## Section 1 - Identification of The Material and Supplier

**Adama Australia Pty Ltd,** Suite 1, Level 4, Building B
207 Pacific Highway St Leonards, NSW 2065
ACN 050 328 973

**Telephone (02)9431 7800 (office hours)**
**Emergency 1800 024 973 (24 hours)**
**Fax (02)9431 7700**

**Chemical nature:** Amino acid derivative.
**Trade Name:** Wipe Out 450 Non-Residual Herbicide
**Product Use:** Agricultural herbicide for use as described on the product label.
**Creation Date:** **July, 2002**
**This version issued:** **October, 2016** and is valid for 5 years from this date.

## 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 a Dangerous Good according to Australian Dangerous Goods (ADG) Code, IATA or IMDG/IMSBC criteria.

**SUSMP Classification:** S5
**ADG Classification:** None allocated. Not a Dangerous Good according to Australian Dangerous Goods (ADG) Code, IATA or IMDG/IMSBC criteria.
**UN Number:** None allocated





## GHS Signal word: WARNING

Skin Irritation Category 2
Eye irritation Category 2B
Hazardous to the aquatic environment (chronic) - category 2

**HAZARD STATEMENT:**

H315: Causes skin irritation.
H320: Causes eye irritation.
H411: Toxic to aquatic life with long lasting effects.

**PREVENTION**

P102: Keep out of reach of children.
P262: Do not get in eyes, on skin, or on clothing.
P264: Wash contacted areas thoroughly after handling.
P280: Wear protective gloves, protective clothing and eye or face protection.

**RESPONSE**

P362: Take off contaminated clothing and wash 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.
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**: clear blue liquid.
**Odour:** Odourless to mild amine odour.
**Major Health Hazards:** Glyphosate is practically nontoxic by ingestion, with a reported acute oral $LD_{50}$ of 5600 mg/kg in the rat. The toxicities of the technical acid (glyphosate) and the formulated product are nearly the same. Glyphosate is classed 2a by IARC - probably carcinogenic to humans.

## Section 3 - Composition/Information on Ingredients

| Ingredients | CAS No | Conc,% | TWA (mg/m$^3$) | STEL (mg/m$^3$) |
|---|---|---|---|---|
| Glyphosate, as the isopropylamine salt | 38641-94-0 | 450g/L | not set | not set |
| Non hazardous detergent | secret | <10 | not set | not set |
| Water | 7732-18-5 | 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.

The 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 should not be exceeded for more than 15 minutes and should not be repeated for 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 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:** Quickly and gently, blot or brush away excess chemical. Wash gently and thoroughly with water (use non-abrasive soap if necessary) for 20 minutes or until chemical is removed. Under running water, remove contaminated clothing, shoes and leather goods (e.g. watchbands and belts). If irritation persists, repeat flushing and obtain medical advice. Completely decontaminate clothing, shoes and leather goods before reuse or discard.
**Eye Contact:** Quickly and gently blot or brush away product. Immediately flush the contaminated eye(s) with lukewarm, gently flowing water for 20 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.
**Ingestion:** First aid is not generally required. If in doubt, contact a Poisons Information Centre or a doctor.

## Section 5 – Fire Fighting Measures

**Fire and Explosion Hazards**: There is no risk of an explosion from this product under normal circumstances if it is involved in a fire.
Fire decomposition products from this product are likely to be irritating if inhaled.
This product is likely to decompose only after heating to dryness, followed by further strong heating.
**Extinguishing Media:** Not Combustible. Use extinguishing media suited to burning materials.
**Fire Fighting:** When fighting fires involving significant quantities of this product, wear a splash suit complete with self contained breathing apparatus.

**Flash point:** Will not burn until water component is driven off.
**Upper Flammability Limit:** Does not burn.
**Lower Flammability Limit:** Does not burn.
**Autoignition temperature:** 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 face mask, face shield and gauntlets. All skin areas should be covered. See above under Personal Protection regarding Australian Standards relating to personal protective equipment. Suitable materials for protective clothing include rubber, PVC. 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. Avoid using sawdust or other combustible material. Sweep up and shovel or collect recoverable product into labelled containers for recycling or salvage, and dispose of promptly. 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 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:** This product is a Scheduled Poison. Observe all relevant regulations regarding sale, transport and storage of this class of poison. Make sure that containers of this product are kept tightly closed. Make sure that the product does not come into contact with substances listed under "Materials to avoid" 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$^3$)** **STEL (mg/m$^3$)**

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

The ADI for Glyphosate is set at 0.3mg/kg/day. The corresponding NOEL is set at 30mg/kg/day. ADI means Acceptable Daily Intake and NOEL means No-observable-effect-level. Values taken from Australian ADI List, June 2014.

**Ventilation:** No special ventilation requirements are normally necessary for this product. However make sure that the work environment remains clean and that dusts 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:** We suggest that protective clothing be made from the following: rubber, PVC.

