SECTION 1: IDENTIFICATION OF THE MATERIAL AND SUPPLIER

1.1 Product identifier
Trade name: Roundup UltraMAX® Herbicide
Product code (UVP): 62289447

1.2 Relevant identified uses of the substance or mixture and uses advised against
Use: Herbicide

1.3 Details of the supplier of the safety data sheet
Supplier: Bayer Cropscience Pty Ltd
ABN 87 000 226 022
Level 4, 109 Burwood Rd
Hawthorn 3122
Victoria
Australia
Telephone: (03) 9248 6888
Telefax: (03) 9248 6800
Responsible Department: 1800 804 479 Technical Information Service
Website: www.crop.bayer.com.au

1.4 Emergency telephone no.
Emergency telephone no.: 1800 033 111 IXOM Operations Pty Ltd

SECTION 2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture
Classification in accordance with Australian GHS Regulation
Chronic aquatic toxicity: Category 2
H411: Toxic to aquatic life with long lasting effects.

2.2 Label elements
Labelling according to specific Australian legislation
No hazard label for supply/use required.

2.3 Other hazards
No additional hazards known beside those mentioned.
SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical nature

Potassium salt of Glyphosate 698 g/l
Soluble concentrate (SL)

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS-No.</th>
<th>Concentration [%]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Potassium salt of glyphosate</td>
<td>70901-12-1</td>
<td>51.16</td>
</tr>
<tr>
<td>Other ingredients (non-hazardous) to 100%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

SECTION 4. FIRST AID MEASURES

If poisoning occurs, immediately contact a doctor or Poisons Information Centre (telephone 13 11 26), and follow the advice given. Show this Safety Data Sheet to the doctor.

4.1 Description of first aid measures

General advice

Move out of dangerous area. Place and transport victim in stable position (lying sideways). Remove contaminated clothing immediately and dispose of safely.

Inhalation

Move to fresh air. Keep patient warm and at rest. Call a physician or poison control center immediately.

Skin contact

Wash off immediately with plenty of water for at least 15 minutes. Take off contaminated clothing and shoes immediately. Get medical attention if irritation develops and persists.

Eye contact

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Get medical attention if irritation develops and persists.

Ingestion

Call a physician or poison control center immediately. Rinse out mouth and give water in small sips to drink. DO NOT induce vomiting unless directed to do so by a physician or poison control center. Never give anything by mouth to an unconscious person. Do not leave victim unattended.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms

To date no symptoms are known.

4.3 Indication of any immediate medical attention and special treatment needed

Risks

This product is not a cholinesterase inhibitor.

Treatment

Treatment with atropine and oximes is not indicated. Appropriate supportive and symptomatic treatment as indicated by the patient’s condition is recommended. There is no specific antidote.
SECTION 5. FIRE FIGHTING MEASURES

5.1 Extinguishing media

Suitable: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Unsuitable: High volume water jet

5.2 Special hazards arising from the substance or mixture

In the event of fire the following may be released: Carbon monoxide (CO), Carbon dioxide (CO2), Nitrogen oxides (NOx), Oxides of phosphorus

5.3 Advice for firefighters

In the event of fire and/or explosion do not breathe fumes. In the event of fire, wear self-contained breathing apparatus.

Contain the spread of the fire-fighting media. Do not allow water to come into direct contact with the product.

Hazchem Code: •3Z

SECTION 6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Precautions: Avoid contact with spilled product or contaminated surfaces. Use personal protective equipment.

6.2 Environmental precautions

Do not allow to get into surface water, drains and ground water.

6.3 Methods and materials for containment and cleaning up

Methods for cleaning up: Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Collect and transfer the product into a properly labelled and tightly closed container. Clean contaminated floors and objects thoroughly, observing environmental regulations.

6.4 Reference to other sections

Information regarding safe handling, see section 7.
Information regarding personal protective equipment, see section 8.
Information regarding waste disposal, see section 13.

SECTION 7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Advice on safe handling: Avoid contact with skin, eyes and clothing. Ensure adequate ventilation.

Hygiene measures: Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, using the toilet or applying cosmetics.
Remove Personal Protective Equipment (PPE) immediately after handling this product. Remove soiled clothing immediately and clean

3/11
thoroughly before using again. Wash thoroughly and put on clean clothing. Keep working clothes separately. Garments that cannot be cleaned must be destroyed (burnt).

