



Safety data sheet

(acc. Regulation (EC) No 1907/2006)

Tradename: Glyphosate 75,7% SG
Company: DVA Chemicals South Africa

Date: 24.07.2014
Rev.: 5
Page: 1 / 8

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product name: Glyphosate 75,7% SG

1.2. Relevant identified uses of the substance or mixture and uses advised against

Recommended use: Herbicide

1.3. Details of the supplier of the safety data sheet

DVA Chemicals South
Africa Unit 17, Block C
Diaz Office Park
Diaz
Tel. +27 44 692 0552

1.4. Emergency telephone number

+72 83 – 380-9987
+27-82-446-8946

SECTION 2: Hazard identification

2.1. Classification of the substance or mixture

Acc. to Regulation (EC) 1272/2008	
Hazard class / Hazard category	Hazard statements
Hazardous to the aquatic environment, Chronic category 2	H411

Acc. to Directive 67/548/EEC or 1999/45/EC	
European classification	R-Phrases
Dangerous for the environment	R51/53

2.2. Label elements

Acc. to Regulation (EC) 1272/2008



GHS09
Environment

Signal word: -

H statements

H411 Toxic to aquatic life with long lasting effects.

P statements

P273 Avoid release to the environment.
P501 Dispose of contents/container to an authorized waste burning site.

Acc. to Directive 67/548/EEC or 1999/45/EC





Safety data sheet

(acc. Regulation (EC) No 1907/2006)

Tradename: Glyphosate 75,7% SG	Date: 24.07.2014
Company: DVA Chemicals South Africa	Rev.: 5
	Page: 2 / 8

R phrases

R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

S phrases

S60 This material and its container must be disposed of as hazardous waste.
S61 Avoid release to the environment. Refer to special instructions/safety data sheets.

2.3. Other hazards

No further information.

SECTION 3: Composition/Information on ingredients

3.1. Substances

This product is a mixture.

3.2. Mixtures

Component	CAS No	EINECS No	Classification (1272/2008/EC)	Classification (67/548/EEC)	Content
Glyphosate *	40465-66-5	-	Aqu.Chronic 2; H411	N, R51/53	~75,7%

* N-Phosphonomethylglycine

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation

- Bring affected victim outside away from exposure and provide for fresh air.
- Call for medical advice if there's pain in breathing.

Eye contact

- Immediately rinse eyes with plenty of water for 15 minutes ensuring eyelids are held open. - Obtain medical advice.

Skin contact

- Immediately take off contaminated clothing. Wash affected skin with water and soap. - If irritation persists, seek medical advice.

Ingestion

- Immediately drinking of plenty of water. - Do not induce vomiting.
- Immediately obtain medical advice.
- Never give anything by mouth or induce vomiting to an unconscious person.

4.2. Most important symptoms and effects, both acute and delayed

- Symptoms of acute exposure to high doses include nausea, vomiting, diarrhoea, muscle weakness and salivation.
- Signs for eye or skin irritation: burning sensation, redness, swelling.
- Ingestion of similar formations has been reported to produce gastrointestinal discomfort with irritation of the mouth, nausea, vomiting and diarrhoea.

4.3. Indication of any immediate medical attention and special treatment needed

- There is no specific antidote. All treatment should be based on observed signs and symptoms of distress in the patient. Treat symptomatically.

SECTION 5: Fire fighting measures

5.1. Extinguishing media

Suitable extinguishing media

- Water (Spray – not splash), extinguishing powder, carbon dioxide, foam.



Safety data sheet

(acc. Regulation (EC) No 1907/2006)

Tradename: Glyphosate 75,7% SG
Company: DVA Chemicals South Africa

Date: 24.07.2014
Rev.: 5
Page: 3 / 8

Unsuitable extinguishing media

- No restrictions.

5.2. Special hazards arising from the substance or mixture -

Forming of dangerous gases / vapours at decomposition:

Carbon dioxide, carbon monoxide, oxides of nitrogen, ammonia, oxides of phosphor

- Forming of dangerous gases / vapours in case of a fire in the surroundings possible too.

5.3. Advice for fire-fighters

- Use self-contained breathing apparatus when tight next to the fire or in closed rooms.
- Clean equipment after use (Shower, clean and check clothing carefully).

Further precautions

- Keep use of water under control according to possible environmental endangering (s. section 6).

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

- Pay attention to protective measurements according to section 8.
- Avoid contact with skin, eyes and clothing.
- Provide for good ventilation.
- Keep unprotected people away.

6.2. Environmental precautions

- Inform the appropriate authorities if considerable quantities of the product are released.
- Prevent escape into water, drainage, sewer or the ground.

6.3. Methods and material for containment and cleaning up

- Take up mechanically or with inert material (sand, earth, absorbing material).
- Collect in a closed, labelled and product-resistant container.

6.4. Reference to other sections

- Concerning disposal see section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Keep away from reactive material (see section 10).
- Avoid contact with skin, eyes and clothing.
- Do not eat, drink or smoke at work.
- Wash hands before breaks and after work.
- Thoroughly clean equipment after use.
- Provide for good ventilation.

