

PANGA PLUS 540 SL

SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: PANGA PLUS 540 SL
Other identifier: Glyphosate 540 SL
Recommended use: Herbicide
Restrictions on use: Agriculture

Supplier: Villa Crop Protection (Pty) Ltd.
Co. Reg. No.: 1983/008184/07
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. HAZARDS IDENTIFICATION

| UN GHS, Regulation EC 1272/2008 [EU-GHS/CLP] EU & SANS 10234:2008 | | |
|--|-------------------|--------------|
| Hazard classes | Hazard categories | H-statements |
| Health | | |
| Oral | Acute Tox. 4 | H302 |
| Skin | Skin Corr. 1A | H314 |
| Eye | Eye Dam. 1 | H318 |
| Inhalation | Acute Tox. 5 | H333 |
| Environment | | |
| Aquatic acute | Aquatic acute 2 | H401 |
| Aquatic chronic | Aquatic chronic 2 | H411 |

The most important adverse effects:

Physiochemical effects:

None known.

Human health effects:

Harmful if swallowed.

Causes severe skin burns and eye damage.

Label elements:



Signal word: Danger.

Hazard statements:

H302: Harmful if swallowed.
H314: Causes severe skin burns and eye damage.
H318: Causes serious eye damage.
H333: May be harmful if inhaled.
H401: Toxic to aquatic life.
H411: Toxic to aquatic life with long lasting effects.

Precautionary statements:

P264: Wash hands and face thoroughly after handling.
P270: Do not eat, drink or smoke when using this product.
P273: Avoid release to the environment.
P280: Wear impervious rubber gloves and boots, protective clothing and chemical safety goggles.
P301/330/331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303/361/353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water and non-abrasive soap.
P305/351/338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310: Immediately call a POISON CENTRE in the case of skin or eye contact.
P391: Collect spillage.
P501: Dispose of content/container to suitable landfill in accordance with local regulations.

Special labelling of certain mixtures:

None known.

Other hazards:

None known.

Toxicity:

Classification according to GHS: Cat. 4

Classification according to WHO: Cat. II

Classification according to GPIC (Active): Cat. U

3. COMPOSITION / INFORMATION ON INGREDIENTS

Substance/Mixture: Mixture.

Composition:

| Chemical Name | CAS | Conc. (m/v %) | Classification EC 1272/2008 |
|---------------------------|-----------|---------------|---|
| Glyphosate acid (96% min) | 1071-83-6 | 54% | Eye Dam. 1 (H318) Aquatic Chronic 2 (H411) |
| KOH (to produce) | 1310-58-3 | <45% | Acute Tox. 4 (H302) |

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| | | | |
|--|-----|------|---|
| salt) | | | Skin Corr. 1A (H314) |
| Blend of Ammonium Quaternary Derivatives | N/A | <20% | Skin Irrit. 2 (H315) Eye Dam. 1 (H318) Aquatic Acute 1 (H400) |

container from fire area if possible and without risk. Do not use high volume water jet, due to contamination risk. Do not scatter the burning material. Water can be used to cool unaffected containers but must be contained for later disposal. Contain fire control agents for later disposal. Avoid pollution of waterways by run-off from the site.
Personal protective equipment: Wear NIOSH/MSHA approved self-contained breathing apparatus and full bunker gear.

4. FIRST AID MEASURES

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 and consult a doctor.

Inhalation: Remove person from contaminated area to fresh air and assist breathing as needed. Qualified personnel should perform administration of oxygen. Seek medical attention if irritation occurs.

Skin: Remove contaminated clothing and shoes. Gently wipe off excess chemical. Wash skin gently and thoroughly with water and non-abrasive soap. **Obtain medical attention immediately.**

Eyes: Flush eyes with clean water for at least 15 minutes. Lift eyelids to facilitate irrigation. If present, remove contact lenses after 5 minutes and continue rinsing. **Seek medical attention immediately.**

Ingestion: Do not induce vomiting. Seek medical advice immediately. Do not give anything by mouth to an unconscious person. If the person is alert, rinse mouth thoroughly with water. Administer oxygen if breathing is difficult. If breathing has stopped, give artificial respiration.

Anticipated acute effects: Harmful if swallowed.

Anticipated delayed effects: None known.

Most important symptoms/effects:

Causes severe skin burns and eye damage.

Advice to physician: There is no specific antidote. Treat symptomatically and supportively as and when required. Remove by gastric lavage and catharsis, but not if victim is unconscious. Give oxygen if respiration is depressed.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media: Extinguish fires with carbon dioxide, dry powder, water fog or alcohol-resistant foam.

Unsuitable Extinguishing Media: High volume water jet. Use a water jet only to cool heated containers.

Specific hazards: In case of fire and/or explosion the following hazardous gases may be released: Carbon monoxide, phosphorous oxides and nitrogen oxides.

