



## SAFETY DATA SHEET

### Section 1 - Identification of the Material and Supplier

**Product Name:** Swan Glyphosate 540 K Herbicide  
**Chemical Nature:** Glyphosate is an amino acid derivative; presented here as the potassium salt for increased water solubility.  
**Product Use:** Non-Selective herbicide for use as described on the product label.  
**Company:** **Swan Chemical Holdings Pty Ltd.**  
U2/9 Glossop St Wangara WA 6065  
Phone: 1300 289 520  
[info@swanchemicalholdings.com](mailto:info@swanchemicalholdings.com)  
swanchemicalholdings.com  
**Creation Date:** March 2024  
**Poisons Information Centre: Phone 13 11 26 from anywhere in Australia**

### Section 2 - Hazards Identification

#### Statement of Hazardous Nature

This product is classified as: Xi, Irritating. N, Dangerous to the environment. Hazardous according to the criteria of SWA.

Not subject to the ADG Code when transported in Australia by Road or Rail in packages 500kg (L) or less; or IBCs (refer to SP AU01). However, if transported by Air or Sea, this provision does not apply. Then the product is classed as Dangerous (Class 9 Environmentally Hazardous) by IATA and IMDG/ IMSBC respectively. See details below and in Section 14 of this SDS.

**SUSMP Classification:** S5

**ADG Classification:** Class 9: Miscellaneous dangerous goods.

**UN Number:** 3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.



#### GHS Signal word: **WARNING**

Skin Corrosion /Irritation Category 2

Skin Sensitisation Category 1

Serious eye damage/eye irritation Category 2B

Hazardous to aquatic environment Short term/Chronic Category 2

#### HAZARD STATEMENT

H315: Causes skin irritation.

H317: May cause an allergic skin reaction.

H320: Causes eye irritation.

H411: Toxic to aquatic life with long lasting effects.

#### PREVENTION

P102: Keep out of reach of children.

P261: Avoid breathing fumes, mists, vapours or spray.

P262: Do not get in eyes, on skin, or on clothing.

P264: Wash contacted areas thoroughly after handling.

P272: Contaminated work clothing should not be allowed out of the workplace.

P273: Avoid release to the environment.

P280: Wear protective gloves, protective clothing and eye or face protection.

#### RESPONSE

P352: Wash with plenty of soap and water.

P362: Take off contaminated clothing and wash before reuse.

P363: Wash contaminated clothing before reuse.

P301+P330+P331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P302+P352: IF ON SKIN: Wash with plenty of soap and water.

P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P333+P313: If skin irritation or rash occurs: Get medical advice.

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P337+P313: If eye irritation persists: Get medical advice.

P391: Collect spillage.

P370+P378: Not combustible. Use extinguishing media suited to burning materials.

#### STORAGE

P410: Protect from sunlight.

P402+P404: Store in a dry place. Store in a closed container.

P403+P235: Store in a well-ventilated place. Keep cool.

#### DISPOSAL

P501: Dispose of contents and containers as specified on the registered label.

#### Emergency Overview

**Physical Description & Colour:** Blue coloured liquid.

**Odour:** Mild amine odour.

**Major Health Hazards:** irritating to eyes and skin, possible skin sensitiser.

### Section 3 - Composition/Information on Ingredients

Chemical Name	CAS No.	Conc.	TWA (mg/m3)	STEL (mg/m3)
Glyphosate present as the potassium salt	1071-83-6	540 g/L	not set	not set
Non-hazardous component(s)	-	Balance	not set	not set

This is a commercial product whose exact ratio of components may vary slightly. Minor quantities of other non-hazardous ingredients are also possible.

The SWA TWA exposure value is the average airborne concentration of a particular substance when calculated over a normal 8 hour working day for a 5-day working week. The STEL (Short Term Exposure Limit) is an exposure value that may be equalled (but should not be exceeded) for no longer than 15 minutes and should not be repeated more than 4 times per day. There should be at least 60 minutes between successive exposures at the STEL. The term 'pea' is used when the TWA limit, because of the rapid action of the substance, should never be exceeded, even briefly.

