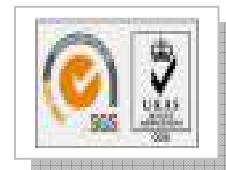




## MATERIAL SAFETY DATA SHEET DICAL -2,4 D 720 g/l SL

1 PRODUCT AND COMPANY IDENTIFICATION		
CAS NUMBER	94-75-7	
MATERIAL	2-4DICHLOROPHNOXYACETIC ACID	
CHEMICAL FAMILY	CARBOXYL ACID AROMATIC	
MOLECULAR FORMULA	(CL-2-C6H3-0)-H2-C-02-H	
MOLECULAR WEIGHT	221.04	
<b>Company Identification</b> <b>Willowood Limited</b> Hong Kong. Phone:2571-3011 Fax:2571-3410 Email:sales@willowoodhk.com		
2 COMPOSITION / ACTIVE INGREDIENT INFORMATION		
Ingredients	CAS number	Proportion (% g/kg)
2,4-D (2-4DICHLOROPHNOXYACETIC ACID)	94-75-7	720
Emulsifier –	--	11.7
Solvent – Water upto		1ltr
3 HAZARDS IDENTIFICATION		
The International Agency for Research on Cancer (IARC) lists chlorophenoxy herbicides in its Group 2B (limited evidence for carcinogenicity in humans.) The US EPA has given the chlorophenoxyherbicides 2,4-D a class D classification(not classifiable as to human carcinogenicity.) More current lifetime feeding studies in rats and mice did not show carcinogenic effects and a recent World Health Organization (WHO) review of toxicology has concluded that is not a carcinogen.		





## 4 FIRST AID MEASURES

### Route(s) of Entry:

Skin contact, Inhalation, Ingestion.

### Health Hazards (Acute and Chronic):

EYES: Moderately irritating to eyes.

SKIN: Moderately irritating to the skin.

INHALATION: Moderately irritating to the mucous membranes.

Inhalation of sprays may cause burning sensations in the respiratory tract, resulting in coughing.

INGESTION: May cause vomiting, with pain in the chest and abdomen, and diarrhea.

### Signs and Symptoms:

Inhalation may cause burning in the chest, with coughing. Prolonged inhalation sometimes causes dizziness. Ingestion usually leads to vomiting. Pain in the chest and abdomen, and diarrhea may follow. Headache, mental confusion, and bizarre behavior are early manifestations of severe poisoning, which may progress to unconsciousness. Individuals with chronic skin disease or known sensitivity to chlorophenoxy compounds should either avoid using them or take strict precautions to avoid contact. (respirator, gloves, etc.)

### Medical Conditions Generally Aggravated by Exposure:

#### Emergency First Aid Procedure:

If swallowed:

- Call a poison control center or doctor immediately for treatment advice.
- Do not induce vomiting unless told to by a poison control center or doctor.
- Do not give any liquid to the person.
- Do not give anything by mouth to an unconscious person.

If in eyes:

- Hold eye 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.
- Call a poison control center or doctor for treatment advice.

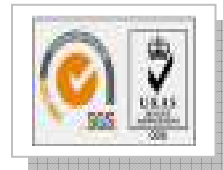
If on skin:

- Take off contaminated clothing.
- Rinse skin immediately with plenty of water for 15 - 20 minutes.
- Call a poison control center or doctor for treatment advice.

If inhaled:

- Move person to fresh air.
- If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible.
- Call a poison control center or doctor for treatment advice. Have the product container or label with you when calling a poison control center or doctor or going for treatment.

NOTE TO PHYSICIAN: Contains petroleum distillate - vomiting may:





## 5 FIRE FIGHTING MEASURES

**Lower Explosive Limit: F.P. Method:**

**Flash Point:** >200°F

Pensky Martens CCNINI

**Fire Extinguishing Media:**

Foam, CO<sub>2</sub>, dry chemical. Wear positive-pressure breathing apparatus and full protective clothing. Fight fire from maximum distance. Stay up-wind and out of low areas.

**Special Fire Fighting Procedures:**

Fire fighting precautions would be the same as those used for any petroleum based oil product. Runoff from fire control area or dilution water may cause pollution. If surface water is contaminated, contact local authorities.

## 6 ACCIDENTAL RELEASE MEASURES

**Steps to be Taken in Case Material is Released or Spilled:**

Do not touch spilled material. See Section 8 for Personal Protective Equipment. Contain and absorb spilled material on Dri-Rite, sand or other inert absorbent. Collect into drums; cover and label for disposal.

Flush area with water if possible.

