



Central Pollution Control Board

Ministry of Environment & Forests, Govt of India, Parivesh Bhawan, East Arjun Nagar, Delhi - 110032

MATERIAL SAFETY DATA SHEETS

169

DDT

1. CHEMICAL IDENTITY

Chemical Name : DDT

Chemical Classification: Toxic

Trade Name :

Synonyms: Dichlorodiphenyltrichloroethane, Clofenotane, 2,2-bis(p-Chlorophenyl)-1,1,1-trichloroethane, Arkotine, Azotox

Formula : C₁₄H₉Cl₅

CAS No: 50-29-3

UN No: 2761

Regulated Identification

Shipping Name : Organo - Chlorine Pesticide

Hazchem Code : 2X

Codes / Label : Class 6.1, Toxic

Hazardous Waste ID No : 15

HAZARDOUS INGREDIENTS	C.A.S. No.	HAZARDOUS INGREDIENTS	C.A.S. No.
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1 DDT

50-29-3

3

2

4

2. PHYSICAL / CHEMICAL DATA

Boiling Pt. °C: 260

Physical State: Solid

Appearance: A colorless crystalline solid or white to off-white powder.

Melting Pt °C: 108.5

Vapour Pressure @ 35°C mmHg: 1.6X10⁻⁷ mm Hg @ 20 deg C

Odour: Slightly aromatic.

Vapour Density(Air =1):

Solubility in water at 30°C g/100ml: 5.50X10⁻³ mg/l @ 25 deg C

Others: Insoluble in dilute acids and alkals, but soluble in most organic solvent solution.

Specific Gravity (Water =1): 0.98 to 0.99

pH :

3. FIRE / EXPLOSION HAZARD DATA

Flammability : No

LEL:

Flash Point °C in OC:

TDG Flammability:

UEL:

Flash Point °C in CC: 162-171

Autoignition Temperature °C :

Explosion sensitivity to impact: Stable

Explosion sensitivity to static Electricity: Stable

Hazardous Combustion Products : Emits toxic fumes of Cl₂

Hazardous Polymerization : Will not occur.

Combustible Liquid: No

Explosive Material: No

Corrosive Material No

Flammable Material: No

Oxidiser : No

Others:

Pyrophoric Material: No

Organic Peroxide : No

4. REACTIVITY DATA

Chemical Stability : Stable

Incompatibility with other material : Incompatible with strong oxidizing and reducing agents. Incompatible with many amines, nitrides, azo/diazo compounds, alkali metals, and epoxides Incompatible with alkaline media.

Reactivity : Reacts with oxidising materials.

Hazardous :

Reaction Products

5. HEALTH HAZARD DATA

Routes of entry: Inhalation, ingestion, skin & eyes.

Effects of Exposure / Symptoms:

Very large doses are followed promptly by vomiting due to local gastric irritation, delayed emesis or diarrhea may occur. With small doses, symptoms usually appear 2-3 hrs. after ingestion, which include tingling of lips, tongue and face malaise, headache, sore throat, fatigue, tremors of neck, head and eyelids, apprehension, ataxia and confusion, convulsions, coma, partial paralysis. In severe poisoning, pulse may be irregular and very slow.

Emergency Treatment :

Inhalation: Remove the victim to fresh air area, provide artificial respiration.

Skin: Wash the affected area with plenty of water and soap.

Eyes: Irrigate with plenty of water for 15 mins.

Ingestion: Conduct gastric lavage and administer saline cathartic, phenobarbital, parenteral fluids. Patient should be kept quiet and observed for 24 hrs.

LD50 (oral-rat) mg/kg: 100 mg/kg

STEL:

LC50 (rat) mg/kg:

Odour Threshold: 5.0725 mg/m³

Permissible Exposure Limit: 1 mg/m³. Skin

TLV (ACGIH) : 1 mg/m³.

NFPA Hazard	Health	Flammability	Reactivity	Special
Signals	0	0	1	

6. PREVENTIVE MEASURES

Personal Protective Equipment : Avoid contact with solid and dust. Provide dust mask, side covered safety goggles/face shield, rubber hand gloves, protective overclothing and shoes.

Handling : Avoid direct physical contact. Use appropriate, approved safety equipment. Untrained individuals should not handle this chemical or its container. Handling should occur in a chemical fume hood.

Storage : Keep in cool, dry, well ventilated area.

Precautions :

7. EMERGENCY / FIRST AID MEASURES

FIRE:

Fire Extinguishing Media : Water, foam, dry chemical powder, CO₂.

Special Procedure : Keep the containers cool by spraying water if exposed to heat or flame.

Unusual Hazards : Poisonous gases are produced in fire.

EXPOSURE: First Aid Measures:

Inhalation: Remove the victim to fresh air area, provide artificial respiration.

Skin: Wash the affected area with plenty of water and soap.

Eyes: Irrigate with plenty of water for 15 mins.

Ingestion: Conduct gastric lavage and administer saline cathartic, phenobarbital, parenteral

fluids. Patient should be kept quiet and observed for 24 hrs.

Antidotes / Dosages: Saline cathartic, phenobarbital

SPILLS :

Steps To Be Taken : Sweep and collect without making dust. Wash the area with plenty of water and soap. Do not get water inside containers.

Waste Disposal Method: Seal all the wastes in vapour tight plastic bags for eventual disposal.

8. ADDITIONAL INFORMATION / REFERENCES

An Insecticide, An experimental Carcinogen, Neoplastigen, Tumorigen and Teratogen. The use of DDT is subject to governmental control in a number of countries. Slow degradation of the compound and the persistence of its biologically active residues in nature produce increasing environmental contamination.

9. MANUFACTURERS / SUPPLIERS DATA

NAME OF FIRM :	Contact person
MAILING ADDRESS :	in Emergency :
TELEPHONE / TELEX NOS :	Local Bodies involved :
TELEGRAPHIC ADDRESS :	Standard Packing :
OTHERS :	Trem Card Details / Ref :

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