

## Section 1 - Identification of The Material and Supplier

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Bondi Junction, NSW 2022

**Chemical nature:** Glufosinate ammonium is an organophosphorus-phosphinic acid derivative.**Trade Name:** Farmalinx Commando 200 Herbicide**APVMA Code:** 68987**Product Use:** Agricultural herbicide for use as described on the product label.**Creation Date:** August, 2013**This version issued:** October, 2020 and is valid for 5 years from this date.

## Section 2 - Hazards Identification

### Statement of Hazardous Nature

This product is classified as: Xi, Irritating. T, Toxic. Hazardous according to the criteria of SWA.

Not a Dangerous Good according to Australian Dangerous Goods (ADG) Code, IATA or IMDG/IMSBC criteria.

**Risk Phrases:** R60, R63, R21/22, R36/38, R48/20/22. May impair fertility. Possible risk of harm to the unborn child. Harmful in contact with skin and if swallowed. Irritating to eyes and skin. Harmful: danger of serious damage to health by prolonged exposure through inhalation and if swallowed.

**Safety Phrases:** S20, S23, S51, S24/25, S36/37/39. When using, do not eat or drink. Do not breathe vapours or spray mists. Use only in well ventilated areas. Avoid contact with skin and eyes. Wear suitable protective clothing, gloves and eye/face protection.

**SUSMP Classification:** S5

**ADG Classification:** None allocated. Not a Dangerous Good under the ADG Code.

**UN Number:** None allocated



### GHS Signal word: DANGER

#### HAZARD STATEMENT:

H302: Harmful if swallowed.

H312: Harmful in contact with skin.

H315: Causes skin irritation.

H320: Causes eye irritation.

H332: Harmful if inhaled.

H335: May cause respiratory irritation.

H360: May damage fertility or the unborn child.

H361: Suspected of damaging fertility or the unborn child.

H373: May cause damage to organs through prolonged or repeated exposure.

#### PREVENTION

P102: Keep out of reach of children.

P201: Obtain special instructions before use.

P202: Do not handle until all safety precautions have been read and understood.

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.

P270: Do not eat, drink or smoke when using this product.

P271: Use only outdoors or in a well ventilated area.

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

#### RESPONSE

P362: Take off contaminated clothing and wash before reuse.

P301+P312: IF SWALLOWED: Call a POISON CENTRE or doctor if you feel unwell.

### SAFETY DATA SHEET

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

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

P304+P340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

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

P332+P313: If skin irritation occurs: Get medical advice.

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

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 to bluish-green liquid.

**Odour:** Slightly pungent odour.

**Major Health Hazards:** May impair fertility. Possible risk of harm to the unborn child. Harmful in contact with skin and if swallowed. Irritating to eyes and skin. Harmful: danger of serious damage to health by prolonged exposure through inhalation and if swallowed.

### Potential Health Effects

#### Inhalation:

**Short term exposure:** Available data indicates that this product is not harmful. However product may be mildly irritating, although unlikely to cause anything more than mild transient discomfort.

**Long Term exposure:** No data for health effects associated with long term inhalation.

#### Skin Contact:

**Short Term Exposure:** Available data shows that this product is harmful, but symptoms are not available. In addition product is a skin irritant. Symptoms may include itchiness and reddening of contacted skin. Other symptoms may also become evident, but all should disappear once exposure has ceased.

**Long Term Exposure:** No data for health effects associated with long term skin exposure.

#### Eye Contact:

**Short Term Exposure:** This product is an eye irritant. Symptoms may include stinging and reddening of eyes and watering which may become copious. Other symptoms may also become evident. If exposure is brief, symptoms should disappear once exposure has ceased. However, lengthy exposure or delayed treatment may cause permanent damage.

**Long Term Exposure:** No data for health effects associated with long term eye exposure.

#### Ingestion:

**Short Term Exposure:** Significant oral exposure is considered to be unlikely. Available data shows that this product is harmful, but symptoms are not available. However, this product is an oral irritant. Symptoms may include burning sensation and reddening of skin in mouth and throat. Other symptoms may also become evident, but all should disappear once exposure has ceased.

