

SAFETY DATA SHEET

1. IDENTIFICATION

Product name: 2,4-Dichlorophenoxyacetic Acid
Product code: D0396
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Revision number:

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture

PHYSICAL HAZARDS

Not classified

HEALTH HAZARDS

Acute toxicity (Oral)	Category 4
Acute toxicity (Dermal)	Category 5
Acute toxicity (Inhalation)	Category 4
Skin corrosion/irritation	Category 3
Serious eye damage/eye irritation	Category 1
Skin sensitization	Category 1
Carcinogenicity	Category 2
Reproductive toxicity	Category 2
Specific target organ toxicity	Respiratory tract irritation
- Single exposure [Category 3]	
Specific target organ toxicity	Liver
- Repeated exposure [Category 2]	

ENVIRONMENTAL HAZARDS

Acute aquatic hazard	Category 1
Long-term aquatic hazard	Category 1

Label elements

Pictograms or hazard symbols



Signal word

Danger

Hazard statements

May be harmful in contact with skin
 Harmful if swallowed or if inhaled
 Causes mild skin irritation
 Causes serious eye damage
 May cause an allergic skin reaction
 Suspected of causing cancer
 Suspected of damaging fertility or the unborn child
 May cause damage to organs through prolonged or repeated exposure : Liver
 May cause respiratory irritation
 Very toxic to aquatic life
 Very toxic to aquatic life with long lasting effects

Precautionary statements
[Prevention]

Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Do not breathe dust, fume, mist, vapors or spray.
Use only outdoors or in a well-ventilated area.
Avoid release to the environment.
Do not eat, drink or smoke when using this product.
Contaminated work clothing should not be allowed out of the workplace.
Wash hands and face thoroughly after handling.

[Response]

Wear protective gloves, protective clothing, face protection.
IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell. Rinse mouth.
IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: Take off contaminated clothing. And wash it before reuse.
IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor if you feel unwell.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor.
IF exposed or concerned: Get medical advice or attention.

[Storage]

Collect spillage.
Store in a well-ventilated place. Keep container tightly closed.
Store locked up.

[Disposal]

Dispose of contents and container in accordance with local, regional, national regulations.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance/mixture: Substance
Components: 2,4-Dichlorophenoxyacetic Acid
Percent: >97.0%(T)
CAS RN: 94-75-7
Synonyms: 2,4-D
Chemical Formula: C₈H₆Cl₂O₃

4. FIRST AID MEASURES

Inhalation: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical advice/attention.
Skin contact: Remove/Take off immediately all contaminated clothing. Gently wash with plenty of soap and water. Get medical advice/attention.
Eye contact: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Get medical advice/attention.
Ingestion: Get medical advice/attention. Rinse mouth.
Protection of first-aiders: A rescuer should wear personal protective equipment, such as rubber gloves and air-tight goggles.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media: Dry chemical, foam, water spray, carbon dioxide.
Precautions for firefighters: Fire-extinguishing work is done from the windward and the suitable fire-extinguishing method according to the surrounding situation is used. Uninvolved persons should evacuate to a safe place. In case of fire in the surroundings: Remove movable containers if safe to do so.
Special protective equipment for firefighters: When extinguishing fire, be sure to wear personal protective equipment

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:	Use personal protective equipment. Keep people away from and upwind of spill/leak. Entry to non-involved personnel should be controlled around the leakage area by roping off, etc.
Environmental precautions:	Be careful not to let it flow into rivers, etc., since adverse effects on the environment are concerned.
Methods and materials for containment and cleaning up:	Sweep dust to collect it into an airtight container, taking care not to disperse it. Adhered or collected material should be promptly disposed of, in accordance with appropriate laws and regulations.

7. HANDLING AND STORAGE

Precautions for safe handling

Technical measures:	Handling is performed in a well ventilated place. Wear suitable protective equipment. Prevent dispersion of dust. Wash hands and face thoroughly after handling. Use a closed system if possible. Use a local exhaust if dust or aerosol will be generated.
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Advice on safe handling: Avoid all contact!

