

Sharda International Africa cc.

P.O. Box 82021, Southdale, 2135, South Africa.

Tel: 011-680.5247, Fax: 011-680.4848

eMail: shardain@vsnl.com, Website: <http://www.shardaintl.com>

(Company registration No. 2006/186705/23)

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SAFETY DATA SHEET

“SHARDA GLYPHOSATE 360 SL”

Date of Issue: January 2011

Version: 1

1. IDENTIFICATION OF PRODUCT AND COMPANY

Name of Product: “Sharda Glyphosate 360 SL”

Active Ingredient: Glyphosate

Product Use: Herbicide

Registration holder: Sharda International Africa

Address: P.O. Box 82021, Southdale, 2135.

Contact Tel. No.: 011-680-5247

Emergency Tel. No.:

Poison Centres: UNITAS Hospital – 0800-111-9900
Tygerberg Hospital – 021-931-6129
NetCare – 082-911

2. HAZARD IDENTIFICATION

2.1 Potential Health Risk:

Likely routes of exposure: Ingestion, inhalation, skin and eye contact.

Inhalation: Can cause irritation to mucous membranes. Unlikely to be hazardous by inhalation.

Skin Contact: Can cause mild skin irritation.

Eye Contact: May cause eye irritation and discomfort.

Ingestion: The surfactant may cause discomfort and vomiting.

2.2 Environmental Risks:

Glyphosate is toxic to plants. Do not allow to contaminate non-target areas.

Refer to Section 11 for toxicology and to Section 12 for environmental information.

3. COMPOSITION AND INFORMATION ON INGREDIENTS (For each hazardous substance)

Active Ingredient: Glyphosate.

Chemical Name: N-(phosphonomethyl)glycine

Chemical Formula: C₃H₈NO₅P

UN No.: 3082

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Chemical Identity	CAS No.	Concentration
Glyphosate (isopropylamine salt)	1071-83-6	360 g/l

4. FIRST AID MEASURES

Symptoms of Poisoning: Irritation to skin, eyes and mucous membranes.

Eye contact: Flush eyes with plenty of clean water for at least 15 minutes.
If irritation persists, obtain medical attention.

Skin contact: Remove contaminated clothing. Wash skin thoroughly with soap and water.

Inhalation: Remove patient to fresh air. Administer symptomatic treatment and obtain medical attention.

Ingestion: The patient must rinse mouth thoroughly with water. Do not induce vomiting. Obtain medical advice.

Advice to doctors / physician: Treat symptomatically. Remove by gastric lavage and catharsis but not if patient is unconscious. Give the patient oxygen if respiration is depressed.

Antidote: There is no specific antidote.

5. FIRE-FIGHTING MEASURES

Flash Point: Not applicable.

Extinguishing Media: Use carbon dioxide, dry powder, alcohol resistant foam. Use water as a spray or fog (not a solid water stream) to avoid spreading the contamination. Use water to cool unaffected stock. Contain fire-fighting water to prevent further contamination.

Fire and Explosion Hazards: The formulation is non-flammable. Containers can be flammable.

Hazardous Products of Combustion: Carbon monoxide, phosphorous oxides, nitrogen oxides.

Fire Fighting Equipment: The fire may produce toxic fumes and other products of combustion. Fire-fighters and others that are exposed to the fire should wear full personal protective clothing (overall, boots, gloves) and a self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES (Spillage)

Personal Precautions and Protective Equipment: Avoid contact with the skin and eyes. Do not breathe spray or fumes. Wash contaminated clothing after use and before re-use. Refer to Section 8 for personal protection.

Emergency Procedures: Contain spillage and prevent the spread of contamination.

Environmental Precautions: Do not allow spillage to enter drains or watercourses or any water body. Spillage or uncontrolled discharge into water courses or water bodies must be reported to the police and the Department of Water and Environmental Affairs.

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Methods and Materials for Cleaning up: Cover the spillage with absorbent material such as sand, soil, sawdust, or other absorbent material. Sweep up contaminated absorbent material and place in clearly marked containers for later disposal. Repeat the process if necessary.

Refer to Section 13 for disposal of spilled material.

7. HANDLING AND STORAGE

Good industrial practice in housekeeping and personal hygiene should be followed at all times when handling this product. Areas for handling and storage should be well ventilated.

Handling:

Avoid contact with eyes, prolonged contact with the skin and inhalation of spray or fumes.

