

MSDS – Material Safety Data Sheet

LAST REVISED: 07.12
MSDS NO.: ACAH 17

MUSCLE-UP® K 360 SL

1. IDENTIFICATION OF THE SUBSTANCE

Product identification: Yellow clear liquid
Common Name: Glyphosate (potassium salt)
Chemical Name: N-(phosphonomethyl)glycine
Use: Agriculture, herbicide
UN No: Not regulated

Supplier: Ag-Chem Africa (Pty) Ltd
288 Mundt Street
Waltloo
012 - 803 0145

Emergency number: 012 - 803 0145

Poison Centre: Griffon Poison Information Centre
(24 Hour Poisoning Emergency Helpline)
082 446 8946

2. COMPOSITION/INFORMATION ON INGREDIENTS

Composition: Glyphosate (glycine) 360 g ae*/l
Glyphosate potassium salt 441 g/l
*acid equivalent

3. HAZARDS IDENTIFICATION

Emergency Overview

- Harmful if swallowed.
- Unlikely to cause skin irritation, and is mildly irritating to the eyes.

Potential Health Effects

Inhalation:

Harmful by inhalation.

Ingestion:

Harmful if swallowed.

Skin Contact:

Unlikely to cause skin irritation on contact.

Eye Contact:

Mildly irritating to the eyes on contact.

Skin sensitization:

Not a skin sensitizer.

4. FIRST AID MEASURES

Inhalation:

Remove person from exposure to fresh air. Apply artificial respiration if person is not breathing and contact an ambulance. Contact a physician if person has difficulty breathing or experiences any discomfort.

Ingestion:

Do not induce vomiting unless instructed to do so by medical personnel. If vomiting occurs spontaneously, keep airways clear. Give water to drink to dilute the material if victim is alert and not convulsing. Never give anything by mouth to an unconscious person. Seek medical attention immediately, especially if symptoms occur.

Skin Contact:

Wash all affected areas with water and soap for at least 15 minutes. Remove contaminated clothing. Wash clothing before re-use. If skin irritation develops, contact a physician immediately.

Eye Contact:

Immediately flush eyes with copious amounts of clear, cool running water for a minimum of 15 minutes. Check for contact lenses after 5 minutes; remove if present. Hold the eyelids apart during the flushing to ensure rinsing of the entire surface of the eyes and lids with water. Contact a physician immediately if irritation persists.

Note to Physician:

Treat symptomatically.

5. FIRE FIGHTING MEASURES

Fire:

Not considered to be a fire hazard.

Fire Extinguishing Media:

Water, foam, dry chemical, carbon dioxide (CO₂).

Fire Fighting Instructions:

In the event of a fire, wear full protective clothing and self-contained breathing apparatus with full-face piece. Decontaminate equipment thoroughly after use. Cool tank/container with water spray. Isolate area.

Hazardous Products of Combustion:

Carbon monoxide (CO), nitrogen oxides (NO_x) and phosphorus oxides (P_xO_y).

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions:

Wear face shield, rubber gloves, full suit, boots resistant to chemicals and a vapour respirator.

Small Spill:

Use absorbent media such as sand to absorb and then collect the spilled product into appropriately labelled containers. Dig up and collect heavily contaminated soil into the same containers. Flush spill area with water, but minimize the use of water to prevent environmental contamination.

Large Spill:

Minimize spread by making a dyke ahead of the spill. Keep out of drains, sewers, ditches and waterways. Notify authorities. Clean the area as described for a small spill.

Refer to Section 13 for disposal of spilled material.

7. HANDLING AND STORAGE

Handling:

Wear appropriate personal protective equipment. Avoid contact with the eyes, skin and clothing. Wash thoroughly and change clothes after handling. Thoroughly clean equipment after use. Observe all warnings and precautions listed for the product. Do not contaminate water, food or feed by storage or disposal. Do not contaminate drains, sewers and water ways when disposing of equipment rinse water. Emptied containers may retain vapour and product residue.

Storage:

Keep in tightly closed container in a shaded, well-ventilated area, away from heat, sparks and other sources of ignition. Keep only in the original container. Keep out of reach of children and uninformed persons. Protect against physical damage.

