SAFETY DATA SHEET

Date Issued : 12/14/2015
SDS No : Varsity D

Varsity D

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Varsity D
CHEMICAL FAMILY: Herbicide

DISTRIBUTOR

Innvictis Crop Care, LLC
4850 Hahns Peak Drive, Suite 200
Loveland, CO 80538

EPA REG. NO.: 71368-115-89391

24 HR. EMERGENCY TELEPHONE NUMBERS

24-Hour Emergency Assistance Call: 1-800-222-1222
Chemical Emergency Call CHEMTREC: 1-800-424-9300

2. HAZARDS IDENTIFICATION

GHS CLASSIFICATIONS

Health:

Acute Toxicity (Oral), Category 4
Eye Irritation, Category 1
Skin Sensitization, Category 1

Environmental:

Acute Hazards to the Aquatic Environment, Category 1
Chronic Hazards to the Aquatic Environment, Category 1

GHS LABEL


Corrosive


Environment


Exclamation mark

SIGNAL WORD: DANGER

HAZARD STATEMENTS

H302: Harmful if swallowed.
H317: May cause an allergic skin reaction.
H318: Causes serious eye damage.
H410: Very toxic to aquatic life with long lasting effects.

PRECAUTIONARY STATEMENTS

General:

P101: If medical advice is needed, have product container or label at hand.
P102: Keep out of reach of children.
P103: Read label before use.

Prevention:

P261: Avoid breathing mist, vapors or spray.
P264: Wash hands, face and other affected areas thoroughly after handling.

P270: Do not eat, drink or smoke when using this product.
P272: Contaminated work clothing should not be allowed out of the workplace.
P273: Avoid release to the environment.
P280: Wear protective gloves/protective clothing/eye protection/face protection.

Response:

P321: Specific treatment see Section 4, First Aid Measures, on this SDS.
P302+P352: IF ON SKIN: Wash with plenty of soap and water.
P333+P313: If skin irritation or rash occurs: Get medical advice/attention.
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313: If eye irritation persists: Get medical advice/attention.
P301+P312: IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
P330: Rinse mouth.
P362: Take off contaminated clothing and wash before reuse.
P391: Collect spillage.

Storage:

P405: Store locked up.

Disposal:

P501: Dispose of contents/container to Local, State and Federal Regulations.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	Wt.%	CAS
2,4-d	37.7 - 40	94-75-7
Other Ingredients	44.85 - 47.95	Mixture

4. FIRST AID MEASURES

EYES: Hold eyes open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes then continue rinsing eyes. Call a poison control center or doctor for treatment advice.

SKIN: Immediately wash skin with plenty of water while removing contaminated clothing. Always wash clothing according to manufacturer's instructions prior to reuse.

INGESTION: Call a poison control center or doctor immediately for treatment advice. Have a person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor. Do not give anything by mouth to an unconscious person.

INHALATION: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth if possible. Call a poison control center or doctor for further treatment advice.

NOTES TO PHYSICIAN: Probable mucosal damage may contraindicate the use of gastric lavage. All treatments should be based on observed signs and symptoms of distress in the patient. Consideration should be given to the possibility that overexposure to materials other than this product may have occurred.

ADDITIONAL INFORMATION: Have the product container or label with you when calling a poison control center or doctor, or going in for treatment. For emergency medical assistance call **NPCC 1-800-222-1222** or call **CHEMTREC 1-800-424-9300**.

5. FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA: Dry chemical, water spray, water fog, CO_2, foam, sand or earth

EXPLOSION HAZARDS: No specific explosion hazards are identified or expected. Always fight fire with the implication that other volatile substances may be present.

FIRE FIGHTING PROCEDURES: Evacuate area and fight fire upwind a safe distance to avoid hazardous vapors and decomposition products. Fire exposed containers can build up pressure and should be kept cool with water spray if possible. Dike and collect water used to fight fire to prevent environmental damage due to runoff. Foam or dry chemical fire extinguishing systems are perferred to prevent environmental damage from excessive water runoff.

FIRE FIGHTING EQUIPMENT: As in any fire, wear self-contained breathing apparatus pressure-demand, (MSHA/NIOSH

approved or equivalent) and full protective gear.

HAZARDOUS DECOMPOSITION PRODUCTS: Irritating or toxic substances may be emitted upon thermal decomposition, decomposition products may include oxides of carbon.

6. ACCIDENTAL RELEASE MEASURES

SMALL SPILL: Contain material. Sweep up spilled material which is contaminated and place it and damaged unusable containers in a container appropriate for non hazardous chemical waste. Check local, state, and federal regulations for proper disposal.

LARGE SPILL: Dike around the spill area to prevent spreading. Pick up spilled material with suitable absorbent material and place in appropriate container for disposal. Scrub the contaminated area with a detergent or soap solution. Place it and unusable containers in a landfill appropriate for non hazardous chemical waste. Check local, state, and federal regulations for proper disposal.

ENVIRONMENTAL PRECAUTIONS

WATER SPILL: Do not contaminate any body of water.