Handle this product with caution.

Use this product only in areas with adequate ventilation.

Do not eat, drink or smoke while handling this product.

Wash hands and exposed skin thoroughly after handling or contact with this product.

Remove contaminate clothing immediately, wash any contaminated skin with soap and water and put on clean clothing. Operators should change and wash clothing after use.

Do not contaminate drains, sewers and water bodies when disposing of equipment rinse water.

Refer to Section 13 for disposal of rinse water.

Observe all safeguards on the label as to cleaning and destruction of the container.

Storage:

Storage Temperature: Store between 4 and 30 °C. Do not allow to freeze.

Store only in a cool dry area protected from heat and moisture.

Incompatible Materials for Storage: Do not store in metal containers.

Keep out of reach of children, uninformed persons and animals.

Store away from food, drink, seed, fertilisers and animal feed.

Store only in the original labelled container.

Minimum Shelf Life: 2 years.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Personal Protective Clothing

To reduce personnel exposure to this product, it is recommended to use appropriate personal protective clothing when handling this product.

Respiratory Protection: Wear a respirator or face mask to prevent the inhalation of dust.

Hand Protection: Always wear gloves when handling.

Eye Protection: If there is a potential for eye contact wear goggles or a full face mask when handling the concentrate and the formulated product.

Skin and Body Protection: For repeated or prolonged contact wear a long-sleeved overall, chemical resistant gloves made from nitrile, butyl rubber or similar product. Wear chemical resistant boots.

Exposure Control Parameters

Airborne Exposure Limits: No specific occupational exposure limits have been set for glyphosate and the surfactant.

Engineering Controls: Local exhaust ventilation is recommended. The facilities should be equipped with an eyewash facility and a safety shower.

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Hygiene Measures:

Do not eat, drink, smoke or go to the bathroom while handling this product.

Wash face, hands and exposed skin after handling this product.

Wash contaminated clothing after exposure to this product.

Re-entry Interval: Do not enter the treated area unless wearing protective clothing until the spray deposit has dried.

9. PHYSICAL AND CHEMICAL PROPERTIES OF PRODUCT

These are typical data based on tests but may vary from sample to sample. These typical values should not be construed as a guaranteed analysis of any specific lot or as specifications for the product.

Appearance, Colour	Honey colour.
Form	Soluble liquid.
Odour	Amine odour.
pH	5.5 – 6.2
Flash Point	Not applicable.
Flammability	Not flammable.
Decomposition Temperature	> 189°C
Density	1.175
Solubility in water	Completely soluble.
Viscosity	Glyphosate is not viscous.
Volatility	Glyphosate is not volatile.
Corrosivity	Glyphosate is corrosive to mild steel, plated steel and other metals. Use stainless steel or HDPE containers and equipment.

10. STABILITY AND REACTIVITY

Stability: Stable under normal storage and use conditions.

Hazardous Decomposition: Does not form hazardous decomposition products.

Materials to Avoid / Reactivity: This product can react with alkaline materials to form heat. This is a chemical neutralisation as an acid-base reaction. Do not allow this product to come into contact with any metal as hydrogen gas can be produced. This product can be corrosive to mild steel, tinplate and unprotected metal surfaces.

11. TOXICOLOGICAL INFORMATION

This section is intended for use by toxicologists and health professionals.

Data obtained on this and similar products and components are summarised below.

Acute Oral Toxicity: Rat, LD50: > 2 000 mg/kg body weight

Acute Dermal Toxicity: Rat, LD50: > 2 000 mg/kg body weight

Skin Irritation/Corrosion: Rabbit: This formulation is not a skin irritant.

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Eye Irritation/Damage: Rabbit: The surfactant in this formulation may be a mild eye irritant.

Skin Sensitization: Guinea Pig: Glyphosate is not a skin sensitizer.

Mutagenicity: Glyphosate has no effect on gene mutation, DNA damage or chromosomal aberrations.
Micronucleus assay in mouse bone marrow – glyphosate is not mutagenic.
Ames test for gene mutation – glyphosate is not mutagenic.

Carcinogenicity: Glyphosate is not a carcinogen.

Toxicity to Reproduction and/or Fertility: Glyphosate is not a reproduction toxin.

Developmental Toxicity / Teratology: Glyphosate is not teratogenic.

12. ECOLOGICAL INFORMATION

This section is intended for use by eco-toxicologists and environmental specialists.