Special Fire Fighting Procedures: Remove spectators from surrounding area. Isolate the fire area and evacuate all personnel downwind of the fire. Fight fire from maximum distance and use unmanned hose holder or monitor nozzles. Keep upwind. Avoid inhaling hazardous vapours and fumes from burning materials. Remove

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions: Avoid contact with eyes and skin. Ventilate area of spill or leak, especially in contained areas.

Protective equipment: Refer to Section 8 for personal protective equipment to be worn during containment and clean-up of a spill involving this product.

Emergency procedures: Alert firefighting personnel, evacuate unprotected personnel and animals.

Environmental Precautions: Prevent spilled product from entering sewers, waterways or ground water. This product is classified to be toxic to aquatic organisms with long-term adverse effects in the aquatic environment. Any spillages or uncontrolled discharges into water courses should be reported immediately to the police and the Department of Water/Environmental Affairs.

Methods and Materials for Containment: Contain spilled product by diking area with sand, earth or lime.

Methods and Materials for Clean-up: Cover contained spill with an inert absorbent material such as sand, earth or other appropriate non-combustible material. Vacuum, scoop, or sweep up material and place the material into a clean, dry, sealable container. Label containers with the contents and dispose of according to local regulations. Do not place spilled material back in original container. Do not re-use spilled material. Collect washings and add to the drums already collected. Do not flush spilled material or washings into drains or waterways. To decontaminate the spill area, tools and equipment, wash with water and suitable detergent. Add the solution to the drums already collected. Open burning or dumping of this material is prohibited. See section 13 for disposal considerations.

7. HANDLING AND STORAGE

Handling:

Precautions for safe handling: Avoid contact with eyes and skin. Harmful if swallowed. Ensure adequate ventilation during handling and use. Do not handle broken containers without protective equipment. Immediately clean up spills that occur during handling. Keep containers tightly closed when not in use. In the case of contact with the product refer to First Aid Measures – Section 4.

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General occupational hygiene: Practice good hygiene when using this material. Wash hands before eating, drinking, chewing gum, smoking, using the toilet or applying cosmetics. Worker should shower at the end of each workday. Launder all clothing before it is re-used.

Storage:

Conditions for safe storage: Keep out of reach of unauthorised persons, children and animals. Store in its original labelled container tightly closed, in an isolated, dry, cool and well-ventilated area. Do not store near heat, open flame, sources of ignition or hot surfaces. Avoid cross contamination with other pesticides and fertilisers.

Incompatible substances and mixtures: Product is incompatible with galvanized steel or unlined mild steel.

Packaging material: Plastic containers.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Permissible concentration: No occupational exposure limits has been determined for the significant ingredients in this product.

Engineering Controls:

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. Local Exhaust: Provide general or local exhaust ventilation systems to maintain airborne concentrations below OELs or other specified exposure limits. Local exhaust ventilation is preferred. Ensure that control systems are properly designed and maintained. Comply with occupational safety, environmental, fire, and other applicable regulations.

Personal Protective Equipment:

Respiratory Protection: Wear an organic cartridge respirator suitable for protection from mists/ vapours of pesticides if product will be used in an area that is not well ventilated.

Hand Protection: Employee must wear appropriate chemically resistant gloves e.g. nitrile rubber gloves to prevent contact with this mixture.

Eye Protection: Wear a face shield or safety goggles when handling the concentrate and when applying the product. Contact lenses are not protective eye devices.

Skin and Body Protection: The use of impervious protective clothing e.g. coveralls, boots and hat, is recommended to prevent skin contact with this mixture.

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

9. PHYSICAL AND CHEMICAL PROPERTIES

- Appearance:** Clear yellow/brown liquid.
- Odour:** Typical odour.
- pH (1% aqueous dilution):** 4.8.
- Melting point:** Not available.
- Freezing Point:** Not available.
- Boiling Point:** Not available.
- Flash Point:** None. Water based.
- Flammability:** Not available.
- Upper/lower explosion limits:** Not available.
- Vapour Pressure (mm Hg):** Not available.
- Relative Vapour Density:** Not available.
- Density:** 1,375 g/ml.
- Solubility:** Soluble in water.
- N-octanol/water partition coefficient:** Not available.
- Auto-ignition temperature:** Not available.
- Decomposition temperature:** Not available.
- Viscosity:** Not available.

10. STABILITY AND REACTIVITY

- Chemical Stability:** The product is stable for two (2) years at ambient temperature and pressure, under normal storage and handling conditions. Avoid storage under extreme temperatures and conditions. Store below 50°C, preferably below 30°C, and not for prolonged periods in direct sunlight.
- Reactivity:** A highly flammable gas with a potential to explode may result when product reacts with galvanised steel or unlined mild steel.
- Possibility of Hazardous Reactions:** High when in contact with galvanised steel or unlined mild steel.
- Conditions to Avoid:** None known.
- Incompatible Materials:** Product is relatively stable in neutral, weakly acidic and weakly alkaline media, but reacts strongly (and possibly violently) with strong alkalis. Mixing with other products may reduce the activity of Glyphosate. Incompatible with galvanized steel and unlined mild steel materials for storage.
- Hazardous Decomposition Products:** Toxic oxides of carbon, nitrogen and phosphorus are released when the product decomposes on heating.

