

# VILLA ANTOKA 40 EC

# SAFETY DATA SHEET

## 1. PRODUCT & COMPANY IDENTIFICATION

**Product Name:** ANTOKA 40 EC  
**Other identifier:** Quizalofop-P-tefuryl 40 EC  
**Recommended use:** Herbicide  
**Restrictions on use:** Agriculture  
**Supplier:** Villa Crop Protection (Pty) Ltd.

PO Box 10413,  
Aston Manor, 1630,  
South Africa

**Telephone:** (011) 396 2233

**Fax:** (011) 396 4666

**Website:** [www.villacrop.co.za](http://www.villacrop.co.za)

### Emergency telephone numbers:

#### 24 Hr Transport / Spill emergency no:

Envirosure. +27 31 205 4918

(Hazcall24) +27 86 044 4411

(Client: Villa Crop Protection)

Griffon Poison Information Centre +27 82 446 8946

(Client: Villa Crop Protection)

### Poisoning Emergency telephone numbers:

Griffon Poison Information Centre +27 82 446 8946

Poisons Information Centre +27 861 555 777

### Villa Crop Protection Emergency number:

**National Safety, Health and Environmental Manager:**

+27 63 698 0668

## 2. HAZARD IDENTIFICATION

**Toxicity class:** WHO: II – Moderately hazardous.

**Likely routes of exposure:** Skin and eye contact, ingestion and inhalation.

**Classification based on co-formulants:** X<sub>n</sub>, X<sub>i</sub>, F, R10, R38, R51/53, R65

### Health effects:

**Eye contact:** May cause irritation.

**Skin contact:** Irritating to skin. May cause sensitisation.

**Inhalation:** Harmful if inhaled.

**Ingestion:** Harmful if swallowed, may cause damage to lungs. May cause harm to the unborn child.

Possible risk of impaired fertility.

Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

### SYMBOLS:

X<sub>n</sub> - Harmful

X<sub>i</sub> - Irritant

N - Dangerous for the environment

Health Hazard



**Signal word:** Danger

## 3. COMPOSITION/INFORMATION ON FORMULANTS

**Common Name:** Quizalofop-P-tefuryl  
**Chemical Name:** (±)-tetrahydrofurfuryl-(R)-2-[4-(6-chloroquinoxalin-2-yloxy)phenoxy]propionate (IUPAC)

**CAS No.:** [119738-06-6]

**Chemical Family:** Aryloxyphenoxy propionate

**Chemical Formula:** C<sub>22</sub>H<sub>21</sub>ClN<sub>2</sub>O<sub>5</sub>

**Formulation:** Quizalofop-P-tefuryl 40 g/l

Emulsifiable Concentrate

**Use / Mode of Action:** Systemic herbicide absorbed through the leaf surface with acropetal and basopetal translocation within plants and accumulation in meristematic tissue. Growth ceases shortly after application with older leaves becoming discoloured and then necrotic.

### Composition:

Component	Content %	CAS No#	Hazard Classification	
Quizalofop-P-tefuryl	±4 %	119738-06-6	Acute tox 4. (H302) Muta. 2 (H341) Repr. 1B (H360) STOT RE 2 (H373)	X <sub>n</sub> , N, R22, R48/22, R50/53, R61, R62, R68; S26, S36/37/39, S57, S60
Tristyrylphenol Ethoxylated	<10 %	99734-09-5	Aquatic chronic 2 (H411)	-
N-methyl-2-pyrrolidone	<10 %	872-50-4	Skin Irrit. 2 (H315) Eye Irrit. 2 (H319) Repro. 1B (H360D)	T, R61; S53
Solvent naptha	<90 %	64742-94-5	Asp. Tox. 1 (H304)	X <sub>n</sub> , F, R10 R38, R51/53, R65; S2, S16, S23, S24, S62

## 4. FIRST AID MEASURES AND PRECAUTIONS

Remove the victim from the area of exposure. Wash off remaining material with plenty of water. In the event of any complaints or symptoms, avoid further exposure. Immediately consult a doctor.

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**Inhalation:** Immediately remove source of contamination or move victim to fresh air. **Seek medical advice immediately.**

**Skin contact:** Remove contaminated clothing, shoes and leather goods immediately. Gently wipe of excess chemical. Wash skin gently and thoroughly with non-abrasive soap and water. Seek medical advice if irritation persists.

