



# Safety Data Sheet

In accordance with Safe Work Australia

## Sky-7<sup>th</sup> 200 Herbicide

### 1. Product identifier & identity for the chemical

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| <b>Product Identifier</b>                                      | <b>Sky-7<sup>th</sup> 200 Herbicide</b>  |
| <b>Active Constituent</b>                                      | <b>200 g/L GLUFOSINATE-AMMONIUM</b>  |
| <b>Other means of Identification</b>                           | Agricultural herbicide. GROUP N HERBICIDE<br>Grow Choice product code number: 905<br>AVPMA registered number: 66397  |
| <b>Recommended use of the chemical and restrictions on due</b> | For the non-residual control of grass and broadleaf weeds in various situations as specified in the Directions for Use Table.  |
| <b>Suppliers name, address and phone number:</b>               | Grow Choice Pty Ltd<br>113 Fitzroy Street   TAMWORTH NSW 2340<br>Phone: 02 6766 3979 1800 817 676<br>Fax: 02 6766 2922   Email: admin@growchoice.com.au                                  |
| <b>Emergency phone number:</b>                                 | In Case Of Emergency Dial 000  |
| <b>Poisons Information Centre</b>                              | Phone: 13 11 26 and speak to a Poisons Information Specialist. Fax: +61 2 9845 3597<br><a href="http://www.chw.edu.au/poisons/contact.htm">http://www.chw.edu.au/poisons/contact.htm</a> |

### 2. Hazard Identification (continued on page 2)

- Classified as **HAZARDOUS** in accordance with the *Approved Criteria for Classifying Hazardous Substances* [NOHSC: 1008(2004) 3<sup>rd</sup> Edition] and the Globally Harmonized System of Classification and Labelling of Chemicals (the GHS).
- Considered non-dangerous for road and rail transport by the Australian Code for the Transport of Dangerous Goods Road and Rail (August 2014 edition)
- Considered non-dangerous for transport by sea and air in accordance with the IMDG Code 37-14 (refer Section 14)

|   |   |   |
|---|---|---|
| <b>2.1 Classification of the hazardous chemical</b> | Reproductive toxicity - Category 1B                             | H360FD<br>May damage fertility. Suspected of damaging the unborn child    |
|   | Acute toxicity – Category 4                                     | H332<br>Harmful if inhaled  |
|   | Acute toxicity - Category 4                                     | H312<br>Harmful in contact with skin                                      |
|   | Acute toxicity – Category 4                                     | H302<br>Harmful if swallowed  |
|   | Specific target organ toxicity (repeated exposure) - Category 2 | H373<br>May cause damage to organs through prolonged or repeated exposure |
|   | Flammable liquid - Category 3                                   | H226<br>Flammable liquid and vapour                                       |
|   | Specific target organ toxicity (single exposure) - Category 3"  | H336<br>May cause drowsiness or dizziness"                                |

#### 2.2 Label Elements

**Signal Word**

**DANGER**

**GHS Symbols**



Exclamation Mark



Health Hazard



Flame

**General Precautionary Statements.**

**If medical advice is needed, have product container or label at hand.  
Keep out of reach of children.  
Read label before use**

**Hazard Statements**

|        |   |
|--------|---|
| H360FD | May damage fertility. Suspected of damaging the unborn child      |
| H332   | Harmful if inhaled  |
| H312   | Harmful in contact with skin                                      |
| H302   | Harmful if swallowed  |
| H373   | May cause damage to organs through prolonged or repeated exposure |
| H226   | Flammable liquid and vapour                                       |
| H336   | May cause drowsiness or dizziness                                 |