### Section 4 - First Aid Measures

#### General Information:

You should call The Poisons Information Centre if you feel that you may have been poisoned, burned or irritated by this product. The number is 13 1126 from anywhere in Australia and is always available. Have this SDS with you when you call.

**Inhalation:** No first aid measures normally required. However, if inhalation has occurred, and irritation has developed, remove to fresh air and observe until recovered. If irritation becomes painful or persists more than about 30 minutes, seek medical advice.

**Skin Contact:** Wash gently and thoroughly with warm water (use non-abrasive soap if necessary) for 10-20 minutes or until product is removed. Under running water, remove contaminated clothing, shoes and leather goods (e.g. watchbands and belts) and completely decontaminate them before reuse or discard. If irritation persists, repeat flushing and seek medical attention.

**Eye Contact:** Immediately flush the contaminated eye(s) with lukewarm, gently flowing water for 15 minutes or until the product is removed, while holding the eyelid(s) open. Take care not to rinse contaminated water into the unaffected eye or onto the face. Obtain medical attention immediately. Take special care if exposed person is wearing contact lenses.

**Ingestion:** If swallowed, do NOT induce vomiting. Wash mouth with water and contact a Poisons Information Centre or call a doctor.

### Section 5 - Fire Fighting Measures

**Fire and Explosion Hazards:** The major hazard in fires is usually inhalation of heated and toxic or oxygen deficient (or both), fire gases. There is no risk of an explosion from this product under normal circumstances if it is involved in a fire.

This product is likely to decompose only after heating to dryness, followed by further strong heating. Fire decomposition products from this product may be toxic if inhaled. Take appropriate protective measures.

**Extinguishing Media:** Try to contain spills, minimise spillage entering drains or water courses.

**Fire Fighting:** If a significant quantity of this product is involved in a fire, call the fire brigade. There is little danger of a violent reaction or explosion if significant quantities of this product are involved in a fire. Recommended personal protective equipment is full fire kit and breathing apparatus.

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Flash Point:	Does not burn.
Upper Flammability Limit:	Does not burn.
Lower Flammability Limit:	Does not burn.
Autoignition temperature:	Not applicable - does not burn.
Flammability Class:	Does not burn.

## Section 6 - Accidental Release Measures

**Accidental Release:** In the event of a major spill, prevent spillage from entering drains or water courses. Wear full protective clothing including eye/face protection. All skin areas should be covered. See below under Personal Protection regarding Australian Standards relating to personal protective equipment. Suitable materials for protective clothing include PVC, Nitrile. Eye/face protective equipment should include a full-face shield. If there is a significant chance that vapours or mists are likely to build up in the cleanup area, we recommend that you use a respirator. Usually, no respirator is necessary when using this product. However, if you have any doubts consult the Australian Standard mentioned below (section 8). Otherwise, not normally necessary.

Stop leak if safe to do so and contain spill. Absorb onto sand, vermiculite or other suitable absorbent material. If spill is too large or if absorbent material is not available, try to create a dike to stop material spreading or going into drains or waterways. Sweep up and shovel or collect recoverable product into labelled containers for recycling or salvage and dispose of promptly. Recycle containers wherever possible after careful cleaning. Refer to product label for specific instructions. After spills, wash area preventing runoff from entering drains. If a significant quantity of material enters drains, advise emergency services. Full details regarding disposal of used containers, spillage and unused material may be found on the label. If there is any conflict between this SDS and the label, instructions on the label prevail. Ensure legality of disposal by consulting regulations prior to disposal. Thoroughly launder protective clothing before storage or re-use. Advise laundry of nature of contamination when sending contaminated clothing to laundry.

## Section 7 - Handling and Storage

**Handling:** Keep exposure to this product to a minimum, and minimise the quantities kept in work areas. Check Section 8 of this SDS for details of personal protective measures, and make sure that those measures are followed. The measures detailed below under 'Storage' should be followed during handling to minimise risks to persons using the product in the workplace. Also, avoid contact or contamination of product with incompatible materials listed in Section 10.