**Long Term Exposure:** No data for health effects associated with long term ingestion.

#### Carcinogen Status:

**SWA:** No significant ingredient is classified as carcinogenic by SWA.

**NTP:** No significant ingredient is classified as carcinogenic by NTP.

**IARC:** No significant ingredient is classified as carcinogenic by IARC.

### Section 3 - Composition/Information on Ingredients

Ingredients	CAS No	Conc,%	TWA (mg/m <sup>3</sup> )	STEL (mg/m <sup>3</sup> )
Glufosinate-ammonium	77182-82-2	200g/L	not set	not set
Propylene glycol monomethyl ether	107-98-2	110g/L	369	553
Other non hazardous ingredients	secret	to 100	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.

### SAFETY DATA SHEET

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 "peak" 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 (0800 764 766 in New Zealand) and is available at all times. Have this SDS with you when you call.

**Inhalation:** First aid is not generally required. If in doubt, contact a Poisons Information Centre or a doctor.

**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. This product is classified as a C1 combustible product. There is little risk of an explosion from this product if commercial quantities are involved in a fire. Vapours from this product are heavier than air and may accumulate in sumps, pits and other low-lying spaces, forming potentially explosive mixtures. They may also flash back considerable distances.

This product is likely to decompose only after heating to dryness, followed by further strong heating.

Fire decomposition products from this product are likely to be irritating if inhaled.

**Extinguishing Media:** In case of fire, use carbon dioxide, dry chemical, foam, water fog.

**Fire Fighting:** If a significant quantity of this product is involved in a fire, call the fire brigade. Cool closed, undamaged containers exposed to fire with water spray.

**Flash point:** 65°C

**Upper Flammability Limit:** No data.

**Lower Flammability Limit:** No data.

**Autoignition temperature:** 440°C

**Flammability Class:** C1

## 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 rubber, PVC. Eye/face protective equipment should comprise as a minimum, protective goggles. 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.

## SAFETY DATA SHEET

## 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 in order 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:** Note that this product is combustible and therefore, for Storage, meets the definition of Dangerous Goods in some states. If you store large quantities (tonnes) of such products, we suggest that you consult your state's Dangerous Goods authority in order to clarify your obligations regarding their storage.

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 label.

## 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> )
Propylene glycol monomethyl ether	369	553

The ADI for Glufosinate-ammonium is set at 0.02mg/kg/day. The corresponding NOEL is set at 2.1mg/kg/day. ADI means Acceptable Daily Intake; NOEL means No-observable-effect-level. Data from Australian ADI List, June 2014.

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:** No special ventilation requirements are normally necessary for this product. However make sure that the work environment remains clean and that vapours and mists are minimised.

**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:** 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:** There is no specific recommendation for any particular protective material type.

**Respirator:** Usually, no respirator is necessary when using this product. However, if you have any doubts consult the Australian Standard mentioned above.

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:

<b>Physical Description &amp; colour:</b>	Blue to bluish-green liquid.
<b>Odour:</b>	Slightly pungent odour.
<b>Boiling Point:</b>	96°C at 100kPa
<b>Freezing/Melting Point:</b>	No specific data. Liquid at normal temperatures.
<b>Volatiles:</b>	No data.
<b>Vapour Pressure:</b>	No data.
<b>Vapour Density:</b>	No data.
<b>Specific Gravity:</b>	1.11 at 20°C
<b>Water Solubility:</b>	Soluble.
<b>pH:</b>	5.9-7.9
<b>Volatility:</b>	No data.
<b>Odour Threshold:</b>	No data.
<b>Evaporation Rate:</b>	No data.
<b>Coeff Oil/water distribution:</b>	No data
<b>Autoignition temp:</b>	Not applicable - does not burn.

## Section 10 - Stability and Reactivity

**Reactivity:** No significant decomposition products. Ammonia may be evolved in the presence of alkalis.

### SAFETY DATA SHEET

**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 oxides of phosphorus and other phosphorus 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.

Glufosinate-ammonium is a SWA Class 3 Reproductive risk, possible risk of harm to the unborn child.

## Classification of Hazardous Ingredients

Ingredient	Risk Phrases
Glufosinate-ammonium	>=10%Conc<25%: T; R60; R63; R48/20/22

## Section 12 - Ecological Information

This product is biodegradable. It will not accumulate in the soil or water or cause long term problems.