**Precautionary Statements**

|                   |                    |   |
|-------------------|--------------------|---|
| <b>Prevention</b> | P201               | Obtain special instructions before use.   |
|                   | P202               | Do not handle until all safety precautions have been read and understood.   |
|                   | P271               | Use only outdoors or in a well-ventilated area.   |
|                   | P280 + P281        | Wear protective gloves/protective clothing/eye protection/face protection and equipment as required.  |
|                   | P264               | Wash hands, arms, face and all exposed skin thoroughly after handling.  |
|                   | P270               | Do not eat, drink or smoke when using this product.   |
|                   | P260 + P261        | Do not breathe dust/fume/gas/mist/ vapours/spray.   |
|                   | P210               | Keep away from heat/sparks/open flames/hot surfaces. – No smoking.  |
|                   | P233               | Keep container tightly closed.  |
|                   | P240               | Ground/Bond container and receiving equipment (if electrostatically sensitive material is for reloading or if product is volatile so as to generate hazardous atmosphere) |
|                   | P242               | Use only non-sparking tools.  |
|                   | P243               | Take precautionary measures against static discharge.   |
|                   | P303 + P361 + P353 | IF ON SKIN (or hair) Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.   |
|                   | P370 + P378        | In case of fire: Use Water fog, fine water spray, foam, dry chemical, carbon dioxide for extinction.  |
| <b>Response</b>   | P301 + P312        | IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.  |
|                   | P330               | Rinse mouth.  |
|                   | 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.  |
|                   | P308 + P314 + P313 | Get medical advice/attention if you feel unwell. IF exposed or concerned: Get medical advice/attention.   |
|                   | P363               | Wash contaminated clothing before reuse.  |
| <b>Storage</b>    | P403 +P235 +P233   | Store in a well-ventilated place. Keep cool. Keep container tightly closed.   |
|                   | P405               | Store locked up   |
| <b>Disposal</b>   | P501:              | Dispose of contents and container in accordance with local, regional and national regulations.  |

**3. Composition/information on ingredients**

| Chemical ingredients:<br>CAS number and other<br>unique identifiers:<br>Concentration of<br>ingredients: | Component                            | CAS No          | Concentration % |
|--|--------------------------------------|-----------------|-----------------|
|  | Glufosinate-ammonium                 | 77182-82-2      | 20              |
|  | Propylene glycol monomethyl<br>ether | 107-98-2        | >= 1 - <= 11    |
|  | Other ingredients, including water   | (non hazardous) | balance         |

**4. First Aid Measures**

**In Case Of Emergency Dial 000 and/or Poisons Information Centre: Phone: 13 11 26 and speak to a Poisons Information Specialist. Take this SDS and or DFU/Label with you or when calling the Poisons Information Centre.**

**Description of necessary first aid measures**

|         |  |
|---------|--|
| Swallow | If swallowed and if more than 15 minutes from a hospital <b>DO NOT induce vomiting</b> . Seek immediate medical advice,                |
| Eye:    | If product gets in eyes, wash it out immediately with water for at least 15 minutes. . Seek medical attention.                         |
| Skin:   | Remove contaminated clothing and wash affected areas thoroughly with soap and water.   |
| Inhaled | Move affected person to fresh air and keep at rest until recovered. Seek medical advice if inhaled in large quantities or feel unwell. |

**Symptoms caused by exposure**

Irritation of eyes, skin, respiratory tract. Shivering, cramps, gastrointestinal complaints, hyperthermia, dyspnoea, bradycardia/tachycardia, convulsions, respiratory depression, amnesia, drowsiness and/or loss of consciousness. These symptoms may be delayed from a few hours to up to 48 hours after exposure. Therefore, regardless of the amount ingested, the patient must be admitted to hospital for at least 36 hours and treated immediately.