**Storage:** This product is a Scheduled Poison. Observe all relevant regulations regarding sale, transport and storage of this schedule of poison. Protect this product from light. Store in the closed original container in a dry, cool, well-ventilated area out of direct sunlight. Make sure that the product does not come into contact with substances listed under 'Incompatibilities' in Section 10. Some liquid preparations settle or separate on standing and may require stirring before use. Check packaging - there may be further storage instructions on the lab.

## Section 8 - Exposure Controls and Personal Protection

The following Australian Standards will provide general advice regarding safety clothing and equipment:

Respiratory equipment: AS/NZS 1715, Protective Gloves: AS 2161, Occupational Protective Clothing: AS/NZS 4501 set 2008, Industrial Eye Protection: AS1336 and AS/NZS 1337, Occupational Protective

Footwear: AS/NZS2210. SWA Exposure Limits TWA (mg/m<sup>3</sup>) STEL (mg/m<sup>3</sup>)

Exposure limits have not been established by SWA for any of the significant ingredients in this product.

No special equipment is usually needed when occasionally handling small quantities. The following instructions are for bulk handling or where regular exposure in an occupational setting occurs without proper containment systems. Ventilation: This product should only be used in a well-ventilated area. If natural ventilation is inadequate, use of a fan is suggested.

**Eye Protection:** Protective glasses or goggles should be worn when this product is being used.

Failure to protect your eyes may cause them harm. Emergency eye wash facilities are also recommended in an area close to where this product is being used.

**Skin Protection:** If you believe you may have a sensitisation to this product or any of its declared

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ingredients, you should prevent skin contact by wearing impervious gloves, clothes and, preferably, apron. Make sure that all skin areas are covered. See below for suitable material types.

Protective Material Types: We suggest that protective clothing be made from the following materials: PVC, nitrile.

**Respirator:** Usually, no respirator is necessary when using this product. However, if you have any doubts consult the Australian Standard mentioned above. Otherwise, not normally necessary.

Eyebaths or eyewash stations and safety deluge showers should, if practical, be provided near to where this product is being handled commercially.

## Section 9 - Physical and Chemical Properties:

**Physical Description & Colour:** Blue coloured liquid.

**Odour:** Mild amine odour.

**Boiling Point:** Approximately 100°C at 100kPa.

**Freezing/Melting Point:** Below 0°C.

**Volatiles:** Water component.

**Vapour Pressure:** 2.37 kPa at 20°C (water vapour pressure).

**Vapour Density:** As for water.

**Specific Gravity:** 1.3

**Water Solubility:** Completely soluble in water.

**pH:** 4.7-5.0 (as supplied)

**Volatility:** No data.

**Odour Threshold:** No data.

**Evaporation Rate:** As for water.

**Coeff Oil/water Distribution:** No data.

**Autoignition temp:** Not applicable - does not burn.

## Section 10 - Stability and Reactivity

**Reactivity:** This product is unlikely to react or decompose under normal storage conditions. However, if you have any doubts, contact the supplier for advice on shelf-life properties.

**Conditions to Avoid:** Protect this product from light. Store in the closed original container in a dry, cool, well-ventilated area out of direct sunlight.

Incompatibilities: strong acids, strong bases, strong oxidising agents.

**Fire Decomposition:** This product is likely to decompose only after heating to dryness, followed by further strong heating. Combustion forms carbon dioxide, and if incomplete, carbon monoxide and possibly smoke. Water is also formed. May form nitrogen and its compounds, and under some circumstances, oxides of nitrogen. Occasionally hydrogen cyanide gas in reducing atmospheres. May form hydrogen chloride gas, other compounds of chlorine. Potassium compounds. Carbon monoxide poisoning produces headache, weakness, nausea, dizziness, confusion, dimness of vision, disturbance of judgment, and unconsciousness followed by coma and death.

**Polymerisation:** This product will not undergo polymerisation reactions.

## Section 11 - Toxicological Information

### Local Effects:

Target Organs: There is no data to hand indicating any particular target organs.