**Eye contact:** Flush eyes immediately with large amounts of gently flowing cold water or normal saline solution, occasionally lifting upper and lower lids, until no evidence of chemical remains (approximately 15 to 20 minutes). If irritation persists, get medical attention.

**Ingestion:** Have victim rinse mouth thoroughly with water. **Do not induce vomiting, due to the aromatic solvent. Seek medical advice immediately.** If the person is alert and respiration is not depressed, give large quantity of water to drink. Never give anything by mouth to an unconscious person.

**Advice to physician:** Treat symptomatically and supportively. No specific antidote known.

## 5. FIRE FIGHTING MEASURES

**Fire/Explosion hazard:** Flammable. .

**Flash point:** 66.1°C.

**Hazardous Decomposition Products:** May release irritating fumes upon combustion such as oxides of carbon and nitrogen.

**Suitable extinguishing agents:** Extinguish fires with carbon dioxide, dry powder, alcohol-type foam or universal-type foams.

**Unsuitable extinguishing agents:** Water jets due to contamination risk.

**Firefighting:** Remove spectators from surrounding area. Isolate the fire area and evacuate downwind. Use a recommended extinguishing agent for the type of surrounding fire. Fight fire from maximum distance and use unmanned hose holder or monitor nozzles. Contain fire control agents for later disposal. Avoid inhaling hazardous vapours and fumes from burning materials. Keep upwind. Remove container from fire area if possible and without risk. Water can be used to cool unaffected containers but must be contained for later disposal. Dyke fire control water for later disposal. Do not use high volume water jet, due to contamination risk. Contain water used for firefighting for later disposal. Avoid the accumulation of polluted run-off from the site and prevent pollution of groundwater and waterways.

**Personal protective equipment:** Full protective clothing and self-contained breathing apparatus.

## 6. ACCIDENTAL RELEASE MEASURES (Spillage)

**Personal precautions:** Avoid contact with skin and eyes. Do not breathe in fumes. For personal protection, see Section 8.

**Environmental precautions: Occupational spill:** Keep spills and cleaning runoff out of municipal sewers, open bodies of water and soil.

**For spills:** Soak up with absorptive material such as damp earth, sand, vermiculite or other suitable non-combustible absorbent material. Place the material into a clean, dry, sealable container and cover for subsequent disposal. In situations where product comes in contact with water, contain contaminated water for later disposal. Prevent material from spreading by damming in with absorptive material. Do not flush spilled material into drains or waterways. Keep spectators away and upwind. To decontaminate spill area, tools and equipment, wash with water and detergent. Collect washings and add to the drums already collected. Label drums with its content and dispose it in accordance with local regulations. Open burning or dumping of this material is prohibited.

## 7. HANDLING AND STORAGE REQUIREMENTS

**Handling:** Harmful if swallowed. Avoid inhalation and contact with eyes and skin. Use with adequate ventilation. Do not handle broken packages without protective equipment. Wash hands thoroughly before eating, drinking, chewing gum, smoking, or using the toilet. Remove clothing immediately after spills on or within and wash affected skin thoroughly using a non-abrasive soap. Replace with clean clothing and clean contaminated clothing before reuse. Seek medical advice. Do not apply directly to areas where surface water is present, or to intertidal areas below the mean high water mark. Water used to clean equipment must be disposed of correctly to avoid contamination. Worker should shower at the end of each workday.

**Storage:** Store in its original container in dry, cool, well-ventilated area. Do not store near heat, open flame, sources of ignition or hot surface. Not to be stored next to foodstuffs and water supplies. Keep out of reach of children, uninformed persons and animals. Do not contaminate other pesticides and fertilizers.

**Storage stability:** Stable under recommended storage and handling conditions.

## 8. EXPOSURE CONTROL/PERSONAL PROTECTION

It is essential to provide adequate ventilation. The measures appropriate for a particular worksite depend on how this material is used and on the extent of exposure. Ensure that control systems are properly designed and

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maintained. Comply with occupational safety, environmental, fire, and other applicable regulations.