**Medical Attention and Special Treatment**

Glufosinate-ammonium is a glutamine synthetase inhibitor and can interfere with neurotransmitter function. Symptomatic treatment and administration of antidotes, decontamination. If ingested, endotracheal intubation and gastric lavage should be performed as soon as possible, followed by administration of charcoal and sodium sulphate solution. Anticonvulsant therapy: Phenobarbital-sodium, 1 mg/kg intramuscularly or subcutaneously until maximum 5 mg/kg daily; when necessary, 10 mg diazepam slowly intravenously. Repeat as necessary until fully sedated. Elimination by dialysis (forced alkaline diuresis) and/or haemo-perfusion. It is essential that this be done soon after ingestion to be effective. ECG (EKG) (electrocardiogram) monitoring. EEG (electroencephalogram) monitoring. Apply artificial respiration as necessary. If necessary give oxygen. Monitor respiratory, cardiac, central nervous system, electrolyte balance (especially for hypokalemia) and signs of increased intracranial pressure. If a large amount has been ingested, keep under medical supervision for at least 48 hours. Contraindication: Atropine, as glufosinate-ammonium does not inhibit cholinesterase. Recovery is normally spontaneous, usually within 48 hours.

## 5. Fire Fighting Measures

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|---|---|
| <b>Suitable extinguishing media</b>                                   | Water fog, fine water spray, foam, dry chemical, carbon dioxide.  |
| <b>Specific hazards arising from the chemical</b>                     | In a fire, irritant and toxic fumes containing oxides of carbon, nitrogen, phosphorus and sulphur, and other toxic substances may be generated.   |
| <b>Special protective equipment and precautions for fire fighters</b> | Fire fighters should wear full protective gear, including self-contained breathing apparatus (AS/NZS 1715/1716). Keep unnecessary people away. If it can be done safely, remove intact containers from the fire. Otherwise, use water spray to cool them. Bund area with sand or earth to prevent contamination of drains or waterways. Dispose of fire control water or other extinguishing agent and spillage safely later. |
| <b>Hazchem Code</b>   | Not applicable  |

## 6. Accidental release measures

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| <b>Personal precautions, protective equipment and emergency procedures</b> | In case of spillage it is important to take all steps necessary to:<br>Avoid contact with the spilled material or contaminated surfaces. Extinguish or remove any sources of ignition. When dealing with spills do not eat, drink or smoke and wear protective clothing and equipment. Keep people and animals away. Prevent spilled material from entering drains or watercourses.          |
| <b>Environmental precautions</b>   | Do not allow to get into surface water, drains and ground water. If the product contaminates rivers and lakes or drains inform respective authorities.<br>Reposition any leaking containers so as to minimise leakage. Dam and absorb spill with an absorbent material (eg sand or soil). Shovel the absorbed spill into drums   |
| <b>Methods and materials for containment and cleaning up</b>               | Contain spill and absorb with earth, sand, clay, or other absorbent material. Collect and store in properly labelled, sealed drums for safe disposal. Deal with all spillages immediately. ). Clean contaminated floors and objects thoroughly, observing environmental regulations. If contamination of drains, streams, watercourses, etc. is unavoidable, warn the local water authority. |
| <b>6.4 Reference to other sections</b>                                     | <b>Information regarding safe handling see section 7.</b><br><b>Information regarding personal protective equipment see section 8.</b><br><b>Information regarding waste disposal, see section 13.</b>   |

## 7. Handling and Storage

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| <b>Precautions for safe handling</b>                                 | Safe work practices are recommended.<br>Avoid contact with eyes and skin.<br>When opening the container and preparing spray wear appropriate PPE (refer Section 8).<br>Do not spray under high wind conditions.<br><b>Hygiene measures:</b><br>When using products, do not eat, drink or smoke.<br>Contaminated work clothing should not be allowed out of the workplace.<br>Wash hands thoroughly with soap and water after use and before eating, drinking, smoking/using tobacco, chewing gum, using the toilet or applying cosmetics.<br>After each day's use, wash gloves, face shield or goggles and contaminated clothing.<br>Avoid contact with eyes and skin. |
| <b>Conditions for safe storage, including any incompatibilities:</b> | Keep out of reach of children, unauthorised persons and animals.<br>Store in tightly sealed original containers in a dry secure place away from fertilizers, feed and food.<br>Store out of direct sunlight and extreme temperature.<br>Always read the label and any attached leaflet before use.   |