Data obtained on this active ingredient and similar products and components are summarised below.

Aquatic Toxicity, Algae and/or Aquatic Plants:

Green algae (*Selenastrum capricornutum*), acute toxicity, 72 hours, $ErC_{50} = 14 \text{ mg/l}$

Unicellular algae (*Pseudokirchneriella subcapitata*), 72 hours, $LOEC = 8.0 \text{ } \mu\text{g/l}$

Aquatic Toxicity, Fish:

Rainbow trout $LD_{50} = 86 \text{ mg/l}$

Rainbow trout 96 hour $LC_{50} = 15 - 26 \text{ mg/l}$

Bluegill sunfish $LD_{50} = 120 \text{ mg/l}$

Channel catfish 96 hour $LC_{50} = 39 \text{ mg/l}$

Fathead minnow 96 hour $LC_{50} = 23 \text{ mg/l}$

Coho salmon 96 hour $LC_{50} = 22 \text{ mg/l}$

Chinook salmon 96 hour $LC_{50} = 20 \text{ mg/l}$

Pink salmon 96 hour $LC_{50} = 14 - 33 \text{ mg/l}$

BCF: Bluegill sunfish = < 1 (No significant bioaccumulation is expected)

BCF: average 0.5 (low potential to bio-accumulate).

Glyphosate 360 SL; common carp 96 hour $LC_{50} = 18.5 \text{ mg/l}$

Glyphosate is regarded as slightly toxic to fish.

Aquatic Toxicity, Invertebrates:

Water Flea (*Daphnia magna*), 48 hours, static, $EC_{50} = > 780 \text{ mg/l}$ (48 hour)

NOEC for Glyphosate 360 SL = 41.0 mg/l (48 hour).

Glyphosate is regarded as slightly toxic to *Daphnia*.

Arthropod Toxicity

Oral $LD_{50} = > 0.285 \text{ mg/bee}$; Contact $LD_{50} = > 0.265 \text{ mg/bee}$

Glyphosate is regarded as non-toxic to bees.

Avian Toxicity

Bobwhite quail, acute oral single dose, $LD_{50} = > 3\ 850 \text{ mg/kg}$

Japanese quail, acute oral single dose, $LD_{50} = > 2\ 000 \text{ mg/kg}$

Mallard duck, dietary toxicity, 5 days; $LC_{50} = > 4\ 640 \text{ mg/kg}$

Chicken; $LD_{50} = > 2\ 500 \text{ mg/kg}$

Reproduction: Mallard duck reproduction $NOEC > 1\ 000 \text{ mg/kg diet}$.

Glyphosate is regarded as non-toxic to birds.

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Soil Organism Toxicity, Invertebrates

Earthworm (*Eisenia foetida*): Acute toxicity, 14 days, $LC_{50} = > 2\ 700$ mg/kg dry soil

Soil Organism Toxicity, Microorganisms

Glyphosate is degraded by soil micro-organisms

Persistence / Degradability: Glyphosate degrades rapidly in soil and water.

Mobility in Soil: Glyphosate binds strongly to clay and organic matter. It is unlikely to move in the soil.

Possible Impact on the Environment: Phytotoxic to most plants.

13. DISPOSAL CONSIDERATIONS

Product

Recycle if appropriate equipment and/or facilities are available.

Do not burn.

Dispose of as hazardous industrial waste.

Keep out of drains, sewers, ditches and water ways.

Follow all local / regional / national / international regulations.

Containers

Triple or pressure rinse empty containers.

Pour rinse water into spray tank; spray on target area.

Store for collection by approved waste or recycling disposal service.

Dispose of as non-hazardous industrial waste.

Do not use containers for any other purpose.

Follow all local / regional / national / international regulations.

14. TRANSPORT INFORMATION

For safe transport of hazardous substances apply appropriate local codes, classifications and regulations.

UN No.: 3082

UN Shipping Name: Hazardous waste, liquid, n.o.s.

Packaging Group: 6.1

15. REGULATORY INFORMATION

RSA Classification: Group III (Blue, Caution)

16. OTHER

The information presented is not necessarily exhaustive but is regarded as representative. These data are presented in good faith and are believed to be correct. No representation as to the completeness or accuracy of these data is made. No responsibility for damages of any nature whatsoever resulting from the use of or reliance upon this information will be accepted. In the event of any uncertainty, consult the supplier before use.
