



SAFETY DATA SHEET

PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: HARVEST CHASER 240 SC
 ACTIVE: **METHOXYFENOZIDE 240g/L**
 REGISTRATION HOLDER: HARVEST CROP SOLUTIONS (PTY) LTD.
 DISTRIBUTOR: HARVEST CHEMICALS (PTY) LTD.
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1. CHEMICAL PRODUCT

Identified Uses: Agricultural Crop Protection Product

2. COMPOSITION/INFORMATION ON INGREDIENTS

Component

| | | | |
|-------------------|---------------|----------|-------------|
| Methoxyfenozide | 21-24% | N;R51/53 | 161050-58-7 |
| Inert ingredients | 76-79% | | |
| UN NO | Not regulated | | |

3. HAZARDS IDENTIFICATION

This product is not classified as dangerous according to EC criteria.

4. FIRST AID MEASURES

General advice: First Aid responders should pay attention to self -protection and use the appropriate protective clothing as indicated on the label. Exposure control and limits for personal protection listed in section 8.

Inhalation: Move the patient to a well ventilated cool area. If the patient is not breathing, call for emergency response or ambulance. Then give artificial respiration by mouth to mouth using rescuer protection. Call the poison control centre or Medical Doctor for treatment advice.

Skin Contact: Remove contaminated clothing. Wash skin immediately with plenty of running water for 15-20minutes. Call the poison control centre or Medical Doctor for treatment advice.

Eye Contact: Flush eyes thoroughly with running water for at least 15 minutes. If irritations persist consult a Medical Doctor or preferably an Ophthalmologist.

Ingestion: No emergency medical treatment necessary.

SYMPTONS AND SIDE EFFECTS-ACUTE AND/OR DELAYED

Beside the information contained in the above listed First Aid Measures no further adverse symptoms or side effects are anticipated. No specific antidotes are prescribed and treatment to any form of exposure should be symptomatic. Ensure having the Material Safety Data Sheet available when seeking advice from a poison control centre or Medical Doctor or seeking medical assistance from a Hospital.

Having the product label and empty container handy would assist.

5. FIRE FIGHTING MEASURES

Suitable Fire Extinguishing Equipment

Product not flammable and does not ignite or burn.

Combustion Hazard

In conditions of fire heat certain components of the product may decompose and the smoke may contain Nitrogen oxides - Carbon monoxide, Carbon dioxide and other unidentified toxic or irritating compounds.

Explosion and other fire hazards

Exposure to fire from an outside source resulting in water evaporation and steam, toxic fumes may be released.

Heed to Fire-fighters

Maintain standard procedures by keeping people away from the fire and denying unauthorised entry. Isolate the fire if possible as this material does not burn. Contain fire water run-off as it may contain residues from other burning material and cause environmental damage. Observe the accidental release measures and Ecological information sections of this M.S.D.S

Fire fighters Protection Equipment

Wear positive -pressure self-contained breathing apparatus and protective fire fighting clothing which include helmet, coat, trousers, boots and gloves.

6. ACCIDENTAL RELEASE MEASURES

Personal: Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection

Environmental: Prevent from seeping or flowing into soil, ditches, sewers, waterways and/or groundwater. See Section 12 Ecological Information.

Containment and cleaning up: _Contain spilled material if possible.

Small spills: Absorb with materials such as: Clay, Dirt, Sand, and Seep up. Collect in suitable and properly identified containers. Large spills: Contact Harvest Crop Protection for clean-up assistance. See Section 13, Disposal Considerations, for additional information.

7. HANDLING AND STORAGE

Handling: Keep out of reach of children, uninformed persons and animals. Do not swallow. Avoid breathing vapour or spray mist. Avoid contact with eyes and skin. Wash thoroughly after handling. Handle in properly ventilated area. See Section, EXPOSURE CONTROLS AND PERSONAL PROTECTION
Storage: Store in a dry place with moderate temperature. Keep container tightly closed when not in use. Do not decant for storage. Do not store near food, animal feed, potable water or eating utensils

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Limits

| Component | list | Type | Value |
|------------------|--------|---|-----------------------------|
| Methoxyfenozide | | TWA Respirable Fraction | 3mg/m ³ |
| | | TWA Inhalable Fraction | 10mg/m ³ |
| Propylene Glycol | WEEL | TWA Aerosol | 10mg/m ³ |
| | ZA REL | TWA Particulate | 10mg/m ³ |
| | ZA REL | TWA Total Vapour and particulates | 470mg/m ³ 150ppm |

RECOMMENDATIONS IN THIS SECTION ARE FOR PRODUCTION, BLENDING AND PACKAGING WORKERS. APPLICATORS AND ASSISTANTS SHOULD CONSULT THE PRODUCT LABEL FOR PERSONAL PROTECTIVE REQUIREMENTS.

Personal Protection

Eye / Face Protection: Use safety glasses (with shields) consistent with EN166 or equivalent.