## 8. Exposure controls/personal protection (continued on page 4)

| <b>Control parameters – exposure standards, biological monitoring</b> | <b>Components</b>    | <b>CAS-No.</b> | <b>Control parameters</b> | <b>Update</b> | <b>Basis</b> |
|---|----------------------|----------------|---------------------------|---------------|--------------|
|   | Glufosinate ammonium | 77182-82-2     | 0.9 mg/m3 (TWA)           |               | OES BCS*     |
|   | 1-Methoxy-2-propanol | 107-98-2       | 369 mg/m3/100 ppm (TWA)   | 12 2011       | AU NOEL      |
|   | 1-Methoxy-2-propanol | 107-98-2       | 553 mg/m3/150 ppm (STEL)  | 12 2011       | AU NOEL      |

|   |  |
|---|--|
| <b>Appropriate engineering controls</b>     | No special requirements. Product is used outdoors<br>Control process conditions to avoid contact. Use only in well-ventilated areas. If necessary, use local exhaust ventilation to keep airborne concentration below the exposure limits.   |
| <b>Personal protective equipment (PPE):</b> | When opening the container, preparing the spray wear cotton overalls buttoned to the neck and wrist and a washable hat, elbow length PVC chemical resistant and face shield or goggles.<br><br>When using the prepared spray, wear cotton overalls buttoned to the neck and wrist and a washable hat and optional once chemical is prepared for use, elbow length PVC chemical resistant and face shield or goggles if protected from spray drift/contamination.<br><b>Face and Eye Protection:</b> Face shield or goggles.<br><b>Clothing:</b> Cotton overalls buttoned to the neck and wrist (or equivalent clothing) and a washable hat.<br><b>Gloves:</b> Elbow-length chemical resistant PVC gloves.<br><b>Respiratory:</b> If airborne concentrations are likely to exceed the exposure standards above or if exposed to dust, an AS/NZS 1715/1716 approved respirator should be worn.<br><br>Recommended to use Australian and New Zealand Standard PPE:<br>Overalls AS 3765, Clothing for protection against Hazardous chemicals<br>Gloves: AS/NZS 2161, Industrial safety gloves and mittens (not electrical and medical gloves)<br>Goggles and face shield As/NZS 1337, Eye protectors for industrial applications.<br>Footwear AS/NZS 2210, Occupational protective footwear<br>Respirators AS NZS 1715 Selection, Use and Maintenance of Respiratory Protective Devices<br>AS/NZS 1716, Respiratory Protective Devices |

**Requirements Concerning Training** Check State and/or Territory regulations that require people who use pesticides in their job or business to have adequate training in the application of the materials.

### 9. Physical and chemical properties

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| <b>Appearance</b>                            | Blue to bluish-green liquid   |
| <b>Odour</b>                                 | Slightly pungent  |
| <b>pH (1% deion. Water)</b>                  | 5.9 to 7.9  |
| <b>Boiling point</b>                         | 96°C  |
| <b>Flash point</b>                           | Approx 600° (Pensky Martens Closed Cup) N.B. the product does not sustain combustion. |
| <b>Fire Point &gt;960C</b>                   | >96°C   |
| <b>Partition coefficient (octanol/Water)</b> | Glufosinate-ammonium Log Pow = <0.1 (pH7, 220C)                                       |
| <b>Specific gravity</b>                      | 1.11 at 200C  |
| <b>Viscosity</b>                             | No data   |
| <b>Auto-ignition</b>                         | 400°C   |

### 10. Stability and Reactivity

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| <b>Thermal decomposition</b>                 | Stable under normal conditions   |
| <b>Chemical stability</b>                    | Stable under recommended storage conditions.   |
| <b>Possibility of hazardous reactions</b>    | No hazardous reactions when stored and handled according to prescribed instructions.   |
| <b>Conditions to avoid</b>                   | Heat, flames and sparks.   |
| <b>Incompatible materials</b>                | Strong oxidizing agents, Acids, Bases, Alkali metals   |
| <b>10.6 Hazardous decomposition products</b> | Thermal decomposition can lead to release of: Ammonia Oxides of carbon Nitrogen oxides (NOx) Oxides of phosphorus Sulphur oxides |

