

**DALOT 240 EC**  
**MATERIAL SAFETY DATA SHEET**

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**SECTION-1****PRODUCT /COMPANY IDENTIFICATION**

Product Name	:	<b>DALOT 240 EC</b>
Active Ingredient	:	Clethodim 240 g/L EC
Chemical Name	:	(5RS)-2-[(1EZ)-1-[(2E)-3-chloroallyloxyimino]propyl]-5-[(2RS)-2-(ethylthio)propyl]-3-hydroxycyclohex-2-en-1-one
CAS No	:	99129-21-2
Chemical Family	:	Cyclohexanedione oxime
Type of Formulation	:	Emulsifiable Concentrate (EC)
Indented Use	:	Agricultural herbicide

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**SECTION-2****COMPOSITION/ INFORMATION ON INGREDIENTS**

Active Ingredient	CAS No	Content (g/L)
Clethodim	99129-21-2	240.0

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**SECTION-3****HAZARD IDENTIFICATION****Pictograms****H-Statements**

H302	:	Harmful if swallowed
H304	:	May be fatal if swallowed and enters airways
H315	:	Causes skin irritation
H320	:	Causes eye irritation
H373	:	May cause damage to organs through prolonged or repeated exposure

**Precautionary Statements**

P102	:	Keep out of reach of children.
P201	:	Keep away from heat, sparks, open flames. - No smoking
P260	:	Do not breathe mist, vapors
P280	:	Wear protective gloves, protective clothing and eye and/or face protection.

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#### **SECTION-4**

##### **Health hazards**

#### **FIRST AID MEASURES**

- If ingestion : If product swallowed in any form, do not induce vomiting. Immediately rinse mouth with water. Give a glass of water. If vomiting occurs spontaneously, keep head below hips to prevent aspiration. Do not give anything by mouth to an unconscious person. Seek immediate medical attention
- If inhaled : If product is inhaled, remove person to fresh air. If not breathing, give artificial respiration. Seek medical attention if breathing problems develop.
- If on skin : Remove contaminated clothing. Wash skin and hair thoroughly; do two soap and water washings.
- If in eyes : Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.
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#### **SECTION-5**

#### **FIRE FIGHTING MEASURES**

- Suitable extinguishing media : In event of fire, use fire extinguishing methods are carbon dioxide, dry chemical, foam, water fog.
- Specific hazards arising from the chemical : If involved in a fire, the dehydrated components may emit toxic fumes.
- Firefighting Instructions : Fire fighters should wear full protective gear, including self-contained breathing apparatus. Keep unnecessary people away. If it can be done safely, remove intact containers from the fire. Otherwise, use water spray to cool them. Bund area with sand or earth to prevent contamination of drains or waterways. Dispose of fire control water or another extinguishing agent and spillage safely later.
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#### **SECTION-6**

#### **ACCIDENTAL RELEASE MEASURES**

- Personal precautions, protective equipment and emergency procedures : In case of spillage it is important to take all steps necessary to: Avoid contact with the spilled material or contaminated surfaces. Extinguish or remove any sources of ignition. When dealing with spills do not eat, drink or smoke and wear protective clothing and equipment. Keep people and animals away. Prevent spilled material

		from entering drains or watercourses.
Environmental precautions	:	Do not allow to get into surface water, drains and ground water. If the product contaminates rivers and lakes or drains inform respective authorities.  Reposition any leaking containers so as to minimize leakage. Dam and absorb spill with an absorbent material (eg sand or soil). Shovel the absorbed spill into drums
Methods and materials for containment and cleaning up	:	Contain spill and absorb with earth, sand, clay, or other absorbent material. Collect and store in properly labelled, sealed drums for safe disposal. Deal with all spillages immediately). Clean contaminated floors and objects thoroughly, observing environmental regulations If contamination of drains, streams, watercourses, etc. is unavoidable, warn the local water authority.

## SECTION-7

## HANDLING AND STORAGE

Precautions for safe handling	:	Safe work practices are recommended. Avoid contact with eyes and skin.  When opening the container and preparing spray wear appropriate PPE (refer Section 8).  Do not spray under high wind conditions.
Conditions for safe storage	:	Keep out of reach of children, unauthorized persons and animals.  Store in tightly sealed original containers in a dry secure place away from fertilizers, feed and food.
Incompatibilities	:	Store out of direct sunlight and extreme temperature.