### Classification of Hazardous Ingredients

Ingredient: Glyphosate (as Salt)

• Hazardous to the aquatic environment (chronic) - Category 2

**Toxicity:** Glyphosate is practically nontoxic by ingestion, with a reported acute oral LD<sub>50</sub> of 5600 mg/kg in the rat. The toxicities of the technical acid (glyphosate) and the formulated product are nearly the same. The oral LD<sub>50</sub> for the trimethylsulfonium salt is reported to be approximately 750 mg/kg in rats, which indicates moderate toxicity. Formulations may show moderate toxicity as well (LD<sub>50</sub> values between 1000 mg/kg and 5000 mg/kg). Oral LD<sub>50</sub> values for glyphosate are greater than 10,000 mg/kg in mice, rabbits, and goats. It is practically nontoxic by skin exposure, with reported dermal LD<sub>50</sub> values of greater than 5000 mg/kg for the acid and isopropylamine salt. The trimethylsulfonium salt has a reported dermal LD<sub>50</sub> of greater than 2000 mg/kg. It is reportedly not irritating to the skin of rabbits and does not induce skin sensitization in guinea pigs. It does cause eye irritation in rabbits.

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Some formulations may cause much more extreme irritation of the skin or eyes. In a number of human volunteers, patch tests produced no visible skin changes or sensitization. The reported 4-hour rat inhalation LC<sub>50</sub> values for the technical acid and salts were 5 to 12 mg/L, indicating moderate toxicity via this route. Some formulations may show high acute inhalation toxicity. While it does contain a phosphatyl functional group, it is not structurally similar to organophosphate pesticides which contain organophosphate esters, and it does not significantly inhibit cholinesterase activity.

**Chronic toxicity:** Studies of glyphosate lasting up to 2 years, have been conducted with rats, dogs, mice, and rabbits, and with few exceptions no effects were observed. For example, in a chronic feeding study with rats, no toxic effects were observed in rats given doses as high as 400 mg/kg/day. Also, no toxic effects were observed in a chronic feeding study with dogs fed up to 500 mg/kg/day, the highest dose tested.

**Reproductive Effects:** Laboratory studies show that glyphosate produces reproductive changes in test animals very rarely and then only at very high doses (over 150 mg/kg/day). It is unlikely that the compound would produce reproductive effects in humans.

**Teratogenic effects:** In a teratology study with rabbits, no developmental toxicity was observed in the foetuses at the highest dose tested (350 mg/kg/day). Rats given doses up to 175 mg/kg/day on days 6 to 19 of pregnancy had offspring with no teratogenic effects, but other toxic effects were observed in both the mothers and the foetuses. No toxic effects to the foetuses occurred at 50 mg/kg/day. Glyphosate does not appear to be teratogenic.

**Mutagenic Effects:** Glyphosate mutagenicity and genotoxicity assays have been negative. These included the Ames test, other bacterial assays, and the Chinese Hamster Ovary (CHO) cell culture, rat bone marrow cell culture, and mouse dominant lethal assays. It appears that glyphosate is not mutagenic.

**Carcinogenic Effects:** Glyphosate is classed 2a by IARC - probably carcinogenic to humans.

**Organ Toxicity:** Some microscopic liver and kidney changes, but no observable differences in function or toxic effects, have been seen after lifetime administration of glyphosate to test animals.

**Fate in humans and animals:** Glyphosate is poorly absorbed from the digestive tract and is largely excreted unchanged by mammals. At 10 days after treatment, there were only minute amounts in the tissues of rats fed glyphosate for 3 weeks. Cows, chickens, and pigs fed small amounts of glyphosate had undetectable levels (less than 0.05 ppm) in muscle tissue and fat. Levels in milk and eggs were also undetectable (less than 0.025 ppm). Glyphosate has no significant potential to accumulate in animal tissue.

**Glyphosate:** LD<sub>50</sub> Oral, Rat = 5600 mg/kg; LD<sub>50</sub> Oral, Mouse = 11300 mg/kg; LD<sub>50</sub> Dermal, Rat = >5010 mg/kg; LD<sub>50</sub> Dermal, Mouse = 7030 mg/kg; LD<sub>50</sub> Dermal, Rabbit = >5000 mg/kg

## Section 12 - Ecological Information

Toxic to Aquatic Organisms, may cause long-term adverse effects to the aquatic environment.