LAND SPILL: Avoid runoff onto any adjacent land.

SPECIAL PROTECTIVE EQUIPMENT: Always wear proper protective equipment when handling this product.

7. HANDLING AND STORAGE

HANDLING: Avoid breathing vapors or spray mist. Wash hands after handling, 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 PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

STORAGE: Store in original container. Keep container tightly closed. Do not allow water or other chemicals to be introduced into contents of container. Do not contaminate water sources with equipment wash water, spray disposal waste or by cleaning of equipment. Keep away from food, feed or other product to prevent contamination. Do not use or store near open flame.

STORAGE TEMPERATURE: (40°F) Minimum to (100°F) Maximum

Notes: If stored below 32°F, this product will freeze. Freezing will not cause this product's formulation to be altered. Thaw product and shake container to help restore it to its normal consistency. Shake well before each use following freezing.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

ENGINEERING CONTROLS: When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultral pesticides [40 CFR 170.240 (d) (4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

PERSONAL PROTECTIVE EQUIPMENT

EYES AND FACE: Wear chemical goggles or shielded safety glasses (ANSI Z87.1 or approved equivalent) when handling and mixing product. Contact lenses should not be worn when working with chemicals.

SKIN: Wear chemical resistant gloves such as Viton or barrier laminate, Coveralls over long-sleeved shirt, long pants and chemical resistant footwear plus socks. Chemical resistant headgear for overhead exposure. When exposed to product concentrate, wear a chemical resistant apron. Always refer to the label of the pesticide(s) in the tank mix and follow the most restrictive requirements.

RESPIRATORY: Work in a well ventilated area; exposure to airborne contaminants is not expected to cause concern. If ventilation is inadequate, a respirator is recommended to protect against spray mist.

PROTECTIVE CLOTHING: Eye protection, long sleeved shirt and long pants, shoes plus socks and chemical resistant gloves. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

OTHER USE PRECAUTIONS: Avoid contact with skin, eyes, and clothing. Avoid breathing vapors. Wash thoroughly after handling product. Eye wash fountains and drench showers should be located within 100 feet or a 10 second walk from the work area per ANSI Z358.1-1990

9. PHYSICAL AND CHEMICAL PROPERTIES

ODOR: Moderate bitter

APPEARANCE: Milky Liquid

COLOR: Light brown

pH: 2.93

PERCENT VOLATILE: Not Established

FLASH POINT AND METHOD: > (212°F)

AUTOIGNITION TEMPERATURE: Not Available

VAPOR PRESSURE: Not Available

VAPOR DENSITY: Not Available

BOILING POINT: Not Available

FREEZING POINT: < (32°F)

MELTING POINT: Not Available

POUR POINT: Not Available

THERMAL DECOMPOSITION: Not Available

SOLUBILITY IN WATER: Soluble

EVAPORATION RATE: Not Available

DENSITY: Not Applicable

SPECIFIC GRAVITY: 1.232 g/mL at 24°C

VISCOSITY #1: 908 cps at 24°C

10. STABILITY AND REACTIVITY

STABLE: Yes

HAZARDOUS POLYMERIZATION: No

STABILITY: Stable under normal use and storage conditions.

POLYMERIZATION: Will not occur.

CONDITIONS TO AVOID: Extreme heat and freezing temperatures.

INCOMPATIBLE MATERIALS: Strong oxidizing agents.

11. TOXICOLOGICAL INFORMATION

ACUTE

DERMAL LD_{50}: > 5000 mg/kg

ORAL LD_{50}: > 1030 mg/kg

INHALATION LC_{50}: > 2.08 mg/L

EYE EFFECTS: Causes serious eye irritation and damage.

SKIN EFFECTS: May cause skin irritation. Overexposure by skin absorption may cause symptoms similar to those for ingestion. May cause an allergic skin reaction (sensitization).

CARCINOGENICITY

Notes: Prolonged overexposure to phenoxy herbicides can cause liver, kidney and muscular damage. The International Agency for Research on Cancer (IARC) lists exposure to chorphenoxy herbicides as a calss 2B carcinogen, the category for limited evidence for carcinogenicity in humans. However, more current 2,4-D lifetime feeding studies in rats and mice did not show carcinogenic potential. The U.S. EPA has given 2,4-D a Class D classification (not classifiable as to human carcinogenicity). Repeated exposures to Flumioxazin Technical in animals have producded anemia and other blood formation changes, organ weight changes, and changes in blood chemistry. Flumioxazin Technical did not produce cancer in life-time feeding studies in laboratory animals.

SENSITIZATION: Sensitizer based on the Local Lymph Node Assay (LLNA) in Mice.

REPRODUCTIVE EFFECTS: No impairment of reproductive function attributable to 2,4-D have been noted in laboratory animal studies. Reproductive effects were observed in rats exposed to Flumioxazin Technical.

