VILLA MCPA 400 SL MATERIAL SAFETY DATA SHEET

1. IDENTIFICATION OF THE SUBSTANCE

Product name: **MCPA 400 SL**
Herbicide
UN number: 2902
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

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. COMPOSITION / INFORMATION ON INGREDIENTS

Common name: **MCPA** phenoxy compound as potassium salt.
Chemical name: (4-chloro-2-methylphenoxy)acetic acid **(IUPAC)**
CAS number: 94-74-6
Chemical family: Phenoxyacetate herbicide (aryloxyalkanoic acid)
Chemical formula: **MCPA**-potassium - $C_9H_8ClKO_3$ (Mol. Wt. :238.7)
Use: Selective systemic post-emergent herbicide.
Formulation: **MCPA** (as potassium salt): 400 g/l Soluble Liquid
SYMBOLS: X_n, X_i
Indication of danger: Environmentally hazardous substance. Irritating.
RISK-PHRASES: R22, R51, R 36/37/38.

3. HAZARD IDENTIFICATION

Toxicity class: WHO II.
Likely routes of exposure: Eye contact, skin contact, ingestion, and inhalation.
Eye contact: May cause severe irritation with cornea injury.
Skin contact: Prolonged or repeated skin contact may cause skin irritation.
Inhalation: May be hazardous.
Ingestion: May cause gastrointestinal irritation.

4. FIRST AID MEASURES AND PRECAUTIONS

Inhalation: Remove source of contamination, or leave contaminated area to fresh air as rapidly as possible. Treat symptomatically and supportively. Single exposure to vapours is not likely to be hazardous.
Skin contact: If irritation occurs, remove contaminated clothing, shoes and leather goods (e.g. watchbands, belts). Gently wipe off excess chemical. Wash skin gently and thoroughly with water and non-abrasive soap. If irritation persists, seek medical advice immediately.
Eye contact: Immediately flush eyes with gently flowing water for 15 minutes, holding the eyelids open. Seek medical attention.
Ingestion: Unlikely to occur under occupational conditions. In case of deliberate ingestion, have victim rinse mouth thoroughly with water. **Do not induce vomiting.** Give plenty of water to drink (1 to 2 glasses). Seek medical advice immediately.
Diagnosis of poisoning: Weakness, fall of blood pressure. Ingestion of near the lethal dose causes burning pains in the tongue, pharynx, and abdomen, hypersalivation; flushing of the skin; vomiting, diarrhoea; painful and tender muscles with fibrillary twitching; fever or subnormal temperature; lethargy; weakness; and intercostal paralysis. Convulsions and cardiac rhythm disturbances may occur. Death occurs due to kidney, liver, or respiratory failure (lung edema). After acute poisoning, survival of more than 48 hours is usually followed by a complete recovery.
Advice to physicians: There is no antidote, and symptomatic treatment should be given. If substantial amounts have been ingested, spontaneous emesis may occur. Limit gastrointestinal absorption by gastric intubation, aspiration and lavage, following placement of a cuffed endotracheal tube. Repeated administration of charcoal at half or more the original dose every 2 to 4 hours may be beneficial.

5. FIRE FIGHTING MEASURES

Fire and explosion hazard: The material does not burn or burns with difficulty. It is not explosive. Should the chemical be involved in a general fire, ensure chemical protective clothing are used. See point **6.**
Extinguishing media: Carbon dioxide, dry chemical powders, foam and water.

6. ACCIDENTAL RELEASE MEASURES (SPILLAGE)

Occupational spill: Keep spectators away. Isolate hazard area and deny entry. Stay upwind, out of low-lying

areas, and ventilate closed spaces before entering. Cover spill with absorbent material. Sweep into disposal container. Wash area with detergent and water and follow with clean water rinse. Do not allow spill to contaminate water supplies. Dike far ahead of liquid spills for later disposal.
Personal precautions: Chemical protective clothing usage is advised, i.e. wear neoprene gloves, cotton overalls and safety goggles.

7. HANDLING AND STORAGE REQUIREMENTS

Handling: Relatively safe to handle. Handle with the care and caution due crop protection chemicals. Avoid spillage.
Storage: Store in a dry, cool covered warehouse in well-labelled containers. Store away from food, feedstuffs, fertilisers, seed and agricultural chemicals. Keep away from children and animals. Local regulations should be complied with.
Storage stability: Stable for a period of 2 years under normal warehouse conditions.

8. EXPOSURE CONTROL / PERSONAL PROTECTION

Personal protective equipment:
Respiratory: In case of insufficient ventilation, wear adequate respiratory protection.
Hand: Gloves of synthetic material.
Eye: Safety goggles.
Skin and body: Wear suitable protective clothing, e.g. cotton overalls.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Light to dark brown liquid.
Odour: Hydrocarbon odour.
Explosive properties: Not explosive
Oxidising properties: No oxidising properties.
Boiling point: Not known.
Flash point: 200 ^{O}C (Pensky Martins closed cup)
Specific gravity: 1.18 g/cm^3

10. STABILITY AND REACTIVITY

Storage stability: Stable at elevated temperatures and at low temperatures. Do not store near crop protection chemicals, feed, fertilizers or seed. Do not store at temperatures below 0^{o}C.
Dilution stability:
Stable in aqueous solutions.