### 11. Toxicological information

|   |   |
|---|---|
| <b>Acute oral toxicity</b>  | LD50 female (Rat) 1910 mg/kg (product)<br>LD50 male rate: 2170 mg/kg (product)  |
| <b>Acute inhalation toxicity</b>  | LD50 female (Rat) 4.31 mg/L (product)<br>LD50 male rate: 3.22 mg/L (product)  |
| <b>Acute dermal toxicity</b>  | LD50 female (Rat) 1380 mg/kg (product)<br>LD50 male rate: 1400 mg/kg (product)  |
| <b>Skin irritation</b>  | Slight irritation (Rabbit) (product)  |
| <b>Eye irritation</b>   | Moderate eye irritation. (Rabbit) (product)   |
| <b>Sensitisation</b>  | Non-sensitizing. (Guinea pig) (product)   |
| <b>Assessment mutagenicity</b>  | Glufosinate-ammonium was not mutagenic or genotoxic in a battery of in vitro and in vivo tests.   |
| <b>Assessment carcinogenicity</b>   | Glufosinate-ammonium was not carcinogenic in lifetime feeding studies in rats and mice.   |
| <b>Assessment toxicity to reproduction</b>                                | Implantation loss occurred in a rat multigeneration study with Glufosinate-ammonium. There were no effects on male fertility.   |
| <b>Assessment developmental toxicity</b>                                  | Glufosinate-ammonium caused developmental toxicity only at dose levels toxic to the dams. Glufosinate-ammonium caused an increased incidence of post implantation losses.   |
| <b>Assessment STOT Specific target organ toxicity – repeated exposure</b> | Glufosinate-ammonium caused neurobehavioral effects and/or neuropathological changes in animal studies. Glufosinate-ammonium was well tolerated in rats and mice but less well tolerated in the dog in sub chronic studies.   |
| <b>Aspiration hazard</b>  | Based on available data, the classification criteria are not met.   |
| <b>Information on likely routes of exposure</b>                           | Harmful if inhaled. Harmful if swallowed. Harmful if absorbed through skin. Irritating to skin. Causes eye irritation.  |
| <b>Data limitations</b>   | The Australian Acceptable Daily Intake (ADI) for glufosinate-ammonium for a human is 0.02 mg/kg/day, set for the public for daily, lifetime exposure. This is based on the NOEL of 2.1mg/kg/day, the level determined to show no effects during long term exposure for the most sensitive indicators and the most sensitive species. (Ref: Comm. Dept. of Health and Ageing Office of Chemical Safety, 'ADI List', 30 June 2014). |
| <b>Further information</b>  | No further toxicological information is available.  |

### 12. Ecological information

|                                      |  |
|--------------------------------------|--|
| <b>Toxicity</b>                      | Toxicity to fish LC50 (Oncorhynchus mykiss (rainbow trout)) 34 mg/l Exposure time: 96 h<br>Toxicity to aquatic invertebrates EC50 (Daphnia magna (Water flea)) 26.8 Exposure time: 48 h<br>Toxicity to aquatic plants (Raphidocelis subcapitata (freshwater green alga)) 37 mg/l<br>The value mentioned relates to the active ingredient glufosinate- ammonium. (Desmodesmus subspicatus (green algae)) 36 mg/l Exposure time: 72 h<br>Toxicity to other organisms LC50 (Coturnix japonica (Japanese quail)) > 5,000 mg/kg Exposure time: 8 d<br>The value mentioned relates to the active ingredient glufosinate- ammonium. |
| <b>Persistence and degradability</b> | Biodegradability Glufosinate-ammonium: Not rapidly biodegradable Koc Glufosinate-ammonium: Koc: 2.3  |
| <b>Bio accumulative potential</b>    | Bioaccumulation Glufosinate-ammonium: Bio concentration factor (BCF) < 1 Does not bio accumulate.  |
| <b>Mobility in soil</b>              | Mobility in soil Glufosinate-ammonium: Highly mobile in soils  |

**13. Disposal considerations****Disposal of product**

On site disposal of the concentrated product is not acceptable. Ideally, the product should be used for its intended purpose. If there is a need to dispose of the product, approach local authorities who hold periodic collections of unwanted chemicals (ChemClear®).