Skin Protection: Wear clean total body- covering protective clothing.

Hand Protection: Use gloves chemically resistant to this material when prolonged or frequently. repeated contact may occur classified under Standard EN374: Protective gloves against chemical and micro-organisms. Preferred glove barrier materials include: Neoprene. Nitril/butadiene rubber ("nitrile" or NBR). Polyvinyl chloride ("PVC" or "vinyl"). When prolonged or frequently repeated contact may occur, a glove with protection class of 4 or higher (breakthrough time greater than 120 minutes according to EN 374) is recommended. When only brief contact is expected, a glove with a protection class of 1 or higher (breakthrough time greater than 10 minutes according to EN374) is recommended.

Observe the instructions and specifications provided by the glove supplier.

Respiratory Protection: For most conditions no respiratory protection would be required. However if discomfort or irritation is experienced use a suitable C.E. approved air-purifying respirator with an organic filter and a type APZ pre- filter.

Ingestion: Do not swallow. Do not eat in the workplace. Wash hands before eating or smoking.

Engineering Guidelines: General, proper ventilation should be sufficient.

9. PHYSICAL AND CHEMICAL PROPERTIES

| | |
|--|---|
| Physical State: | Liquid |
| Colour: | White to brown |
| Odour: | Mild |
| Odour Threshold: | No test data available |
| Ph | 7 |
| Melting point | Not Applicable |
| Freezing point | No test data available |
| Boiling point (760 mmHg) | No test data available |
| Flash point- Closed Cup | Not combustible |
| Evaporation Rate (Butyl Acetate =1) | No test data available |
| Flammability (solid, gas) | Not applicable to liquids |
| Flammable Limits in air | Lower: No test data available Upper: No test data available |
| Vapour Pressure | No test data available |
| Vapour Density (air=1) | No test data available |
| Specific Gravity (H ₂ O=1) | No test data available |
| Solubility in water (by weight) | Not Applicable |
| Partition coefficient, octanol/ water (log Pow) | No test data available See Section 12 for individual component data. |
| Autoignition Temperature | No test data available |
| Decomposition Temperature | No test data available |
| Kinematic Viscosity | No data available |
| Explosive properties | No |
| Oxidizing properties | No |
| Liquid Density | 1.1 g/ml @ 20 °C |

10. STABILITY AND REACTIVITY

Reactivity: No dangerous reaction known under conditions of normal use. Chemical stability: Stable
 Possibility of hazardous reactions: Polymerization will not occur. Conditions to Avoid: None known
 Incompatible Materials: None known.
 Hazardous decomposition products: Does not decompose

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Ingestion

Very low toxicity if swallowed. Harmful effects not anticipated from swallowing small amounts.

As product: LD₅₀ > 5,000 mg/ kg

No deaths occurred at this concentration.

Aspiration hazard

Based on available information, aspiration hazard could not be determined.

Dermal

Prolonged skin contact is unlikely to result in absorption of harmful amounts.

As product: LDS0, rat. 2,000 mg/ kg

No deaths occurred at this concentration.

Inhalation

At room temperature, exposure to vapour is minimal due to low volatility. No adverse effects are anticipated from single exposure to mist. Based on the available data, respiratory irritation was not observed.

As product: LCS0, 4 h, Aerosol.rat. 0.9mg/ l

No deaths occurred at this concentration. Maximum attainable concentration.

Eye damage/ eye irritation

Essentially non -irritating to eyes.

Skin corrosion/irritation

Brief contact is essentially non- irritating to skin

Sensitization

Skin

As product: Did not cause allergic reactions when tested in guinea pigs.

Respiratory

No relevant data found

Repeated Dose Toxicity

For the active ingredient(s): may cause methemoglobinemia, thereby impairing the blood's ability to transport oxygen. In animals, effects have been reported on the following organs: Blood, Liver, Kidney and Thyroid. For the minor component(s): In rare cases, repeated excessive exposure to propylene glycol may cause central nervous systems effects.

Chronic Toxicity and Carcinogenicity

Active ingredient did not cause cancer in laboratory animals.

Developmental Toxicity

For the active ingredient(s): did not cause birth defects or any other fetal effects in laboratory animals.

Reproductive Toxicity

In animal studies the active ingredient did not interfere with reproduction.

Genetic Toxicology

As product: In vitro genetic toxicity studies were negative. Animal genetic toxicity studies were negative.