TARGET ORGANS: Repeated overexposure to phenoxy herbicides (2,4-D) may cause effects to liver, kidneys, blood chemistry, and gross motor function. Rare cases of peripheral nerve damage have been reported, but extensive animal studies have failed

to substantiate these observations, even at high doses for prolonged periods. Compound related effects of Flumioxazin Technical noted in rats following subchronic exposures at high dose levels were hematotoxicity including anemia, and increses in liver, spleen, heart, kidney, and thyroid weights. In dogs, the effects produced at high dose levels included a slight prolongation in activated partial thromboplastin time, increased cholesterol and phospholipid, elevated alkaline phosphatase, increased liver weights and histological changes in the liver. The lowest no-observable-effect-level (NOEL) in subchronic studies was 30 ppm in three-month toxicity study in rats.

12. ECOLOGICAL INFORMATION

ENVIRONMENTAL DATA: In laboratory and field studies with 2,4-D acid the typical half-life ranged from a few days to a few weeks. Flumioxazin degrades rapidly in water and soil. Dissipation occurs by a combination of hydrolysis and microbial oxidation. Although flumioxazin dissipates rapidly, discrete intermediates do not accumulate and the ultimate environmental products are incorporated into soil organic matter and carbon dioxide. Based on clumn leaching sutdies and the short aerobic soil half-life, the potentital for flumioxazin or its degradation products to leach in field agricultural soils is low. The low use rate and rapid soil dissipation results in low carryover potential to rotational crops.

AQUATIC TOXICITY (ACUTE)

96-HOUR LC_{50}: 100 mg/L (Rainbow Trout)

48-HOUR EC_{50}: > 5.5 mg/L (Daphnia Magna)

Notes: Flumioxazin technical is practically non-toxic to bees and avian species. It is slightly to moderately toxic to freshwater fish and moderately toxic to aquatic invertebrates.

13. DISPOSAL CONSIDERATIONS

DISPOSAL METHOD: Do not reuse product containers. Triple rinse (or equivalent), then offer for recycling at an ACRC site (go to http:www.acrecycle.org/ for locations) or by reconditioning, or puncture and dispose of in a sanitary landfill or by other procedures approved by local, state, and federal regulations.

14. TRANSPORT INFORMATION

DOT (DEPARTMENT OF TRANSPORTATION)

PROPER SHIPPING NAME: <26 Gallons - Not Regulated.
>26 Gallons - Environmentally hazardous substance, Liquid, N.O.S., UN 3082, Class 9, PG III, ERG 171

PRIMARY HAZARD CLASS/DIVISION: 9

UN/NA NUMBER: 3082

PACKING GROUP: III

NAERG: 171

REPORTABLE QUANTITY (RQ) UNDER CERCLA: 100 lbs Acetic Acid (2,4-D Acid)

MARINE POLLUTANT #1: 2,4-D Acid

15. REGULATORY INFORMATION

UNITED STATES

SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT)

311/312 HAZARD CATEGORIES: Acute, Chronic

FIRE: No **PRESSURE GENERATING:** No **REACTIVITY:** No **ACUTE:** Yes **CHRONIC:** Yes

313 REPORTABLE INGREDIENTS: Acetic Acid (2,4-Dichlorophenoxy) - (CAS No. 94-75-7) 100 lbs.

EPCRA SECTION 313 SUPPLIER NOTIFICATION

Chemical Name	Wt.%	CAS
2,4-d	37.7 - 40	94-75-7

CERCLA (COMPREHENSIVE RESPONSE, COMPENSATION, AND LIABILITY ACT)

Chemical Name	Wt.%	CERCLA RQ
2,4-d	37.7 - 40	100

TSCA (TOXIC SUBSTANCE CONTROL ACT)

Chemical Name	CAS
2,4-d	94-75-7

TSCA REGULATORY: Exempt from TSCA, subject to FIFRA.

CALIFORNIA PROPOSITION 65: Not Listed

FIFRA (FEDERAL INSECTICIDE, FUNGICIDE, AND RODENTICIDE ACT):

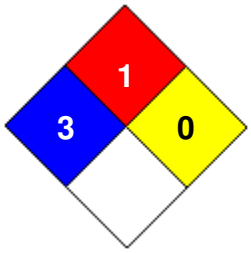
This chemical is a pesticide product registered by the United States Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets (SDS), and for workplace labels of non-pesticide chemicals. The hazard information required on the pesticide label is reproduced below. The pesticide label also includes other important information, including directions for use.

DANGER. Corrosive. Causes irreversible eye damage. Harmful if swallowed. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Prolonged or frequently repeated skin contact may cause allergic reaction in some individuals.

16. OTHER INFORMATION

REASON FOR ISSUE: New SDS Format

NFPA CODES



GENERAL STATEMENTS: DISCLAIMER AND LIMITATION OF LIABILITY

This data sheet was developed from information on the constituent materials identified herein and does not relate to the use of such materials in combination with any other material or process. No warranty is expressed or implied with respect to the completeness or ongoing accuracy of the information contained in this data sheet, and INNVICTIS CROP CARE LLC, disclaims all liability for reliance on such information. This data sheet is not a guarantee of safety. Users are responsible for ensuring that they have all current information necessary to safely use the product described by this data sheet for their specific purpose.