

2,4-D L.V. 4 Ester

Riverdale

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Product Code: 1391-RIV

MSDS Number: 139

MATERIAL SAFETY DATA SHEET: 2,4-D L.V. 4 Ester

1. INFORMATION ON INGREDIENTS

| Chemical Name | CAS # | Weight % | Common Name | OSHA PEL | ACGIH TLV |
|---|-----------|----------|-------------------|-----------------------------------|-----------|
| Isocetyl (2-ethylhexyl) Ester of 2,4-Dichlorophenoxyacetic Acid | 1928-43-4 | 67.20% | 2,4-D Ester | 10 mg/m ³ (2,4-D Acid) | N/A |
| Solvent and Emulsifier | | 32.80% | Inert Ingredients | N/A | N/A |
| Total | | 100.00% | | | |

2. HEALTH DATA

PRIMARY ROUTE OF ENTRY:

Dermal/Eye: Yes**Oral:** Yes**Inhalation:** No**SYMPTOMS OF OVEREXPOSURE:** Nonspecific: muscle weakness, lethargy, loss of appetite, abdominal pains, headache, or shortness of breath.

ACUTE HEALTH EFFECTS

Inhalation: This product contains petroleum distillates. Excessive inhalation may cause respiratory irritation, dizziness, weakness, nausea, headache, or possible unconsciousness.**Eyes:** May cause slight eye irritation.**Skin:** May cause mild skin irritation reaction in some individuals. Harmful if absorbed through skin. Prolonged or repeated overexposure may result in effects similar to those caused by ingestion.**Ingestion:** May cause muscle weakness, nausea, diarrhea, and abdominal pain. Fall in blood pressure or myotoma (prolonged muscular spasms) may occur under extreme exposure conditions. Can be fatal.

TOXICOLOGICAL DATA

Acute Oral LD50: 1250 mg/kg**Acute Dermal LD50:** >2000 mg/kg**Acute Inhalation LC50:** > 5 mg/L**Eye Irritation:** minimal irritation**Dermal Irritation:** minimal irritation**Dermal Sensitization:** is not a sensitizer**MEDICAL CONDITIONS POSSIBLY AGGRAVATED BY EXPOSURE:** Skin exposure may aggravate existing skin conditions. Exposure to mist may aggravate existing respiratory conditions.**CHRONIC HEALTH EFFECTS:** Repeated or prolonged overexposure to phenoxy herbicides may cause liver, kidney, gastrointestinal or muscular system effects. The EPA's Science Advisory Panel has given 2,4-D a class D classification (not classifiable as to human carcinogenicity). Various epidemiological studies have yielded conflicting results with the majority being negative. The current scientific consensus is that there is no proven causal association between 2,4-D and cancer. Recent studies have not shown 2,4-D to be a mutagen or teratogen.

| NTP | Agency Listing Carcinogen | | OSHA |
|-----|---------------------------|------|------|
| | IARC | IARC | |
| No | No | No | No |

3. FIRST AID MEASURES

EYE CONTACT: Hold eyelids open and flush entire eye with a steady, gentle stream of water for 15 minutes. Get medical attention.**INHALATION:** Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.**INGESTION:** Call a physician or Poison Control Center. DO NOT induce vomiting. Drink promptly a large quantity of milk, egg whites, gelatin solution, or if these are not available, drink large quantities of water. Avoid alcohol. Do not give anything by mouth to an unconscious person.**SKIN CONTACT:** Wash affected area with soap and water. If irritation persists, get medical attention.**NOTE TO PHYSICIAN:** This product contains petroleum distillates. If large amounts have been ingested, empty the stomach by gastric intubation with the aid of a cuffed endotracheal tube to prevent aspiration and possible chemical pneumonia.

4. FIRE FIGHTING MEASURES

FLASH POINT (F): 210°**FLASH POINT METHOD USED:** Tag Closed Cup**EXTINGUISHING MEDIA:** Use CO₂ or dry chemical for small fires and water fog or foam for large fires. Use water spray to cool closed containers.**COMBUSTION PRODUCTS:** May include, but are not limited to: hydrogen chloride and nitrogen oxides**SPECIAL FIRE FIGHTING PROCEDURES:** May produce toxic and noxious fumes under extreme fire conditions. Use positive pressure self-contained breathing apparatus and acid resistant protective clothing. Any water used to extinguish the fire should be contained by diking to prevent contamination of the public water system.**UNUSUAL FIRE & EXPLOSION HAZARDS:** When heated above the flash point this material emits flammable vapors which, when mixed with air, can burn or be explosive. Fine mist or spray may be flammable at temperatures below the flash point.

See Section 13, REGULATORY INFORMATION, for NFPA ratings.

5. ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS SPILLED OR RELEASED:

Wear the suggested safety equipment when cleaning large spills (section 7). Surround with impervious material such as dirt to prevent run-off. Absorb product with an inert absorbent such as clay granules or sawdust. Contain all affected material in a closed, marked container for proper disposal. Treat contaminated area with detergent and water. 2,4-D spills are subject to CERCLA (Superfund) reporting requirements. Reportable Quantity (RQ) = 26 gallons of this product.

6. HANDLING AND STORAGE

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE: Always use original container to store pesticides in a secured warehouse or storage building. Do not store seeds, fertilizers, insecticides or fungicides. Containers should be opened in well ventilated areas. Do not contaminate water, food or feed by storage or disposal. Keep container tightly sealed when not in use. Do not stack cardboard cases more than two pallets high.**WORK HYGIENIC PRACTICE:** Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. Remove protective equipment immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

7. EXPOSURE CONTROL/PERSONAL PROTECTION

RESPIRATORY PROTECTION: Wear a NIOSH/MSHA approved pesticide respirator when exposed to mist.**VENTILATION:** Open ventilation. Reduce all mist with local exhaust.**PROTECTIVE GLOVES:** Chemical-resistant gloves. (See Precautionary Statement on Product Label)**EYE PROTECTION:** Wear face shield, splash goggles or safety glasses with front, brow and temple protection.**OTHER PROTECTIVE EQUIPMENT:** Long sleeved shirt, long pants, socks and shoes. (See Precautionary Statements on Product Label)

8. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE AND ODOR: Dark amber liquid, aromatic (solvent) odor**SOLUBILITY IN WATER:** 100% emulsifiable (can be mixed) with water**BOILING POINT (F):** > 400°**VAPOR PRESSURE (mm Hg @ 20 C):** <1**SPECIFIC GRAVITY (H₂O = 1):** 1.034**pH:** NID**FREEZING POINT (F):** NID**POUNDS PER GALLON:** 8.6

9. STABILITY AND REACTIVITY

STABILITY: Stable**CONDITIONS TO AVOID:** Avoid heat conditions**INCOMPATIBILITY:** Strong oxidizers or acids**HAZARDOUS BYPRODUCTS:** None**HAZARDOUS POLYMERIZATION:** Will Not Occur

10. ECOLOGICAL INFORMATION

ENVIRONMENTAL FATE: 2,4-D has a relatively short half-life (on average 6-9 days in soil, 6-7 in grass) and is readily degraded into nontoxic substances by soil microbes and aquatic microorganisms. Research has shown that 2,4-D does not bioaccumulate to any significant degree in mammals or in other organisms.**ECOTOXICITY:** This product is toxic to aquatic invertebrates. Drift or runoff may adversely affect aquatic invertebrates and nontarget plants.

11. DISPOSAL CONSIDERATIONS

PRODUCT DISPOSAL: Pesticide wastes are toxic. Improper disposal of excess pesticide spray mixtures or rinsate is a violation of Federal law and may contaminate groundwater. If product cannot be disposed of by use according to the label, contact your State Pesticide or Environmental Control Agency or the Hazardous Waste Representative at the nearest EPA Regional Office for guidance.**CONTAINER DISPOSAL:** Triple rinse (or equivalent) and offer for recycling, or puncture and dispose of in a sanitary landfill. Plastic containers are also disposable by incineration, or if allowed by State and local authorities, by burning. If burned, stay out of smoke.

12. TRANSPORTATION INFORMATION

DOT REGULATED CONTAINER SIZE: 30 gal, 55 gal, 220 gal, 260 gal

(All smaller container sizes are not DOT regulated)

HAZARD CLASS: 3**UN NUMBER:** NA 1993**PACKING GROUP:** III**GUIDE NUMBER:** 128**PROPER SHIPPING NAME:** Environmental Hazardous Substance, Liquid

13. REGULATORY INFORMATION

SARA TITLE III; Section 311/312:

An immediate and delayed-health hazard.

REPORTABLE QUANTITY (RQ):

100 lbs of 2,4-D acid equivalent or approximately 26 gallons of 2,4-D L.V. 4 Ester. For releases greater than the RQ, contact the National Response Center at (800) 424-8802.

| HMIS INFORMATION | |
|------------------|---|
| HEALTH: | 2 |
| FLAMMABILITY: | 1 |
| REACTIVITY: | 0 |
| PROTECTIVE: | H |

SARA TITLE III; Section 313- This product contains the following substances subject to the reporting requirements of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372: 2,4-D 2-ethylhexyl ester
CAS #: 1928-43-4

| NFPA INFORMATION | |
|------------------|---|
| TOXICITY: | 2 |
| FIRE: | 1 |
| REACTIVITY: | 0 |

| | |
|------------------|---|
| NFPA INFORMATION | |
| SPECIAL: | N |

The information given herein is to the best of our knowledge true and accurate. No warranty, however, expressed or implied, is ymade.