**PERSONAL PROTECTIVE EQUIPMENT:**

**Respirator:** An approved full-face respirator suitable for protection from vapours of pesticides with an approved is required. Wear self-contained breathing apparatus in the case of hazardous fumes. Respiratory use and selection of filter must be based on airborne concentrations. Limitations of respirator use specified by the approved agency and the manufacturer must be observed.

**Clothing:** Employee must wear appropriate protective (impervious) clothing; overalls or long-sleeves uniform, boots, hat and equipment to prevent repeated or prolonged skin contact with this substance. Do not wear leather clothing.

**Gloves:** Employee must wear appropriate chemical resistant protective gloves to prevent contact with this substance.

**Eye protection:** The use of a face shield or goggles with side-shields is advised.

**Emergency eyewash:** Where there is any possibility that an employee's eyes may be exposed to this substance; the employer should provide an eyewash fountain or appropriate alternative within the immediate work area for emergency use.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

- Appearance:** Yellow liquid.
- Odour:** Not specified.
- Odour threshold:** Not available.
- pH:** 6.6 to 7.2.
- Melting point/Freezing point:** Not available.
- Flash point:** 66.1°C.
- Evaporation rate:** Not available.
- Flammability:** Flammable.
- Explosive limits:** Not available.
- Vapour pressure:** Not available.
- Vapour density:** Not available.
- Density:** 0.906 g/cm<sup>3</sup> at 20°C.
- Solubility(ies):** Emulsifies in water.
- Partition coefficient: n-octanol/water:** Not available.
- Auto-ignition temperature:** > 300°C.
- Decomposition temperature:** Not available.
- Viscosity:** 9.85 mPa at 20°C.
- Surface Tension:** 33.9 dyn/cm at 25°C.

## 10. STABILITY AND REACTIVITY

- Stability:** Stable for a minimum of 2 years when stored under recommended conditions. The product should be protected from temperatures above or below 30°C.
- Hazardous decomposition:** Not expected, stable under recommended storage and handling conditions.
- Conditions to avoid:** Avoid heat, direct sunlight and sources of ignition.

**Incompatible materials:** Strong acids, bases and oxidising agents.

**Hazard decomposition products:** May release irritating fumes upon combustion such as oxides of carbon and nitrogen.

## 11. TOXICOLOGICAL INFORMATION

- Formulation (calculated):**
- Acute oral LD<sub>50</sub>:** > 2000 mg/kg, rat.
- Acute dermal LD<sub>50</sub>:** > 2000 mg/kg, rat.
- Acute inhalation LC<sub>50</sub>:** > 15.0 mg/ℓ.
- Acute skin irritation:** Irritating to skin.
- Acute eye irritation:** May cause irritation.
- Sensitization:** May cause skin sensitization, (guinea pigs).
- Carcinogenicity:** Limited evidence of carcinogenic effect.
- Toxicity class:** WHO II.

## 12. ECOLOGICAL INFORMATION

**Animals Quizalofop-P-tefuryl** is extensively degraded by hydrolysis, hydroxylation and conjugation. **Plants:** the racemic mixture is rapidly hydrolysed to **Quizalofop**. **Soil/Environment:** DT<sub>50</sub> (lab., aerobic) 0.1 – 0.9d; DT<sub>90</sub> (lab., aerobic) 0.2 – 3.1d; DT<sub>50</sub> (lab., anaerobic) 0.63d. In the field, residues of **Quizalofop-p-tefuryl** dissipated to <LOQ (20µ/kg) at 3 - 31d after application (450 or 900 g/ha). Thus, this active has no potential for accumulation in the soil. Furthermore there is no evidence of potential to leach into groundwater >0.1 µg/ℓ. In whole system of water/sediment, DT<sub>50</sub> 0.24–4.8 h, DT<sub>90</sub> 0.72– <24 h.

**ECOTOXICOLOGY:**

- Birds:**  
Acute oral LD<sub>50</sub> for bobwhite quail and mallard ducks > 2150 mg/kg (tech.).
- Fish:**  
LC<sub>50</sub> (96 hours): for trout 0.51 and sunfish > 0.23 mg/ℓ (tech.).  
LL<sub>50</sub> (96h): < 5 mg/ℓ (solvent).
- Daphnia:**  
LC<sub>50</sub> (48 h): > 1.5 mg/ℓ (tech.).  
EL<sub>50</sub> (48h): < 10 mg/ℓ (solvent).
- Bees:**  
LD<sub>50</sub> (oral, 48h) > 16.8 µg/bee; (contact, 48h) > 100 µg/bee (tech).
- Earthworms:** LC<sub>50</sub> (14d): > 500 mg/kg dry soil (tech.).

