C (gas stripping-GC, Cetin et al., 2006)

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## SECTION 10: Stability and reactivity

### Reactivity

No further relevant information available.

### Chemical stability

### Thermal decomposition / conditions to be avoided

No decomposition if used according to specifications.

### Possibility of hazardous reactions

No dangerous reactions known.

### Conditions to avoid

No further relevant information available.

### Incompatible materials

oxidizing agents

### Hazardous decomposition products

hydrogen chloride gas, carbon monoxide, carbon dioxide

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## SECTION 11: Toxicological information

### RTECS Number

KJ3325000

### Information on toxicological effects

### Acute toxicity

LD/LC50 values that are relevant for classification:

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Route	Endpoint	Value
Oral	LDLO	150 mg/kg (chd)
Oral	TDLO	6 ml/kg (man)
Oral	LD50	87 mg/kg (rat)
Dermal	LD50	2,510 mg/kg (rat)
Intraperitoneal	LD50	9,100 µg/kg (rat)
Intraperitoneal	LD50	32 mg/kg (mouse)
Subcutaneous	LD50	1,500 mg/kg (rat)

### Primary irritant effect

#### on the skin

No irritant effect.

#### on the eye

No irritating effect.

### Sensitization

No sensitizing effects known.

### Additional toxicological information

#### Interactive effects

No interactive effects between components are known.

### Carcinogenic categories

#### IARC (International Agency for Research on Cancer)

2A

#### NTP (National Toxicology Program)

R

#### OSHA-Ca (Occupational Safety & Health Administration)

Substance is not listed.

### Alternative sources for toxicological information

No non-standard sources for toxicological information where used.

## SECTION 12: Ecological information

### Toxicity

#### Aquatic toxicity

No further relevant information available.

### **Persistence and degradability**

No further relevant information available.

### **Bioaccumulative potential**

No further relevant information available.

### **Mobility in soil**

No further relevant information available.

### **Results of PBT and vPvB assessment**

#### **PBT**

Not applicable.

#### **vPvB**

Not applicable.

#### **PBT:**

Not applicable.

#### **vPvB:**

Not applicable.

### **Other adverse effects**

#### **Remark**

Very toxic for fish

### **Additional ecological information**

#### **General notes**

Water hazard class 3 (Assessment by list): extremely hazardous for water

Do not allow product to reach ground water, water course or sewage system, even in small quantities.

Danger to drinking water if even extremely small quantities leak into the ground.

Also poisonous for fish and plankton in water bodies.

Very toxic for aquatic organisms

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## SECTION 13: Disposal considerations

### **Waste treatment methods**

#### **Recommendation**

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

## Uncleaned packagings

### Recommendation

Disposal must be made according to official regulations.

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## SECTION 14: Transport information

### UN-Number

DOT, IMDG, IATA UN2811

### UN proper shipping name

DOT Toxic solids, organic, n.o.s. (p,p'-DDT)

IMDG TOXIC SOLID, ORGANIC, N.O.S. (p,p'-DDT)

IATA Toxic solid, organic, n.o.s. (p,p'-DDT)

### Transport hazard class(es)

#### DOT

Class: 6.1 Toxic substances

Label: 6.1

#### IMDG

Class: 6.1 Toxic substances

Label: 6.1

#### IATA

Class: 6.1 Toxic substances

Label: 6.1

### Packing group

DOT, IMDG, IATA III

### Environmental hazards

Environmentally hazardous substance, solid

### Marine pollutant

Symbol (fish and tree)

### Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Not applicable.

### Transport/Additional information

DOT:

### Quantity limitations

On passenger aircraft/rail: 100 kg

On cargo aircraft only: 200 kg

**IMDG:**

**Limited quantities (LQ)**

5 kg

**Excepted quantities (EQ)**

Code: E1

Maximum net quantity per inner packaging: 30 g

Maximum net quantity per outer packaging: 1000 g

**IATA:**

**Remarks**

When sold in quantities of less than or equal to 1 mL, or 1 g, with an Excepted Quantity Code of E1, E2, E4, or E5, this item meets the De Minimis Quantities exemption, per IATA 2.6.10. Therefore packaging does not have to be labeled as Dangerous Goods/Excepted Quantity.

**Special precautions for user**

Warning: Toxic substances

**Hazard identification number (Kemler code)**

60

**EMS Number**

F-A, S-A

**Stowage Category**

A

**UN "Model Regulation"**

UN 2811 TOXIC SOLID, ORGANIC, N.O.S. (P,P'-DDT), 6.1, III, ENVIRONMENTALLY HAZARDOUS

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## SECTION 15: Regulatory information

**Safety, health and environmental regulations/legislation specific for the substance or mixture**

No further relevant information available.

**Sara**

Section 355 (extremely hazardous substances):	Substance is not listed.
Section 313 (Specific toxic chemical listings):	Substance is not listed.

TSCA (Toxic Substances Control Act):	ACTIVE
Hazardous Air Pollutants:	Substance is not listed.
Chemicals known to cause cancer:	Substance is listed.
Chemicals known to cause reproductive toxicity for females:	Substance is listed.
Chemicals known to cause reproductive toxicity for males:	Substance is listed.
Chemicals known to cause developmental toxicity:	Substance is listed.

### Carcinogenic categories

EPA (Environmental Protection Agency):	B2
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### TLV (Threshold Limit Value)

A3

### NIOSH-Ca (National Institute for Occupational Safety and Health)

Substance is listed.

### Chemical safety assessment

A Chemical Safety Assessment has not been carried out.

## SECTION 16: Other information

### Abbreviations and acronyms

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

EINECS: European Inventory of Existing Commercial Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMS: Hazardous Materials Identification System (USA)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety & Health

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

Acute toxicity - oral 3: Acute toxicity – Category 3

Carcinogenicity 2: Carcinogenicity – Category 2

Specific target organ toxicity (repeated exposure) 1: Specific target organ toxicity (repeated exposure) – Category 1

Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1

Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1

**Disclaimer:**

The information in this MSDS is only applicable to the specified product, unless otherwise specified, it is not applicable to the mixture of this product and other substances. This MSDS only provides information on the safety of the product for those who have received the appropriate professional training for the user of the product. Users of this MSDS must make independent judgments on the applicability of this SDS. The authors of this MSDS will not be held responsible for any harm caused by the use of this MSDS.