7.2. Conditions for safe storage, including any incompatibility

- Store in closed original packaging.
- Keep container at a dry and well ventilated place.
- Keep away from food, drink and animal feeding stuffs.

7.3. Specific end use(s)

- Ask supplier before special use.

Further precautions

- Inform personnel about dangerous product.
- Empty containers retain vapour and product residue.
- Do not contaminate drains, sewers and waterways when depositing of equipment rinse water.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

- Occupational exposure limits:
At the present there are no information regarding exposure limit values.

8.2. Exposure controls

- Pay attention to measurements according section 7.
- Install local ventilation when danger of decomposition.



Safety data sheet

(acc. Regulation (EC) No 1907/2006)

Tradename: Glyphosate 75,7% SG
Company: DVA Chemicals South Africa

Date: 24.07.2014
Rev.: 5
Page: 4 / 8

Personal Protective Equipment:

- Respiratory protection
At recommended use no special equipment is necessary.
When released or in case of intensive or longer exposure use self-contained breathing apparatus. Use only equipment according to international/national regulations.
- Hand protection
Chemical resistant gloves (EN 374)
Recommended material: nitrile rubber, chloroprene rubber, PVC
- Eye protection
Glasses with side protection.
- Skin protection
Protective workclothings.
Wear long-sleeve shirts and long pants.

Hygiene measures

- Shower and eye shower.
- Do not eat, drink or smoke at work.
- Wash hands before breaks and after work. -
Take off contaminated clothing.
- Wearing of closed clothing is recommended. -
Separate preserving of working clothing.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance:	granules
Colour:	white
Odour:	without
pH:	4 – 6 (20°C)
Melting point/range:	230°C
Boiling point/range:	n.a.
Flash point:	n.a.
Auto-ignition temperature:	n.a.
Explosive properties:	Lower Explosive Limit: n.a. Upper Explosive Limit: n.a.
Vapour pressure:	n.a.
Density:	0,5 g/cm ³ (20°C)
Solubility:	Water (20°C) soluble
Partition coefficient: (n-octanol/water)	n.d.
Viscosity:	n.a.

9.2. Other information

Decomposition temperature:	n.d.
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SECTION 10: Stability and reactivity

10.1. Reactivity

- No special information.

10.2. Chemical stability

- Stable under normal conditions of use.

10.3. Possible hazardous reactions

- This product can react with caustic (basic materials to liberate heat). This is not a polymerization but rather a chemical neutralization in an acid base reaction.
- Do not mix, store or apply this product or spray solutions of this product in galvanized steel or unlined mild steel containers or spray tanks. Forming of hydrogen, which may form a highly combustible gas air mixture.
- With alkalines forming of ammonia is possible.



Safety data sheet

(acc. Regulation (EC) No 1907/2006)

Tradename: Glyphosate 75,7% SG
Company: DVA Chemicals South Africa

Date: 24.07.2014
Rev.: 5
Page: 5 / 8

10.4. Conditions to avoid

- Avoid sources of ignition and extreme heat.

10.5. Incompatible materials

- Strong oxidizing agents, strong acids, strong bases.
- Galvanized steel, mild steel.

10.6. Hazardous decomposition products

- oxides of nitrogen, ammonia, oxides of phosphorous
- carbon dioxide, carbon monoxide

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute Toxicity

- Acute oral toxicity, rat LD 50 > 4640 mg/kg
- Acute dermal toxicity, rat LD 50 > 2150 mg/kg
- Inhalation toxicity, rat LC 50 n.d.

Irritation

- 4 days slight to moderate irritation to eye. This was evident at 1 day but cleared by 4 days.
- No irritation to skin (rabbits, 4 hours essentially).

Sensitization

- Not a sensitizer (guinea pig, skin).

Repeated dose toxicity

Glyphosate

- repeated dermal exposure, rabbit, 21 days
NOAEL toxicity > 5000 mg/kg/day
- rat, oral, 3 months, NOAEL toxicity > 20000 mg/kg diet
- Data from Glyphosate laboratory toxicity studies were conducted with a formulation comprised of 62% isopropylamine salt of Glyphosate (MON 0139).

Rabbits – 3 week dermal:

Repeated daily primarily resulted in slight skin irritation.

Dogs – 6 month feeding:

Only slight body weight changes noted.

Rats – 90 days feeding:

No treatment related effects.

Mice – 90 days feeding:

Decreased weight gains at the high dose level group animals.

Carcinogenicity

Glyphosate

mouse, oral, 24 months, NOEL tumor > 30000 mg/kg diet
NOAEL toxicity ~ 5000 mg/kg diet

Target organ: liver

Increase of body weight, histopathological effects

rat, oral, 24 months, NOEL tumor > 20000 mg/kg diet
NOAEL ~ 8000 mg/kg diet

Target organ: eyes

- Increase of body weight, histopathological effects.
- None of the components present in this material at concentrations equal to or greater than 0,1% is listed by IARC, NTP, OSHA or ACGIH as a carcinogen.