## SECTION-8

## EXPOSURE CONTROLS AND PERSONAL PROTECTION

Engineering controls	:	Use only with adequate ventilation. Keep container tightly closed. Do not generate dust.
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### Personal protective equipment (PPE)

Respiratory protection	:	Use NIOSH/MSHA approved respirator appropriate for exposure of concern.
Hand protection	:	Protective gloves
Eye protection	:	Wear safety glasses with side shields. Additionally, wear a face shield where the possibility exists for face contact due to splashing, spraying or airborne contact with this material.
Skin and body protection	:	Where there is potential for skin contact have available and wear as appropriate impervious gloves, apron, pants, and jacket.

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**SECTION-9****PHYSICAL AND CHEMICAL PROPERTIES**

Appearance	:	Clear to amber colored liquid
Odor	:	Aromatic
pH	:	4 - 7
Flash Point	:	>54°C
Solubility (water)	:	Emulsifiable
Stability	:	Stable under normal temperature and pressure

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**SECTION-10****STABILITY & REACTIVITY**

Possibility of Hazardous Reactions	:	No dangerous reaction known under conditions of normal use and storage conditions.
Chemical Stability	:	This product is chemically stable under recommended conditions of storage, use and temperature.
Conditions to Avoid	:	Protect this product from light. Store in the closed original container in a dry, cool, well ventilated area out of direct sunlight.
Incompatible materials	:	Strong acids, strong bases, strong oxidizing agents.
Polymerization	:	This product will not undergo polymerization reactions.

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**SECTION-11****TOXICOLOGICAL INFORMATION**

Acute oral LD <sub>50</sub> , mg/kg rats	:	>2000
Acute dermal LD <sub>50</sub> , mg/kg rabbits	:	>2000
Acute Inhalation LD <sub>50</sub> , mg/kg rat	:	>5.26 (4h)
Skin Irritation (rabbits)	:	Slight Irritant
Eye Irritation (rabbits)	:	Not an irritant
Skin Sensitization (guinea pigs)	:	Sensitizer

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**SECTION-12****ECO-TOXICOLOGICAL INFORMATION**

Acute oral LD <sub>50</sub> for Bobwhite quail	:	>5000 mg/kg
Acute oral LD <sub>50</sub> for Mallard ducks	:	>5000 mg/kg diet
Rainbow trout LD <sub>50</sub> , mg/kg	:	160mg/L
Daphnia LC <sub>50</sub> (48h)	:	>220.0 mg/L
Algae EC <sub>50</sub> (72h) for <i>S. capricornutum</i>	:	100 mg/L
Bees (LD <sub>50</sub> , µg/bee)	:	> 100 (contact)
Worms (LC <sub>50</sub> , for earthworm)	:	>1000mg/Kg soil

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**SECTION-13****DISPOSAL CONSIDERATIONS**

- Disposal of the products : All herbicide waste are considered acutely toxic. On site disposal of the concentrated product is not acceptable. Ideally, the product should be used for its intended purpose. If there is a need to dispose of the product, approach local authorities who hold periodic collections of unwanted chemicals.
- Disposal of the container : Do not re-use empty containers. (Consult local authority).
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**SECTION-14****TRANSPORT INFORMATION**

- General Transport Information : It is considered good practice not to transport agricultural chemical products with food, food related materials and animal feed products.
- Proper shipping Name : Environmentally hazardous substance, Flammable liquid, [Land/Air/Sea] n.o.s. (Contains Clethodim)
- UN Number : 1993
- Class : 3
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**SECTION-15****REGULATORY INFORMATION****H-Statements**

- H302 : Harmful if swallowed
- H304 : May be fatal if swallowed and enters airways
- H315 : Causes skin irritation
- H320 : Causes eye irritation
- H373 : May cause damage to organs through prolonged or repeated exposure

**Precautionary Statements**

- P102 : Keep out of reach of children.
- P280 : Wear protective gloves, protective clothing and eye and/or face protection.
- P273 : Avoid release to the environment.
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**SECTION-16****OTHER INFORMATION**

The information contained in the Material Safety Data Sheet is correct to the best of our knowledge at the date of issue. It is intended as a guide for the safe use, handling, disposal, storage and transportation and is not intended as a warranty or as a specification. The information relates only to the product specified and may not be suitable for use with other materials or in processes other than those specifically described herein.

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