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers
Store in original container. Store in a cool, dry place and in such a manner as to prevent cross contamination with other crop protection products, fertilizers, food, and feed. Store in a place accessible by authorized persons only. Reacts with galvanized steel or unlined mild steel to produce hydrogen, a highly flammable gas that could explode. Protect from freezing. Partial crystallization may occur on prolonged storage below the minimum storage temperature. Freezing will affect the physical condition but will not damage the material. Thaw and mix before using.

Advice on common storage
Keep away from food, drink and animal feedingstuffs.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters
No known occupational limit values.

8.2 Exposure controls

Respiratory protection
Respiratory protection is not required under anticipated circumstances of exposure. Respiratory protection should only be used to control residual risk of short duration activities, when all reasonably practicable steps have been taken to reduce exposure at source e.g. containment and/or local extract ventilation. Always follow respirator manufacturer’s instructions regarding wearing and maintenance.

Hand protection
Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time.
Wash gloves when contaminated. Dispose of when contaminated inside, when perforated or when contamination on the outside cannot be removed. Wash hands frequently and always before eating, drinking, smoking or using the toilet.
Material Nitrile rubber
Rate of permeability > 480 min
Glove thickness > 0.4 mm
Protective index Class 6
Directive Protective gloves complying with EN 374.

Eye protection
Wear goggles (conforming to EN166, Field of Use = 5 or equivalent).

Skin and body protection
Wear standard coveralls and Category 3 Type 5 suit.
If there is a risk of significant exposure, consider a higher protective type suit.
Wear two layers of clothing wherever possible. Polyester/cotton or
cotton overalls should be worn under chemical protection suit and should be professionally laundered frequently.
If chemical protection suit is splashed, sprayed or significantly contaminated, decontaminate as far as possible, then carefully remove and dispose of as advised by manufacturer.

General protective measures
If product is handled while not enclosed, and if contact may occur:
Complete suit protecting against chemicals
In normal use and handling conditions please refer to the label and/or leaflet. In all other cases the above mentioned recommendations would apply.

Engineering Controls
Advice on safe handling
Avoid contact with skin, eyes and clothing. Ensure adequate ventilation.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Form</td>
<td>Liquid, clear, free from foreign matter</td>
</tr>
<tr>
<td>Colour</td>
<td>blue</td>
</tr>
<tr>
<td>Odour</td>
<td>odourless</td>
</tr>
<tr>
<td>Odour Threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>pH</td>
<td>4.3 - 4.8 (6.0 %) (23 °C) (deionized water)</td>
</tr>
<tr>
<td>Melting point/range</td>
<td>No data available</td>
</tr>
<tr>
<td>Boiling Point</td>
<td>No data available</td>
</tr>
<tr>
<td>Flash point</td>
<td>does not flash</td>
</tr>
<tr>
<td>Flammability</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Thermal decomposition</td>
<td>No data available</td>
</tr>
<tr>
<td>Minimum ignition energy</td>
<td>No data available</td>
</tr>
<tr>
<td>Self-accelerating decomposition temperature (SADT)</td>
<td>No data available</td>
</tr>
<tr>
<td>Upper explosion limit</td>
<td>No data available</td>
</tr>
<tr>
<td>Lower explosion limit</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>No data available</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative vapour density</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative density</td>
<td>1.379</td>
</tr>
<tr>
<td>Density</td>
<td>ca. 1.37 g/cm³ (20 °C)</td>
</tr>
<tr>
<td>Water solubility</td>
<td>soluble</td>
</tr>
</tbody>
</table>
Partition coefficient: n-octanol/water
Potassium salt of glyphosate: log Pow: < -3.2 (25 °C)

Viscosity, dynamic
No data available

Viscosity, kinematic
No data available

Oxidizing properties
No oxidizing properties

Explosivity
Not explosive

9.2 Other information
Further safety related physical-chemical data are not known.

SECTION 10. STABILITY AND REACTIVITY

10.1 Reactivity
Stable under normal conditions.

10.2 Chemical stability
Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions
Reacts with galvanised steel or unlined mild steel to produce hydrogen, a highly flammable gas that could explode.