Incompatible materials for storage: galvanised steel, unlined mild steel, see section 10.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls:

A well-ventilated area is recommended for handling this product.

Respiratory Protection:

Wear appropriate respirator when ventilation is inadequate.

Skin Protection:

Protective rubber gloves to minimise skin contact.

Eye Protection:

Face shield, or goggles resistant to chemicals (at least).

Other Protection:

Full overall with protection for hands and feet (rubber gloves and boots resistant to chemicals).

9. PHYSICAL AND CHEMICAL PROPERTIES

Formulation type:	SL (soluble concentrate)
Physical state:	Liquid
Appearance:	Clear, slight yellow
Odour:	Slight chemical odour
Density:	1.24 g/ml
pH:	4.7 (CIPAC 75.3)
pH (1% solution):	4.9 (CIPAC 75.3)
Persistent foam (10% soln):	No foam visible after 1 minute (CIPAC 47.2)

10. STABILITY AND REACTIVITY

Chemical Stability:	Under normal use conditions of handling and storage, this product is stable for up to 2 years.
Incompatibilities:	May react slightly with alkalis. May also react with galvanised steel or unlined mild steel to produce hydrogen, a highly flammable gas that could explode.
Hazardous Decomposition Products:	Thermal decomposition: refer Section 5.

11. TOXICOLOGICAL INFORMATION

Acute Oral LD ₅₀ (rat):	15 556 mg/kg
Acute Dermal LD ₅₀ (rabbit):	13 889 mg/kg
Inhalation LC ₅₀ (rat; 4-hour):	13.8 mg/l
Skin sensitization (guinea pig):	None
Skin irritation (rabbit):	None
Eye irritation (rabbit):	Mild

12. ECOLOGICAL INFORMATION

(based on information on technical glyphosate):

Toxicity to bees:

LD₅₀ (contact and oral) >100 µg/bee.

Toxicity to fish and other aquatic organisms:

Fish: LC₅₀ (96 hours) for sheepshead minnows >1 000 mg/l; trout 86 mg/l.

Daphnia: LC₅₀ (24 hours) 780 mg/l.

Algae: EC₅₀ (72 hours) for *selenastrum capricornutum* 485 mg/l, (7 days) 13,8 mg/l; (96 hours) for *skeletonema costatum* 1,2 mg/l, (7 days) 0,64 mg/l; (7 days) for *navicula pelliculosa* 42, *anabaena flos-aquae* 15 mg/l.

Other aquatic organisms: LC₅₀ (96 hours) for mysid shrimps (*mysidopsis bahia*) >1 000, grass shrimps 281, fiddler crabs 934 mg/l. EC₅₀ (96 hours) for sea urchins >1 000 mg/l; (14 days) for *lemna gibba* 25,5 mg/l. EC₅₀ (48 hours) for *litoria moorei* tadpoles 111 mg/l.

Toxicity to birds:

Acute oral LD₅₀ for bobwhite quail >3 851 mg/kg. Dietary LC₅₀ (8 days) for quail and ducks >4 640 mg/kg diet.

Toxicity to earthworms and soil micro-organisms:

Earthworms: LC₅₀ values in soil >5 000 ppm for glyphosate trimethylsulfonium salt.

Persistence in environment:

DT₅₀ in clay loam 1 day; in light clay 1-2 days. DT₅₀ for total residues 15-30 days.

13. DISPOSAL CONSIDERATIONS

Keep product and container out of drains, sewers, ditches, water ways and water bodies. Triple rinse the empty container into the spray tank or mixing tank as instructed on the label on the container. Do not re-use containers. Store for collection by an approved waste disposal service. Adhere to all local and national legislation and regulations pertaining to waste management.

14. TRANSPORT INFORMATION

UN No.: Not regulated

15. REGULATORY INFORMATION

Risk-Phrase:	R36	Irritating to eyes.
Safety-Phrase(s):	S1/2	Keep locked up and out of the reach of children.
	S26	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
	S46	If swallowed seek medical advice immediately and show the container or label.

National legislation:	National Road Traffic Act, 1996 (Act 93 of 1996)
	Fire Brigade Service Act, 1987 (Act 99 of 1987)
	Occupational Health and Safety Act, 1993 (Act 85 of 1993)

16. 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.

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