11. TOXICOLOGICAL INFORMATION

Acute oral LD$_{50}$: 1 750 mg/kg.
Acute dermal LD$_{50}$: >2 500 mg/kg.
Acute skin irritation: Slight irritant.
Acute eye irritation: Moderate irritation.
Carcinogenicity, Teratogenicity, Mutagenicity: The International Agency for Research on Cancer lists phenoxyacetic acid herbicides as a class 2B carcinogen, limited evidence in humans. EPA classifies these herbicides, as a class D. Results of tests on this product in animals have been inconclusive.

12. ECOLOGICAL INFORMATION

Degradability: In soil **MCPA** degraded to 4-chloro-2-methylphenol, followed by ring hydroxylation and ring opening. The half-life in soil is approximately 7 days after initial "lag phase". After application rate of 3 kg/ha of **MCPA**, the residual activity in soil is about 3 to 4 months.
Accumulation: Animals: The product shows little or no tendency to bio-accumulate. Only moderate metabolism occurs in rats, and there is only a small amount of conjugate formation.
Plants: In wheat, **MCPA** is hydroxylated to the methyl group with formation of 2-hydroxymethyl-4-chlorophenoxyacetic acid.
ECOTOXICOLOGY: Considered to be a marine pollutant. Toxic to fish.

Birds:		
Oral LD$_{50}$:	bobwhite quail:	377 mg/kg
Fish:		
LC$_{50}$ (96 hours):	rainbow trout:	232 mg/ℓ
Daphnia magna:		
LC$_{50}$:		> 100 mg/ℓ
Bees:		
LD$_{50}$:		0.104 mg/bee

13. DISPOSAL CONSIDERATION

Controlled incineration: Stable under normal temperatures and pressures.
Incineration at high temperatures (1000°C) with sufficient residence time leads to complete detoxification and destruction and is the most environmentally acceptable method for disposal.
Package product wastes: Combustible containers should be disposed of in pesticide incinerators or in specified landfill sites. Non-combustible containers must be triple rinsed with water, punctured and disposed of in specified landfill areas. Containers that are not to be reused should be punctured and transported to a facility for recycling or disposal in approved landfill site. Comply with any local legislation applying to disposal.

14. TRANSPORT INFORMATION

UN NUMBER: 2902
ADR/IRD: 6.1
IMDG/IMO: 6.1
ICAO/IATA: 6.1
PACKING GROUP: III
ROAD/RAIL: Phenoxy pesticide, liquid, toxic (**MCPA**).). Environmentally hazardous substance, Irritating
AIR/IATA: 609, 611(IATA) Phenoxy pesticide, liquid, toxic (**MCPA**)). Environmentally hazardous substance, Irritating
SEA: Phenoxy pesticide, liquid, toxic.(**MCPA**)). Environmentally hazardous substance, Irritating
Considered a marine pollutant.

15. REGULATORY INFORMATION

Symbol: X_n, X_i
Indication of danger: Environmentally hazardous substance. Irritating.

Risk phrases:
R22 Harmful if swallowed.
R36/37/38 Irritating to eyes / respiratory system / skin.
R51 Toxic to aquatic organisms.

Safety phrases:
S2 Keep out of reach of children.
S13 Keep away from food, drink, and animal feedstuffs.
S20/21 When using do not eat, drink or smoke.
S23 Do not breathe vapour or spray.
S36 Wear suitable protective clothing.
S37 Wear suitable gloves.
S45 In case of accident or if you feel unwell, seek medical advice immediately.

16. PACKING AND LABELLING

Packed in 1, 5, 10, 20 and 25 litres plastic containers and labelled according to South African regulations and guidelines.

17. OTHER INFORMATION

All information and instructions provided in this Material Safety Data Sheet (MSDS) are based on the current state of scientific and technical knowledge at the date indicated on the present MSDS and are presented in good faith and believed to be correct. This information applies to the PRODUCT AS SUCH. In case of new formulations or mixes, it is necessary to ascertain that a new danger will not appear.
It is the responsibility of persons in receipt of this MSDS to ensure that the information contained herein is properly read and understood by all people who may use, handle, dispose or in any way come in contact with the product. If the recipient subsequently produces formulations(s) containing this product, it is the recipient's sole responsibility to ensure the transfer of all relevant information from this MSDS to their own MSDS.

18. REFERENCES

- Applicable own physical and chemical, toxicity and ecotoxicity research studies.
- *The Pesticide Manual*; Tenth Edition; Editor Clive Tomlin; Crop Protection Publications, 1994.
- *The Pesticide Manual*; Eleventh Edition; Editor Clive Tomlin; Crop Protection Publications, 1997.
- *Pestline*; Material Safety Data Sheets for Pesticides and Related Chemicals; Volume II; Occupational Health Services Inc., 1991.

END OF DOCUMENT

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For detailed information on revisions, contact the Registration holder.