10.4 Conditions to avoid
Extremes of temperature and direct sunlight.

10.5 Incompatible materials
Galvanised steel, Carbon steel, Unlined mild steel
Store only in the original container.

10.6 Hazardous decomposition products
Hazardous products of combustion: see section 5.

SECTION 11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute oral toxicity
LD50 (Rat) > 5,000 mg/kg
Test conducted with a similar formulation.
No mortality.

Acute inhalation toxicity
LC50 (Rat) > 0.95 mg/l
Exposure time: 4 h
Highest attainable concentration.
No mortality.
Test conducted with a similar formulation.

Acute dermal toxicity
LD50 (Rat) > 4,000 mg/kg
Test conducted with a similar formulation.
No mortality.

Skin corrosion/irritation
Slight irritant effect - does not require labelling. (Rabbit)
Test conducted with a similar formulation.

Serious eye damage/eye
Slight irritant effect - does not require labelling. (Rabbit)
irritation  Test conducted with a similar formulation.
Respiratory or skin sensitisation  Skin: Non-sensitizing. (Guinea pig)
OECD Test Guideline 406, Buehler test  Test conducted with a similar formulation.

Assessment mutagenicity
Potassium salt of glyphosate is not considered mutagenic.

Assessment carcinogenicity
Potassium salt of glyphosate: Based on available data, the classification criteria are not met.

Assessment toxicity to reproduction
Potassium salt of glyphosate: Based on available data, the classification criteria are not met.

Assessment developmental toxicity
Potassium salt of glyphosate: Based on available data, the classification criteria are not met.

Assessment STOT Specific target organ toxicity – single exposure
Potassium salt of glyphosate: Based on available data, the classification criteria are not met.

Assessment STOT Specific target organ toxicity – repeated exposure
Potassium salt of glyphosate did not cause specific target organ toxicity in experimental animal studies.

Aspiration hazard
Based on available data, the classification criteria are not met.

Information on likely routes of exposure
Harmful if inhaled.
May cause skin irritation.
May cause eye irritation.
Harmful if swallowed.

Early onset symptoms related to exposure
Refer to Section 4

Delayed health effects from exposure
Refer to Section 11

Exposure levels and health effects
Refer to Section 4

Interactive effects
Not known

When specific chemical data is not available
Not applicable

Mixture of chemicals
Refer to Section 2.1

Further information
No further toxicological information is available.
### SECTION 12. ECOLOGICAL INFORMATION

#### 12.1 Toxicity

**Toxicity to fish**

- LC50 (Lepomis macrochirus (Bluegill sunfish)) 5.2 mg/l  
  Test conducted with a similar formulation.
- LC50 (Cyprinus carpio (Carp)) 4.0 mg/l  
  Test conducted with a similar formulation.

**Toxicity to aquatic invertebrates**

- EC50 (Daphnia (water flea)) 8.0 mg/l  
  Test conducted with a similar formulation.

**Toxicity to aquatic plants**

- ErC50 (Raphidocelis subcapitata (freshwater green alga)) 1.4 mg/l  
  Growth rate; Exposure time: 72 h  
  Test conducted with a similar formulation.
- NOEC (Raphidocelis subcapitata (freshwater green alga)) 0.22 mg/l  
  Growth rate; Exposure time: 72 h  
  Test conducted with a similar formulation.

#### 12.2 Persistence and degradability

**Biodegradability**

- Potassium salt of glyphosate: Not readily biodegradable.

**Koc**

- Potassium salt of glyphosate: Koc: 884

#### 12.3 Bioaccumulative potential

**Bioaccumulation**

- Potassium salt of glyphosate: Bioconcentration factor (BCF) < 1

#### 12.4 Mobility in soil

**Mobility in soil**

- Potassium salt of glyphosate: Variable, depends on temperature, soil type, soil moisture, soil pH and organic matter content.

#### 12.5 Other adverse effects

**Additional ecological information**

- No further ecological information is available.