Conditions for safe storage, including any incompatibilities

Storage conditions:	Keep container tightly closed. Store in a cool, dark and well-ventilated place. Store locked up. Store away from incompatible materials such as oxidizing agents.
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Packaging material: Comply with laws.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering controls:	Install a closed system or local exhaust. Also install safety shower and eye bath.
Exposure limits:	
ACGIH TLV(TWA):	10 mg/m ³ (l)
OSHA PEL(TWA):	10 mg/m ³
Personal protective equipment	
Respiratory protection:	Dust respirator, self-contained breathing apparatus(SCBA), supplied air respirator, etc. Use respirators approved under appropriate government standards and follow local and national regulations.
Hand protection:	Impervious gloves.
Eye protection:	Safety goggles. A face-shield, if the situation requires.
Skin and body protection:	Impervious protective clothing. Protective boots, if the situation requires.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state (20°C):	Solid
Form:	Crystal - Powder
Colour:	White - Pale yellow red
Odour:	No data available
pH:	No data available
Melting point/freezing point:	139°C
Boiling point/range:	160°C /0.05kPa
Flash point:	No data available
Flammability or explosive limits:	
Lower:	No data available
Upper:	No data available
Vapour pressure:	0.01Pa/25°C
Vapour density:	7.63
Relative density:	No data available
Solubility(ies):	
[Water]	Insoluble
[Other solvents]	
Soluble:	Organic solvents
Log Pow:	2.81

10. STABILITY AND REACTIVITY

Chemical stability:	Stable under proper conditions.
Possibility of hazardous reactions:	No special reactivity has been reported.
Incompatible materials:	Oxidizing agents, Alkali metals, Amines
Hazardous decomposition products:	Carbon monoxide, carbon dioxide etc

11. TOXICOLOGICAL INFORMATION

Acute Toxicity:	orl-rat LD50:375 mg/kg skn-rbt LD50:1400 mg/kg ihl-rat LC50:>1.8 g/m ³ /4H orl-hmn LDLo:80 mg/kg
Skin corrosion/irritation:	skn-rbt 500 mg/24H MLD
Serious eye damage/irritation:	eye-rbt 750 ug/24H SEV
Germ cell mutagenicity:	dni-ham-ovr 1 mmol/L mmo-sat 250 ug/plate (-S9) sce-hmn-lym 10 mg/L
Carcinogenicity:	
IARC =	Group 2B (Possibly carcinogenic to humans)
NTP =	No data available
Reproductive toxicity:	orl-rat TDLo: 220 ug/kg (1-22D preg) orl-rat TDLo: 500 mg/kg (6-15D preg)
RTECS Number:	AG6825000

12. ECOLOGICAL INFORMATION

Ecotoxicity:	
Fish:	48h LC50:0.9 ppm (Lepomis macrochirus) 48h LC50:2.2 mg/L (Oncorhynchus mykiss) 96h LC50:>100 mg/L (Oryzias latipes)
Crustacea:	No data available
Algae:	96h EC50:24.2 mg/L (Selenastrum capricornutum)
Persistence / degradability:	0 % (by BOD) , 2 % (by TOC) , 1 % (by HPLC)
Bioaccumulative potential(BCF):	<1.0 (conc. 1 mg/L) , <10.0 (conc. 0.10 mg/L)
Mobility in soil	
Log Pow:	2.81
Soil adsorption (Koc):	20 - 136
Henry's Law (PaM³/mol):	9.88 x 10 ⁻³

13. DISPOSAL CONSIDERATIONS

Recycle to process, if possible. Consult your local regional authorities. You may be able to dissolve or mix material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber system. Observe all federal, state and local regulations when disposing of the substance.

14. TRANSPORT INFORMATION

Hazards Class:	9: Miscellaneous dangerous goods.
UN-No:	3077
Proper shipping name:	Environmentally hazardous substance, solid, n.o.s.
Packing group:	III
Marine pollutant	Y

15. REGULATORY INFORMATION

Regulations on the Control over Safety of Dangerous Chemicals (State Council announces on January 26, 2002 and revised on February 16,2011): Safe use and production, the storage of a dangerous chemical, transport, loading and unloading were prescribed.



16. OTHER INFORMATION

This SDS was prepared sincerely on the basis of the information we could obtained, however, any warranty shall not be given regarding the data contained and the assessment of hazards and toxicity. Prior to use, please investigate not only the hazards and toxicity information but also the laws and regulations of the organization, area and country where the products are to be used, which shall be given the first priority.

The products are supposed to be used promptly after purchase in consideration of safety. Some new information or amendments may be added afterwards. If the products are to be used far behind the expected time of use or you have any questions, please feel free to contact us. The stated cautions are for normal handling only. In case of special handling, sufficient care should be taken, in addition to the safety measures suitable for the situation. All chemical products should be treated with the recognition of "having unknown hazards and toxicity", which differ greatly depending on the conditions and handling when in use and/or the conditions and duration of storage. The products must be handled only by those who are familiar with specialized knowledge and have experience or under the guidance of those specialists throughout use from opening to storage and disposal. Safe usage conditions shall be set up on each user's own responsibility.