



MATERIAL SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name : 2,4-D Acid Technical
CAS No : 94-75-7
Use : Herbicide
Company Info : M/s HPM Chemicals & Fertilizers Ltd
209-210, Anupam Bhawan, Commercial Complex
Azadpur, Delhi-110033
Telephone : (011)-45071800, 899
Fax : (011)- 27681800
Website : www.hpmindia.com
E-mail : info@hpmindia.com

2. COMPOSITION/INFORMATION ON INGREDIENTS

Composition	Concentration
Monocrotophos a.i.	98.20% min.
Other associates impurities	1.80% max

3. HAZARDS IDENTIFICATION OF PREPARATION

Emergency Overview:

Harmful if swallowed.

Irritating to the eyes, skin, and respiratory tract

Avoid breathing dust

Avoid contact with eyes, skin or clothing.

Keep out of reach of children.

Overexposure by ingestion

may cause gastrointestinal irritation with nausea,

vomiting and diarrhea. Human fatalities have been reported from acute poisoning.

Potential Health Effects:

EYE:Causes severe eye

irritation.SKIN:

Causes skin irritation. May cause skin sensitization, an allergic

reaction, which becomes evident upon re-exposure to this material.

May be harmful if absorbed through the skin.

INHALATION:Causes respiratory tract irritation. Can produce delayed pulmonary edema.

INGESTION:Harmful if swallowed.

CHRONIC:

May cause liver and kidney damage. May cause reproductive and fetal effects. Effects may be delayed. Chronic exposure will cause



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neurological degradation and/or abnormalities.

Potential Physical Hazards: Can decompose at high temperatures forming irritating and toxic gases.

Environmental Hazards: Toxic to fish.

Keep out of waterways. Slightly toxic to birds and wildlife. Practically non-toxic to bees.

4. FIRST AID MEASURES

- Skin Contact** : Remove contaminated clothing and shoes immediately. Wash contaminated area with soap or mild detergent and large amount of water until no effects of chemical remains. If symptoms persists get medical help.
- Eye Contact** : Irrigate the eyes with large amount water or normal saline occasionally lifting upper and lower lids until no evidence of chemical remains and obtain a medical help.
- Ingestion** : Remove by gastric lavage and catharsis, maintain blood pressure and airway, Give oxygen if respiration is depressed. Do not perform gastric lavage if victim is victim is unconscious. Get medical attention immediately.
- Inhalation** : Remove the patient from the exposure area to fresh air immediately. If breathing has stopped perform the artificial respiration. Keep person warm and rest. Get medical attention immediately.

5. ACCIDENTIAL RELEASE

- Personal Preparation** : Avoid contact with skin, eyes and clothing.
- Environmental Precautions** : Prevent contamination of soil, drains and surface water.
- Method of cleaning** : Absorb the material in the sand, soil, diatomaceous earth or suitable absorbent. Place in suitable material and remove to safe place or dispose of in an incinerator approved for chemicals.

6. FIRE-FIGHTING MEASURES

- Suitable Extinguishing Media** : Dry chemical, CO₂, Water spray, standard foam. For larger fire, use water spray, fog or standard foam.
- Exposure Hazards** : During a fire, irritating and possibly toxic gases like



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Fire-Fighting

carbon dioxide; carbon monoxide; nitrogen oxides; sulfur dioxide; hydrogen chloride; may be generated by thermal decomposition or combustion
: Use dry chemical, foam or CO2 extinguishing media. Wear full protective clothing and self-contained breathing apparatus. Evacuate non essential personnel from the area to prevent human exposure to fire, smoke, fumes or products of combustion. Prevent use of contaminated buildings, area, and equipment until decontaminated. Water runoff can cause environmental damage. If water is used to fight fire, dike and collect runoff.

7. HANDLING AND STORAGE

Handling

: Use appropriate (impervious) clothing, gloves and closed foot ware to prevent the repeated contact with skin. Use flash proof and dust resistant goggles to prevent the contact with eyes.

Storage

: Keep the product in original container tightly closed and correctly labeled. Store in suitable, cool, dry, well ventilated place under lock and key; away from the reach of the children, animals, food and animal feeding stuffs. Store away from the incompatible substances and source of ignition

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Technical protective measures : None
Exposure controls limits : Not Established
Respiratory protection : Wear suitable mask
Hand protection : Wear impervious gloves
Eye protection : Wear flash proof and dust resistant goggles.
Skin protection : Wear impervious clothing and closed foot ware.