### SECTION 13. DISPOSAL CONSIDERATIONS

Triple-rinse containers before disposal. Add rinsings to spray tank. Do not dispose of undiluted chemicals on site. If recycling, replace cap and return clean containers to recycler or designated collection point. If not recycling, break, crush, or puncture and deliver empty packaging to an approved waste management facility. If an approved waste management facility is not available, bury the empty packaging 500 mm below the surface in a disposal pit specifically marked and set up for this purpose, clear of waterways, desirable vegetation and tree roots, in compliance with relevant Local, State or Territory government regulations. Do not burn empty containers or product. Do not reuse container for any other purpose.

### SECTION 14. TRANSPORT INFORMATION

ADG
UN number 3082
Transport hazard class(es) 9
Subsidiary Risk None
Packaging group III
Description of the goods ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (GLYPHOSATE POTASSIUM SALT SOLUTION)

AU01: Environmentally Hazardous Substances meeting the descriptions of UN 3077 or UN 3082 are not subject to this Code when transported by road or rail in:
a) packagings that do not incorporate a receptacle exceeding 500 kg(L); or
b) IBCs

IMDG

UN number 3082
Transport hazard class(es) 9
Subsidiary Risk None
Packaging group III
Marine pollutant YES
Description of the goods ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (GLYPHOSATE POTASSIUM SALT SOLUTION)

IATA

UN number 3082
Transport hazard class(es) 9
Subsidiary Risk None
Packaging group III
Environm. Hazardous Mark YES
Description of the goods ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (GLYPHOSATE POTASSIUM SALT SOLUTION)

SECTION 15. REGULATORY INFORMATION

Registered according to the Agricultural and Veterinary Chemicals Code Act 1994
Australian Pesticides and Veterinary Medicines Authority approval number: 68506

SUSMP classification (Poison Schedule)

Schedule 5 (Standard for the Uniform Scheduling of Medicines and Poisons)

SECTION 16. OTHER INFORMATION

Trademark information Roundup UltraMAX® is a Registered Trademark of the Bayer Group.

Abbreviations and acronyms
ADN European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR European Agreement concerning the International Carriage of Dangerous Goods by
### Road

- **ATE**: Acute toxicity estimate
- **AU OEL**: Australia. OELs. (Adopted National Exposure Standards for Atmospheric Contaminants in the Occupational Environment)
- **CAS-Nr.**: Chemical Abstracts Service number
- **CEILING**: Ceiling Limit Value
- **Conc.**: Concentration
- **EC-No.**: European community number
- **ECx**: Effective concentration to x %
- **EINECS**: European inventory of existing commercial substances
- **ELINCS**: European list of notified chemical substances
- **EN**: European Standard
- **EU**: European Union
- **IATA**: International Air Transport Association
- **IBC**: International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk (IBC Code)
- **ICx**: Inhibition concentration to x %
- **IMDG**: International Maritime Dangerous Goods
- **LCx**: Lethal concentration to x %
- **LDx**: Lethal dose to x %
- **LOEC/LOEL**: Lowest observed effect concentration/level
- **MARPOL**: MARPOL: International Convention for the prevention of marine pollution from ships
- **N.O.S.**: Not otherwise specified
- **NOEC/NOEL**: No observed effect concentration/level
- **OECD**: Organization for Economic Co-operation and Development
- **OES BCS**: OES BCS: Internal Bayer AG, Crop Science Division "Occupational Exposure Standard"
- **PEAK**: PEAK: Exposure Standard - Peak means a maximum or peak airborne concentration of a particular substance determined over the shortest analytically practicable period of time which does not exceed 15 minutes.
- **RID**: Regulations concerning the International Carriage of Dangerous Goods by Rail
- **SK-SEN**: Skin sensitiser
- **SKIN_DES**: SKIN_DES: Skin notation: Absorption through the skin may be a significant source of exposure.
- **STEL**: STEL: Exposure standard - short term exposure limit (STEL): A 15 minute TWA exposure which should not be exceeded at any time during a working day even if the eight-hour TWA average is within the TWA exposure standard. Exposures at the STEL should not be longer than 15 minutes and should not be repeated more than four times per day. There should be at least 60 minutes between successive exposures at the STEL.
- **TWA**: TWA: Exposure standard - time-weighted average (TWA): The average airborne concentration of a particular substance when calculated over a normal eight-hour working day, for a five-day working week.
- **UN**: United Nations
- **WHO**: World health organisation

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.
Changes since the last version are highlighted in the margin. This version replaces all previous versions.