**Effects on Birds:** Glyphosate is slightly toxic to wild birds. The dietary LC<sub>50</sub> in both Mallards and Bobwhite quail is greater than 4500 ppm.

**Effects on Aquatic Organisms:** Technical glyphosate acid is practically nontoxic to fish and may be slightly toxic to aquatic invertebrates. The reported 96-hour LC<sub>50</sub> values for other aquatic species include greater than 10 mg/L in Atlantic oysters, 934 mg/L in fiddler crab, and 281 mg/L in shrimp. The 48-hour LC<sub>50</sub> for glyphosate in Daphnia (water flea), an important food source for freshwater fish, is 780 mg/L. Some formulations may be more toxic to fish and aquatic species due to differences in toxicity between the salts and the parent acid or to surfactants used in the formulation. There is a very low potential for the compound to build up in the tissues of aquatic invertebrates or other aquatic organisms.

**Effects on Other Organisms:** Glyphosate is nontoxic to honeybees. Its oral and dermal LD<sub>50</sub> is greater than 0.1 mg/bee. The reported contact LC<sub>50</sub> values for earthworms in soil are greater than 5000 ppm for both the glyphosate trimethylsulfonium salt and formulated product.

### Environmental Fate:

**Breakdown in Soil and Groundwater:** Glyphosate is moderately persistent in soil, with an estimated average half-life of 47 days. Reported field half-lives range from 1 to 174 days. It is strongly adsorbed to most soils, even those with lower organic and clay content.

**Breakdown in water:** In water, glyphosate is strongly adsorbed to suspended organic and mineral

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matter and is broken down primarily by microorganisms. Its half-life in pond water ranges from 12 days to 10 weeks.

**Breakdown in Vegetation:** Glyphosate may be translocated throughout the plant, including to the roots. It is extensively metabolized by some plants, while remaining intact in others.

**Other Adverse Effects:** No further relevant information available.

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### Section 13 - Disposal Considerations

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Disposal: Special help is available for the disposal of Agricultural Chemicals. The product label will give general advice regarding disposal of small quantities, and how to cleanse containers.

**Special Precautions for Landfill or Incineration:**

Please consult your state Land Waste Management Authority for more information.

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### Section 14 - Transport Information

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**Not subject to the ADG Code when transported in Australia by Road or Rail in packages 500kg(L) or less; or IBCs (refer to SP AU01).**

**UN Number:** 3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. Hazchem Code: •3Z

**Special Provisions:** 179, 274, 331, 335, AU01

**Limited quantities:** ADG 7 specifies a Limited Quantity value of 5 L for this class of product.

**Dangerous Goods Class:** Class 9: Miscellaneous Dangerous Goods.

**Packing Group:** III

**Packing Instruction:** P001, IBC03, LP01

Class 9 Miscellaneous Dangerous Goods shall not be loaded in the same vehicle or packed in the same freight container with Dangerous Goods of Class 1 (Explosives).

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### Section 15 - Regulatory Information

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AICS: All the significant ingredients in this formulation are compliant with NICNAS regulations. The following ingredient: Glyphosate present as the potassium salt, is mentioned in the SUSMP.

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### Section 16 - Other Information

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**This SDS contains only safety-related information. For other data see product literature.**

**Abbreviations and acronyms:**

ADG: Australian Dangerous Goods

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

IARC: International Agency for Research on Cancer

STEL: Short Term Exposure Limit

TWA: Time Weighted Average

NES: National Exposure Standard (Safe Work Australia - Workplace Exposure Standards For Airborne Contaminants)

Serious Eye Damage/Irritation 1: Serious eye damage/eye irritation – Category 1

Aquatic Chronic 2: Hazardous to the aquatic environment, long-term (Chronic). Category 2

This SDS summarises our best knowledge of the health and safety hazard information of the product and how to safely handle and use the product in the workplace. Each user should read this SDS and consider the information in the context of how the product will be handled and used in the workplace including in conjunction with other products.

Please read all labels carefully before using product.

This SDS is prepared in accord with the SWA document 'Preparation of Safety Data Sheets for Hazardous Chemicals - Code of Practice' (Feb 2016).

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