12. ECOLOGICAL AND ECOTOXICOLOGICAL INFORMATION

Toxicity

Material is not classified as dangerous to aquatic organisms (LCS0/ECS0/ICS0/LLS0/ELS0 greater than 100mg/L in most sensitive species). Material is practically non-toxic to birds on an acute basis (LDS0 > 2000mg/kg)

Fish Acute & Prolonged Toxicity

LCS0, *Oncorhynchus mykiss* (rainbow trout), 96 h: 100 mg/l

Aquatic invertebrate Acute Toxicity

ECS0, *Daphnia magna* (Water flea), 48 h, immobilization: 100 mg/l

Aquatic Plant Toxicity

ErCS0, *Pseudokirchneriella subcapitata* (green algae), Growth rate inhibition, 96 h: > 100 mg/l Toxicity to Above Ground Organisms

As product: oral LOSO, *Colinus virginianus* (Bobwhite quail): > 2,250 mg/kg

Toxicity to soil Dwelling Organisms

LCS0, *Eisenia fetida* (earthworms): > 1,250 mg/kg

Persistence and Degradability

Data for Component : Methoxyfenozide

Biodegradation rate may increase in soil and/or water with acclimation

Data for Component Propylene glycol

Material is readily biodegradable. Passes OECD test(s) for ready biodegradability. Biodegradation may occur under anaerobic conditions (in the absence of oxygen).

OECD Biodegradation Tests:

| Biodegradation | Exposure time | Method | 10 Day window |
|----------------|---------------|-----------------|----------------|
| 81% | 28 days | OECD 301 F Test | Pass |
| 96% | 64 days | OECD 306 test | Not applicable |

Data for Component: Sodium Lignosulfonate No relevant information found. Indirect

Photodegradation with OH Radicals

| Rate Constant | Atmospheric Half -life | Method |
|-------------------------------|------------------------|-----------|
| 1,089E -10 cm ³ /s | 0.098d | Estimated |

Bioaccumulative potential

Bioaccumulation : Bioconcentration potential is moderate (BCF between 100 and 3000 or Log Pow between 3 and 5)

Partition coefficient, n-octanol/water (log Pow): 3.72 Shake flask (OECD 107 test) Bioconcentration Factor (BCF): 11.0; Fish; Measured

Data for Component: Propylene glycol

Bioaccumulation: Bioconcentration potential is low (BCF < 100 or Log Pow < 3).

Partition coefficient, n-octanol/water (log Pow): -1.07 Measured

Bioconcentration Factor (BCF): 0.09; Estimated

Data for Component : Sodium lignosulfonate

Bioaccumulation: Bioconcentration potential is low (BCF < 100 or Log Pow < 3)

Partition coefficient, n-octanol/water (log Pow): - 3.45 Estimated

Bioconcentration Factor (BCF): 3.2; Fish

Mobility in soil

Data for Component: Methoxyfenozide

Mobility in soil: Potential for mobility in soil is medium (Koc between 150 and 500)

Henry's law constant (H): $<1.64 \text{ E-04 Pa} \cdot \text{m}^3/\text{mole}; 20 \text{ }^\circ\text{C}$

Data for Component: Propylene glycol

Mobility in soil: Given its very low Henry's constant; volatilization from natural bodies of water or moist soil is not expected to be an important fate process. Potential for mobility in soil is very high (Koc between 0 and 50).

Partition coefficient, soil organic carbon/water (Koc): <1 Estimated.

Henry's law Constant (H) : $1.2 \text{ E-08 atm} \cdot \text{m}^3/\text{mole}$ Measured.

Data for Component: Sodium lignosulfonate

Mobility in soil: Expected to be relatively immobile in soil (Koc >5000)

Partition coefficient, soil organic carbon/water (Koc): $>99,999$ Estimated.

Henry's Law Constant (H): $9.43 \text{ E-25 atm} \cdot \text{m}^3/\text{mole}; 25^\circ\text{C}$ Estimated.

13. DISPOSAL CONSIDERATIONS

If waste product or empty containers cannot be disposed of according to the product label directions, disposal of this material must be in accordance with your local or area regulatory authorities. This information presented below only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations. If the material as supplied becomes waste, follow all applicable local, regional and national laws.

14. TRANSPORT INFORMATION

| | |
|------------------|---------------|
| ROAD&RAIL | Not regulated |
| OCEAN | Not regulated |
| INLAND WATERWAYS | Not regulated |
| AIR | Not regulated |

It will at all times remain the responsibility of the transporting organisation to follow all applicable laws, regulations and rules relating to the transportation of the product.

15. REGULATORY INFORMATION

European Inventory of Existing Commercial Chemical Substances (EINECS)

The components of this product are on the EINECS inventory or are exempt from inventory requirements.

Classification and User Information

This product is not classified as dangerous according to EC criteria. Contains:

- ▶ Methoxyfenozide
- ▶ Propylene glycol
- ▶ Sodium lignosulfonate

To avoid risks to mankind, animals, plants and the environment, comply with the usage instructions.

16. OTHER INFORMATION

Risk Phrases

Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. The information in this M.S.D.S. (Material Safety Data Sheet) has been provided in good faith and believed to be accurate. However no warranty is expressed, implied or given. It remains the buyer or end users responsibility to ensure that his operations comply with all state, provincial or local laws.