## 13. DISPOSAL CONSIDERATION

**Pesticide disposal:** Open dumping or burning of this pesticide is prohibited. Never pour untreated waste or surplus products into public sewers or where there is any danger of run-off or seepage into water systems. Do not contaminate rivers, dams or any other water sources with the product or used containers. Emptied containers retain

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vapour and product residues. Observe all labelled safeguards until container is destroyed. Empty the container of excess product into the mixing tank or spray tank of the applicator. Destroy the emptied containers by perforation and flattening and dispose of according to local regulations. Do not re-use the empty container for any other purpose. Prevent contamination of food, feedstuffs, drinking water and eating utensils.

## 14. TRANSPORT INFORMATION

**UN No.:** 1993  
**Road Transport ADR/IRD:**  
 Class: 3  
 Packing group: III  
 UN proper shipping name: **FLAMMABLE LIQUID**, Liquid, N.O.S. (Quizalofop-p-tefuryl 4 %)  
**Maritime Transport IMDG/IMO:**  
 Class: 3  
 Packing group: III  
 UN proper shipping name: **FLAMMABLE LIQUID**, Liquid, N.O.S. (Quizalofop-p-tefuryl 4 %)  
**Marine pollutant.**  
**Air transport IATA/ICAO:**  
 Class: 3  
 Packing group: III  
 UN proper shipping name: **FLAMMABLE LIQUID**, Liquid, N.O.S. (Quizalofop-p-tefuryl 4 %)

## 15. REGULATORY INFORMATION

**Symbol:** X<sub>n</sub>, Xi, T, N, F  
**Indication of danger:** Harmful, Irritant, Toxic and **FLAMMABLE LIQUID.**  
**Risk phrases:**  
**R 10** Flammable.  
**R 22** Harmful if swallowed.  
**R 48/22** Harmful: danger of serious damage to health by prolonged exposure in contact with skin.  
**R 38** Irritating to skin.  
**R 50/53** Very toxic aquatic organisms may cause long-term adverse effects in the aquatic environment.  
**R 51/53** Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.  
**R 61** May cause harm to the unborn child.  
**R 62** Possible risk of impaired fertility.  
**R 65** Harmful: may cause lung damage if swallowed.  
**Safety phrases:**  
**S 2** Keep out of the reach of children.  
**S 16** Keep away from sources of ignition – No smoking.

**S 23** Do not breathe in fumes/spray.  
**S 24** Avoid contact with skin.  
**S 26** In case of contact with eyes rinse immediately with plenty of water and seek medical advice.  
**S 36/37/39** Wear suitable protective clothing, gloves and eye/face protection.  
**S 57** Use appropriate container to avoid environmental contamination.  
**S 60** This material and its container must be disposed of as hazardous waste.  
**S 62** If swallowed do not induce vomiting; seek medical advice immediately and show the label or this datasheet.

### Hazard statements:

**H 302** Harmful if swallowed.  
**H 304** May be fatal if swallowed and enters airways.  
**H 315** Causes skin irritation.  
**H 319** Causes serious eye irritation.  
**H 341** Suspected of causing genetic defects.  
**H 360/D** May damage fertility or the unborn child.  
**H 373** May cause damage to organs through prolonged or repeated exposure.  
**H 411** Toxic to aquatic life with long-lasting effects.

## 16. OTHER INFORMATION

**Packing and Labelling:** Packed in 500 ml, 1, 2, 5, 10, 15, 20 and 25 litres plastic fluorinated containers labelled according to the South African regulations and guidelines.  
**Disclaimer:** The information on this sheet is not a specification; it does not guarantee specific properties. The information is intended to provide general guidance as to health and safety based upon our knowledge of the handling, storage use of the product. It is not applicable to unusual or non-standard uses of the product nor where instructions or recommendations are not followed. All information is given in good faith but without guarantee in respect of accuracy, and no responsibility is accepted for errors and omissions or the consequence thereof.

### END OF DOCUMENT

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For detailed information on revisions, contact the Registration holder.