11. TOXICOLOGICAL INFORMATION

- ACUTE TOXICITY: Calculated according to GHS.**
- Oral LD₅₀ (24 h) rat** >850 mg/kg.
- Dermal LD₅₀ (24 h) rat** >16500 mg/kg.
- Inhalation LC₅₀ (4 h) rat** >11.8 mg/l.
- Skin Irritation/Corrosion:** Causes severe skin burns and eye damage.
- Eye Damage/Irritation:** Causes serious eye damage.
- Skin Sensitization:** Not available.
- Respiratory Sensitization:** Not available.
- Reproductive cell mutagenicity:** Not available.
- Carcinogenicity:** Not available.
- Reproductive toxicity:** Not available.

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Specific target organ toxicity – single exposure: Not available.

Specific target organ toxicity – repeated exposure: Not available.

Aspiration hazard: Not available.

Chronic Effects: Not available.

POTENTIAL ADVERSE EFFECTS:

Inhalation: May be harmful inhalation.

Skin contact: Due to the inert formulants, this product may cause severe burns to skin.

Eye contact: May cause serious damage to eyes.

Ingestion: Harmful if swallowed.

12. ECOLOGICAL INFORMATION

This product is toxic to aquatic organisms and may cause long lasting effects in the aquatic environment.

ECOTOXICITY DATA: Based on the active ingredient Glyphosate potassium salt.

Fish:

LC₅₀ (96 h) Trout >1227 mg/l

Daphnia:

LC₅₀ (48 h) >1227 mg/l

Algae:

E_bC₅₀ (72 h) Green algae 35 mg a.e./l

E_rC₅₀ (72 h) Green algae 54 mg a.e./l

Birds:

Acute oral LD₅₀ Bobwhite quail >2241 mg a.e./kg

Bees:

LD₅₀ (48 h) contact >100 g a.e./bee

LD₅₀ (48 h) oral >100 g a.e./bee

Plants: Slowly metabolised to aminomethylphosphonic acid ([1066-51-9]), which is the major plant metabolite.

ENVIRONMENTAL EFFECTS:

Animal: In mammals, following oral administration, glyphosate is very rapidly excreted unchanged and does not bio-accumulate.

Persistence and degradability: In soil (field), DT₅₀ 1-130 d, depending on edaphic and climatic conditions. In water, DT₅₀ varies from a few to 91 d. Photodegradation in natural water occurs, DT₅₀ 33-77 d; no substantial photodegradation in soil was recorded over 31 d. In a lab. Whole system with water and sediment, DT₅₀ 27-146 d (aerobic), 14-22 d (anaerobic). The major metabolite in soil and water is aminomethylphosphonic acid.

Bio-accumulative Potential: Not expected.

Mobility in soil: Not determined.

Other adverse effects: Not determined.

13. DISPOSAL CONSIDERATIONS

Waste: Open dumping or burning of this pesticide is prohibited. Waste resulting from the use of this product cannot be reused or re-processed. Never pour untreated waste or surplus product 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. Comply with local legislation applying to waste disposal. The product may be taken to a registered waste disposal site or incineration plant.

Container: Emptied containers retain vapour and product residues. Do not re-use the empty container for any other purpose. Triple rinse empty containers by inverting the empty container over the spray or mixing tank and allow draining for at least 30 seconds after the flow has slowed down to a drip. Thereafter, rinse the container three times with a volume of water equal to a third of that of the container. Add the rinsings to the contents of the spray tank before recycling or destroying the container in the prescribed manner. Destroy the container by perforating and flattening and dispose of through an approved waste dump site, incineration plant or recycling company. Observe all labelled safeguards until container is destroyed.

14. TRANSPORT INFORMATION

UN Number: 3265

Road Transport ADR/IRD:

Class: 8

Packaging group: I

UN Proper Shipping Name: Corrosive liquid, acidic, organic, n.o.s.
(Glyphosate 540 g/l)

Maritime Transport IMDG/IMO:

Class: 8

Packaging group: I

UN Proper Shipping Name: Corrosive liquid, acidic, organic, n.o.s.
(Glyphosate 540 g/l)

Marine Pollutant (Y/N): Yes

Air transport IATA/ICAO:

UN Proper Shipping Name: Corrosive liquid, acidic, organic, n.o.s.
(Glyphosate 540 g/l)

Special/Environmental Precautions: None known.

Transport in bulk (according to MARPOL 73/78, Annex II and the IBC code): Not available.

15. REGULATORY INFORMATION

Safety, health and environmental regulations/legislation for the mixture:

OHSA 1993 Regulations for Hazardous Chemical Substances.

Relevant information regarding restrictions: None.

EU regulation: Regulation EC1272/2008 (EU-GHS/CLP)

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Other national regulations: None.

Chemical Safety Assessment carried out? No

16. OTHER INFORMATION

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

Additional H-statements (formulants)

H315: Causes skin irritation.

H400: Very toxic to aquatic life.

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 and 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.