Mutagenicity

Glyphosate

- In vitro and in vivo mutagenicity test: not mutagenic

Reproduction toxicity

Glyphosate

- rat, oral, 3 generations, NOAEL toxicity > 30 mg/kg
NOAEL reproduction > 30 mg/kg



Safety data sheet

(acc. Regulation (EC) No 1907/2006)

Tradename: Glyphosate 75,7% SG
Company: DVA Chemicals South Africa

Date: 24.07.2014
Rev.: 5
Page: 6 / 8

Further information

Terratogenicity (glyphosate)

- rat, oral, 6-19 days pregnancy, NOAEL toxicity 1000 mg/kg body weight NOAEL development 1000 mg/kg body weight
Increase of body weight, decrease surviving range, lost of weight, postimplantation, delayed forming of bones at descendants only occurred in case of maternal poisoning
- rabbit, oral, 6-27 days pregnancy, NOAEL toxicity 175 mg/kg body weight NOAEL development 175 mg/kg body weight
Decrease in surviving range

SECTION 12: Ecological information

12.1. Toxicity

- Fishes:

Rainbow trout, LC 50, 96 hours, static	22 mg/l
Rainbow trout, LC 50, 96 hours, dynamic	8,2 mg/l
Bluegill sunfish, LC 50, 96 hours, dynamic	5,8 mg/l
Fathead minnow, LC 50, 96 hours	9,4 mg/l
Channel catfish, LC 50, 96 hours	16 mg/l
Chinook salmon, LC 50, 96 hours	20 mg/l
Coho salmon, LC 50, 96 hours	22 mg/l
- Crustaceans:

Daphnia magna, LC 50, 48 hours, aeration	37 mg/l
Daphnia magna, LC 50, 48 hours, w/o aeration	24 mg/l
Gammarus pseudolimnaeus, EC 50, 48 hours	42 mg/l
- Algae: Algae S. Capricornutum, EC 50, 72 hours 2,1 mg/l
- Birds:

Bobwhite quail, LC 50, 8 days	> 6300 ppm
Mallard duck, LC 50, 8 days	> 6300 ppm

12.2. Persistence and degradability

- Soil field, half life 2-174 days
Koc 884-60000 l/kg, adsorbs strongly to soil
Water, aerobic, half life < 7 days
(Glyphosate)

12.3. Bioaccumulative potential

- Lepomis macrochirus hole fish BCF < 1
(no significant bioaccumulation is occurred) (Glyphosate)

12.4. Mobility in soil

- No detailed data available.

12.5. Results of PBT and vPvB assessment

- No specific data available.

12.6. Other adverse effects

- Toxic to aquatic organisms.
- Prevent escape into water, drainage, sewer or the ground.

SECTION 13: Disposal considerations

13.1. Waste treatment

methods Product disposal

- Obey the local and national regulations for recycling.
- Contaminated adsorbents, surplus product, etc., should be burnt in an incinerator, preferably designed for pesticide disposal.

Container disposal

- Dispose at an authorized waste burning site for dangerous goods waste.



Safety data sheet

(acc. Regulation (EC) No 1907/2006)

Tradename: Glyphosate 75,7% SG	Date: 24.07.2014
Company: DVA Chemicals South Africa	Rev.: 5
	Page: 7 / 8

SECTION 14: Transport information

	Road transport ADR	Railway transport RID	Inland waterway ADN	Maritime transport IMDG	Air transport IATA
14.1. UN No	UN 3077				
14.2. Proper shipping name	Environmentally hazardous substance, solid, n.o.s. (ammonium salt of glyphosate)				
14.3. Class	9				
14.4. Packing Group	III				
14.5. Environmental hazards	Fish & tree				
14.6. Special pre- caution for user	No further information				
14.7. Transport in bulk acc. to MARPOL 73/78 und IBC Code	No further information				

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture (1272/2008/EC)

National regulations

- Water hazard class WGK: 2 (Germany)

15.2. Chemical safety assessment

- No further information.

16. Other information

Latest Update

Complete revision

Used abbreviations

- n.a. not applicable
- n.d. no data

Literature references and sources of information

EC Directive 67/548/EEC resp. 1999/45/EC in valid version; regulation (EC) No 1907/2006 (REACH) in valid version; National exposure limit values in valid version; Transport regulations according to ADR, RID, ADN, IMDG, IATA in valid version; information from supplier.



Safety data sheet

(acc. Regulation (EC) No 1907/2006)

Tradename: Glyphosate 75,7% SG
Company: DVA Chemicals South Africa

Date: 24.07.2014

Rev.: 5

Page: 8 / 8

List of relevant hazard statements from section 2 and 3 (GHS classification)

H411 Toxic to aquatic life with long lasting effects.

List of relevant R-phrases from section 2 and 3 (EU-classification)

R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

These details are based on our today's knowledge. They should describe our products regarding safety requirements and therefore should not assure certain properties.