

MOFARNO 160EC
MATERIAL SAFETY DATA SHEET

SECTION-1

PRODUCT /COMPANY IDENTIFICATION

Product Name	:	MOFARNO 160 EC
Active Ingredient	:	Fomesafen 125 + Quizalofop-p-ethyl 35 g/L EC
Chemical Name	:	Fomesafen: 5-(2-chloro- α,α -trifluoro-p-tolyloxy)-N-mesyl-2-nitrobenzamide Quizalofop-p-ethyl: ethyl (R)-2-[4-(6-chloroquinoxalin-2-yloxy)phenoxy]propionate.
CAS No	:	Fomesafen :72178-02-0 Quizalofop-p-ethyl: 100646-51-3
Chemical Family	:	Fomesafen: diphenyl ether Quizalofop-p-ethyl: aryloxyphenocypionate
Type of Formulation	:	Emusifiable Concentrate (EC)
Indented Use	:	Agricultural herbicide
Company/Supplier details	:	SINERIA HOLLAND BV. Randwycksingel 20-A015 6229 EE, Maastricht. The Netherlands www.sineria.com

SECTION-2

COMPOSITION/ INFORMATION ON INGREDIENTS

Active Ingredient	CAS No	QTY (g/L)
Fomesafen	72178-02-0	125g/L
Quizalofop-p-ethyl	100646-51-3	35g/L

SECTION-3

HAZARD IDENTIFICATION

Pictograms

:



H-Statements

- H315 : Causes skin irritation
H317 : May cause an allergic skin reaction
H320 : Causes eye irritation
H402 : Harmful to aquatic life
H410 : Very toxic to aquatic life with long-lasting effects

Precautionary Statements

- P101 : If medical advice is needed, have product container or label at Hand.
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.

SECTION-4

FIRST AID MEASURES

Health hazards

- 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.

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.
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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.
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SECTION-8

EXPOSURE CONTROLS AND PERSONAL PROTECTION

- Engineering controls : Use only with adequate ventilation. Keep container tightly closed. Do not generate dust.
- 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 : Transparent to yellowish liquid
- Odor : Aromatic
- pH : 5-9
- Flash Point : Not Applicable
- Solubility (water) : Emulsion
- 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

Based on A.I. information

Fonesafen

- Acute oral LD₅₀, mg/kg rats : >2000mg/kg
- Acute dermal LD₅₀, mg/kg rabbits : >2000mg/kg
- Acute Inhalation LD₅₀, mg/kg rat : 2.82 (4h)
- Skin Irritation (rabbits) : Mild irritant
- Eye Irritation (rabbits) : Irritant
- Skin sensitisation : Not a sensitizer

Quizalofop-P-ethyl

- Acute oral LD₅₀, mg/kg rats : 1180 (female); 1210 (male)
- Acute oral LD₅₀, mg/kg mice : 1810 (female); 1750 (male)
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SECTION-12

ECO-TOXICOLOGICAL INFORMATION

Based on A.I. Information

Fomesafen

- Dietary LC₅₀ (5d) for mallard ducks and bobwhite quail : >20000 mg/kg diet
- Acute oral LD₅₀ for mallard ducks : >5000mg/kg
- Rainbow trout LC₅₀, (96h) mg/L : 155 mg/L
- Bluegill sunfish : 1375 mg/L
- Daphnia EC₅₀ (48h) : 330mg/L
- Algae EC₅₀ (72h) : 0.17mg/L
- Bees (LD₅₀, µg/bee) : >50 (oral); > 100 (contact)

Quizalofop-P-ethyl

Acute oral LD ₅₀ for Bobwhite quail	:	>2000mg/kg
Acute oral LD ₅₀ for mallard ducks	:	>2000mg/kg
Rainbow trout LC ₅₀ , (96h) mg/L	:	>0.5 mg/L
Daphnia LC ₅₀ (48h)	:	0.29mg/L
Worms LC ₅₀ , (14 d) for earthworm	:	>1000mg/kg soil

SECTION-13

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).

DISPOSAL CONSIDERATIONS

SECTION-14

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, liquid, n.o.s.

[Land/Air/Sea]

(Contains Fomesafen and Quizalofop-P-ethyl)

UN Number

: 3082

Class

: 9

TRANSPORT INFORMATION

SECTION-15

GHS07: Harmful

GHS09: Environmental hazard

H-Statements

H315

: Causes skin irritation

H317

: May cause an allergic skin reaction

H320

: Causes eye irritation

H402

: Harmful to aquatic life

H410

: Very toxic to aquatic life with long-lasting effects

REGULATORY INFORMATION

Precautionary Statements

- P101 : If medical advice is needed, have product container or label at Hand.
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- 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 with other materials or in processes other than those specifically described herein.

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