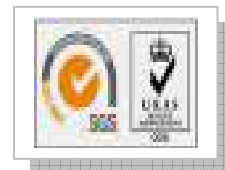
## 7 HANDLING AND STORAGE

**Precautions to be Taken:**

Do not contaminate water, food, or feed by storage or disposal. STORAGE: Store in original container in a locked storage area. Keep from freezing.

**Other Precautions:**

Engineering Control Statements of non-WPS uses: Containers over 1 gallon and less than 5 gallons: Persons engaged in open pouring of this product must also wear coveralls or a chemical resistant apron. Containers of 5 gallons or more: Do not open-pour product from this container. A mechanical system (such as a probe and pump or spigot) must be used for transferring the contents of this container. If the contents of a non-refillable pesticide container are emptied, the probe must be rinsed before removal.





## 8 EXPOSURE CONTROL / PERSONAL PROTECTION

Good local ventilation is recommended; mechanical ventilation may be used if exposure limits may be exceeded.

**Ventilation Requirements:**

**Personal Protective Equipment:**

**Clothing Requirement Statement:**

When mixing, loading, or applying this product, wear long-sleeved shirt, long pants, socks, shoes, chemical-resistant gloves and eye protection. It is recommended that safety glasses include front, brow, and temple protection.

**Personal Hygiene Statement:**

After using this product, rinse gloves before removing, remove clothing and launder separately before reuse, and promptly and thoroughly wash hands and exposed skin with soap and water. Remove saturated clothing as soon as possible and shower.

**PROTECTIVE CLOTHING:** Wear long sleeves and pants; chemical-resistant gloves and shoes with socks.

**EYE PROTECTION:** Safety glasses with side shields or safety goggles.

**RESPIRATORY PROTECTION:** If exposure limits may be exceeded, wear a respirator with an organic-vapor removing cartridge with a prefilter approved for pesticides (MSHA/NIOSH approval number prefix TC-23C), or a NIOSH approved respirator with any R, P or HE filter.

## 9 PHYSICAL AND CHEMICAL PROPERTIES

**Boiling Point:** >200 °F

**Melting Point:** NI

**Evaporation Rate (Butyl Acetate = 1) :** <1

**Vapor Pressure (mmHg.):** NI

**Vapor Density (Air = 1):** NI

**Solubility in Water:** Emulsifiable

**Specific Gravity (H<sub>2</sub>O = 1):** 0.96650

**Appearance and Odor:** Amber liquid, ester odor

pH = 2.92 for a 1% aqueous solution

Density = 8.05 pounds/gallon

Freezing point <35°F

Viscosity: 8.11 cps @ 23.8°C

## 10 STABILITY AND REACTIVITY

Stable.

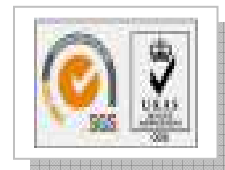
**Stability:**

None known

**Incompatibility (Materials to Avoid):**

May produce gases such as HCl, organo chlorides, nitrogen oxides, and carbon monoxide when burning.

**Decomposition/By-Products:** **Hazardous Polymerization:** Will not occur.





## 11 TOXICOLOGICAL INFORMATION

EYES: Moderately irritating to the eye.

SKIN: Moderately irritating to the skin. Acute dermal LD50 is greater than 2,000 mg/kg for males, and between 1,000 and 2,000 for females. This product is considered to be a contact sensitizer.

INHALATION: Acute inhalation LC50 is greater than 2.06 mg/L in male and female rats.

INGESTION: Acute oral LD50 is greater than 2,000 mg/kg for male and female rats.

## 12 ECOLOGICAL INFORMATION

Carfentrazone is very toxic to algae and moderately toxic to fish. This product is toxic to aquatic invertebrates. Drift or runoff may adversely affect aquatic invertebrates and nontarget plants. Do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwater. When cleaning equipment, do not pour the washwater on the ground;

## 13 DISPOSAL

Disposal should be carried out in accordance with local, state and national legislation.

## 14 TRANSPORT INFORMATION

The following guidelines apply for domestic ground transport. If shipping by air or ocean, please contact our Transportation Dept.

Freight Class: Herbicides, NOI - NMFC #50320

In our current available sizes, this product does not qualify as a Hazardous Material.

## 15 REGULATORY INFORMATION

OSHA STATUS: This product is hazardous under the criteria of the Federal OSHA Hazard Communication Standard 29 CFR 1910.1200. TSCA STATUS: This product is exempt from TSCA Regulation under FIFRA Section 3(2)(B)(ii) when used as a pesticide.

## 16 OTHER INFORMATION

The information provided in this Material Safety Data Sheet is correct to the best of our knowledge. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification, since the conditions of the operations mentioned are beyond our control. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process unless specified in the text. Willowood disclaims any liability for loss or damage resulting from the use of these data, information or suggestions.