**Disposal of Container**

Do not use this container for any other purpose. Triple rinse containers; add rinsate to the spray tank, then offer the container for recycling/reconditioning, or puncture top, sides and bottom and dispose of in landfill in accordance with local regulations. drumMUSTER is the national program for the collection and recycling of empty, cleaned, non-returnable crop production and on-farm animal health chemical containers. If the label on your container carries the drumMUSTER symbol, triple rinse the container, ring your local Council, and offer the container for collection in the program. If recycling, replace cap and return clean containers to recycler or designated collection point. If not recycling, puncture or shred and bury containers in local authority landfill. If no landfill is available, bury the containers below 500mm in a disposal pit specifically marked and set up for this purpose clear of waterways, desirable vegetation and tree roots. Empty containers and product should not be burnt.

**14. Transport information****General Transport Information**

It is considered good practice not to transport agricultural chemical products with food, food related materials and animal feed products.

**Land**

Considered **non-dangerous** for road and rail transport by the Australian Code for the Transport of Dangerous Goods Road and Rail (August 2014 edition)

**Sea and Air**

Considered **non-dangerous** for transport by sea and air in accordance with the IMDG Code 37-14

**15. Regulatory information****Poisons Schedule number**

Schedule 5 (S5)

**Safety, health and environmental regulations specific for the product in question**

Registered according to the Agricultural and Veterinary Chemicals Code Act 1994

Australian Pesticides and Veterinary Medicines Authority approval number: 66397

**16. Other information****Date of Review**

This Safety Data Sheet (SDS) was reviewed 23 January 2017 and replaces the Material Data Safety Sheet dated 28 August 2016 and any prior dated MSDS/SDS.

**Acronyms:**

AVPMA: Australian Pesticides and Veterinary Medicines Authority.

GHS: Globally Harmonised system of Classification and Labelling of chemicals

HSIS: Hazardous Substances Information System

NOHSC: National Occupational Health and Safety Commission

CAS No.: unique numerical identifier assigned by Chemical Abstracts Service (division of the American Chemical Society)

STEL Exposure standard - short term exposure limit.

AS/NZS: Australian Standards and New Zealand Standards for Personal protective equipment

ADI: Acceptable Daily Intakes For Agricultural And Veterinary Chemicals

ADG: Australian Dangerous Goods

IMDG: International Maritime Code of Dangerous Goods

IATA: International Air Transport Association

**End of SDS**

**DISCLAIMER:**

This SAFETY DATA SHEET has been developed according to the Work Health and Safety Regulations (WHS Regulations) Code of Practice for the Preparation of Safety Data Sheets for Hazardous Chemicals December 2011. The data, information and recommendations herein ("information") are represented in good faith and believed to be correct as of the date hereof. The purpose of this SAFETY DATA SHEET is to describe product in terms of their safety requirements. Grow Choice Pty Ltd makes no representation of merchantability, fitness for a particular purpose of application, or of any other nature with respect to the information or the product to which the information refers ("the product"). The information is supplied upon the condition that the persons receiving same will make their own determination as to its suitability for their purpose prior to the use of the product. The physical data shown herein are typical values based on the material tested. These values should not be construed as a guaranteed analysis of any specific lot or as guaranteed specification for the product or specific lots thereof.

Due care should be taken to make sure that the use or disposal of this product and/or its packaging is in compliance with Relevant Federal, State and Local Government regulations.