**Acute and prolonged toxicity to fish:** LC<sub>50</sub>: 79mg/l (96h) in bluegill sunfish, 42mg/l (96h) in rainbow trout, 80mg/l (96h) in carp, 560-1000mg/l in freshwater fish & invertebrates.

**Acute toxicity to aquatic invertebrates:** EC<sub>50</sub>/LC<sub>50</sub>: >100mg/l (48h) in daphnia, 7.2-125mg/l in marine and estuarine organisms.

**Chronic toxicity to aquatic invertebrates:** NOEC: 32mg/l in freshwater invertebrates.

**Toxicity other non mammal terr. Species:** LD<sub>50</sub>/LC<sub>50</sub>: acute oral >2000mg/kg in avian, acute dietary >5000ppm in avian, reproduction 400ppm in avian, contact >600µg/bee in honeybee.

**Stability in water:** hydrolytic half-life: >300 days.

**Photodegradation:** photolytic half-life: >300 days.

**Stability in soil:** soil half-life: 6-23 days in field dissipation studies. Koc: 10-1229 (depending on soil type).

**Bioaccumulation:** no accumulation.

**Environmental precautions:** Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not clean equipment or dispose of equipment wash waters in a manner that will contaminate water resources of arable land.

## Section 13 - Disposal Considerations

**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. However, for help with the collection of unwanted rural chemicals, contact ChemClear 1800 008 182 <http://www.chemclear.com.au/> and for help with the disposal of empty drums, contact DrumMuster <http://www.drummuster.com.au/> where you will find contact details for your area.

## Section 14 - Transport Information

**ADG Code:** This product is not classified as a Dangerous Good. No special transport conditions are necessary unless required by other regulations.

## Section 15 - Regulatory Information

**AICS:** All of the significant ingredients in this formulation are compliant with NICNAS regulations. The following ingredient: Glufosinate ammonium, is mentioned in the SUSMP.

## Section 16 - Other Information

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

### Acronyms:

**ADG Code** Australian Code for the Transport of Dangerous Goods by Road and Rail (7<sup>th</sup> edition)

### SAFETY DATA SHEET

Issued by: Farmalinx Pty Ltd

Phone: 02 9389 2455 (business hours)

Poisons Information Centre: 13 1126 from anywhere in Australia, (0800 764 766 in New Zealand)

<b>AICS</b>	Australian Inventory of Chemical Substances
<b>SWA</b>	Safe Work Australia, formerly ASCC and NOHSC
<b>CAS number</b>	Chemical Abstracts Service Registry Number
<b>Hazchem Code</b>	Emergency action code of numbers and letters that provide information to emergency services especially firefighters
<b>IARC</b>	International Agency for Research on Cancer
<b>NOS</b>	Not otherwise specified
<b>NTP</b>	National Toxicology Program (USA)
<b>R-Phrase</b>	Risk Phrase
<b>SUSMP</b>	Standard for the Uniform Scheduling of Medicines & Poisons
<b>UN Number</b>	United Nations Number

THIS SDS SUMMARISES OUR BEST KNOWLEDGE OF THE HEALTH AND SAFETY HAZARD STATEMENT: INFORMATION OF THE PRODUCT AND HOW TO SAFELY HANDLE AND USE THE PRODUCT IN THE WORKPLACE. EACH USER MUST REVIEW THIS SDS IN THE CONTEXT OF HOW THE PRODUCT WILL BE HANDLED AND USED IN THE WORKPLACE.

IF CLARIFICATION OR FURTHER INFORMATION IS NEEDED TO ENSURE THAT AN APPROPRIATE RISK ASSESSMENT CAN BE MADE, THE USER SHOULD CONTACT THIS COMPANY SO WE CAN ATTEMPT TO OBTAIN ADDITIONAL INFORMATION FROM OUR SUPPLIERS. OUR RESPONSIBILITY FOR PRODUCTS SOLD IS SUBJECT TO OUR STANDARD TERMS AND CONDITIONS, A COPY OF WHICH IS SENT TO OUR CUSTOMERS AND IS ALSO AVAILABLE ON REQUEST.

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" (December 2011)

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## SAFETY DATA SHEET