9. PHYSICAL AND CHEMICAL PROPERTIES

Color:White
Physical State:Solid crystalline powder
Odor:
Aromatic chlorine odor
Molecular Weight: 221.04



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Melting Point:138.8° C
Bulk Density:0.910 gm/cm³
at ambient temperature (tap density)
Vapor Pressure: 1.1 x 10⁻²
Pa @ 20°C
Solubility:Water =0.0962 g/100 mL;
n-octanol = 5.74 g/100 mL;
methanol = 48.4 g/100 mL, and; n-hexane = 0.0036 g/100 mL

10. STABILITY AND REACTIVITY

CHEMICAL STABILITY:Stable, however may decompose if heated.
CONDITIONS TO AVOID:Avoid excessive heat and fire.
INCOMPATIBILITY WITH OTHER MATERIALS:Strong oxidizing agents.
HAZARDOUS DECOMPOSITION PRODUCTS:Carbon dioxide, carbon monoxide,
And hydrogen chloride.
HAZARDOUS POLYMERIZATION:
Product will not undergo polymerization

11. TOXICOLOGICAL INFORMATION

ACUTE TOXICITY:ORAL (rat):The oral LD50 is 639 mg/kg .
DERMAL (rabbit):The dermal LD 50 is > 2,000mg/kg.
INHALATION (rat):The inhalation LC₅₀(4 hrs.) is >1.79 mg/L.
EYE IRRITATION (rabbit):Causes severe eye irritation.
SKIN IRRITATION (rabbit):Causes mild skin irritation.
SKIN SENSITIZATION (guinea pig):Non-sensitize

12 ECOLOGICAL INFORMATION

ENVIRONMENTAL SUMMARY:Toxic to fish.
Do not contaminate water by cleaning of equipment or disposal of equipment washwaters.
Slightly toxic to birds and wildlife. Practically non-toxic to bees.
ENVIRONMENTAL FATE:2,4-D is considered to be minimally persistent in soils with
a median half –life ranging from 2.9 to 5.6 days.
Does not pose a threat to groundwater contamination



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13. DISPOSAL CONSIDERATION

PESTICIDE DISPOSAL: Wastes resulting from the use of this product may be disposed on site (by use according to the label) or at an approved waste disposal facility. Further information can be obtained from the EPA or the equivalent state and local agencies.

CONTAINER DISPOSAL: Completely empty bag into application equipment. Check with EPA, State, and local authorities for the current regulations applicable to your area for disposal of waste containers.

14. TRANSPORT INFORMATION

PROPER SHIPPING NAME: Environmentally hazardous substance, solid, N.O.S. (2,4-D Acid)

HAZARD CLASS OR DIVISION: 9

IDENTIFICATION NUMBER: UN 3077

PACKING GROUP: PG III

REPORTABLE QUANTITY: 100 lbs.

ADDITIONAL INFORMATION: Marine Pollutant

15. REGULATORY INFORMATION

Regulations under FIFRA: All pesticides are governed under FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act). Therefore, the regulations presented are pertinent only when handled outside of the normal use and applications of pesticides. This includes waste streams resulting from manufacturing/formulation facilities, spills or misuse of products, and storage of large quantities of products containing hazardous or extremely hazardous substances.

OSHA HAZARD COMMUNICATION STANDARD STATUS: Regulated

CERCLA REPORTABLE QUANTITY: 100 lbs.

SARA TITLE III STATUS: •

302 Extremely Hazardous Substance: Not Listed • 311/312

Hazard Categories: Immediate health hazard

Delayed health hazard • 313 Toxic Chemicals: 2,4-D Acid

CLEAN AIR ACT: 2,4-D is listed as a Hazardous Air Pollutant (HAP). CLEAN WATER ACT: 2,4-D is listed as a Hazardous Substance under the CWA.

STATES: •

California Proposition 65 Status:

Not Listed • 2,4-D can be found on the following state right to know lists; California, New Jersey, Pennsylvania, Minnesota, and Massachusetts



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16. OTHER INFORMATION

All information and instructions provided in this Material Safety Data Sheet (MSDS) are based on the current state of scientific and technical knowledge at the date indicated on the present MSDS and are presented in good faith and believed to be correct. This information applies to the product as such. In case of new formulations or mixes, it is necessary to ascertain that a new danger will not appear. It is the responsibility of persons on receipt of this MSDS to ensure that the information contained herein is properly read and understood by all people who may use, handle, dispose or in any way come in contact with the product. If the recipient subsequently produce formulations containing this product, it is the recipients sole responsibility to ensure the transfer of all relevant information from this MSDS to their own MSDS.