**Respirator:** If there is a significant chance that vapours or mists are likely to build up in the area where this product is being used, we recommend that you use a respirator. It should be fitted with a type G cartridge, suitable for agricultural chemicals.

Eyebaths or eyewash stations and safety deluge showers should be provided near to where product is being used.

## Section 9 - Physical and Chemical Properties:

| | |
|---|---|
| **Physical Description & colour**: | Clear blue liquid. |
| **Odour:** | Odourless to mild amine odour. |
| **Boiling Point:** | Approximately 100°C at 100kPa. |
| **Freezing/Melting Point:** | Approximately 0°C. |
| **Volatiles:** | Water component. |
| **Vapour Pressure:** | 2.37 kPa at 20°C (water vapour pressure). |
| **Vapour Density:** | No data. |
| **Specific Gravity:** | 1.19-1.20 approx |
| **Water Solubility:** | Completely soluble in water. |
| **pH:** | 4.9-5.3 |
| **Volatility:** | No data. |
| **Odour Threshold:** | No data. |
| **Evaporation Rate:** | No data. |

**Coeff Oil/water distribution**: No data
**Autoignition temp:** 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:** This product should be kept in a cool place, preferably below 30°C.
**Incompatibilities:** strong oxidising agents.
**Fire Decomposition:** Carbon dioxide, and if combustion is incomplete, carbon monoxide and smoke. Nitrogen and its compounds, and under some circumstances, oxides of nitrogen. Occasionally hydrogen cyanide gas. Oxides of phosphorus and other phosphorus compounds. Water. Carbon monoxide poisoning produces headache, weakness, nausea, dizziness, confusion, dimness of vision, disturbance of judgment, and unconsciousness followed by coma and death. Hydrogen cyanide poisoning signs and symptoms are weakness, dizziness, headache, nausea, vomiting, coma, convulsions, and death. Death results from respiratory arrest. Hydrogen cyanide gas acts very rapidly; symptoms and death can both occur quickly.
**Polymerisation:** This product is unlikely to undergo polymerisation processes.

## Section 11 – Toxicological Information

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

### Skin Contact:
**Short term exposure:** Available data indicates that this product is not harmful. It should present no hazards in normal use. In addition, this 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.

### Eye Contact:
**Short term exposure:** Available data shows that this product is not harmful. In addition, 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.

### Ingestion:
**Short term exposure:** Available data shows that this product is not harmful. This product is unlikely to cause any irritation problems in the short or long term.

### Carcinogen Status:

**SWA:** No significant ingredient is classified as carcinogenic by SWA.
**NTP:** No significant ingredient is classified as carcinogenic by NTP.
**IARC:** In 2015, IARC classified glyphosate as 'probably carcinogenic to humans', but has since (May 2016) concluded glyphosate is unlikely to pose a carcinogenic or genotoxic risk to humans.
See the IARC website for further details. A web address has not been provided as addresses frequently change.

**Toxicity:** Glyphosate is practically nontoxic by ingestion, with a reported acute oral $LD_{50}$ of 5600 mg/kg in the rat. The toxicities of the technical acid (glyphosate) and the formulated product are nearly the same. The oral $LD_{50}$ 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 ($LD_{50}$ values between 1000 mg/kg and 5000 mg/kg). Oral $LD_{50}$ 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 $LD_{50}$ values of greater than 5000 mg/kg for the acid and isopropylamine salt. The trimethylsulfonium salt has a reported dermal $LD_{50}$ 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. 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 $LC_{50}$ 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 fetuses 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 fetuses. No toxic effects to the fetuses 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: $LD_{50}$ Oral, Rat = 5600mg/kg
$LD_{50}$ Oral, Mouse = 11300mg/kg
$LD_{50}$ Dermal, Rat = >5010mg/kg
$LD_{50}$ Dermal, Mouse = 7030mg/kg
$LD_{50}$ Dermal, Rabbit = >5000mg/kg

**Classification of Hazardous Ingredients**

| Ingredient | Risk Phrases |
|---|---|
| Glyphosate (as Salt) | R51-53 |

- Hazardous to the aquatic environment (chronic) - category 2

## Section 12 – Ecological Information

**Effects on birds:** Glyphosate is slightly toxic to wild birds. The dietary $LC_{50}$ 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 LC50 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 LC50 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 LD50 is greater than 0.1 mg/ bee. The reported contact LC50 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 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.

## 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

**UN Number:** This product is not classified as a Dangerous Good by ADG, IATA or IMDG/IMSBC criteria. No special transport conditions are necessary unless required by other regulations.

## Section 15 – Regulatory Information

**AICS:** All of the significant ingredients in this product are compliant with NICNAS regulations.
The following ingredient: Glyphosate 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, 7th Edition |
| **AICS** | Australian Inventory of Chemical Substances |
| **CAS number** | Chemical Abstracts Service Registry Number |
| **Hazchem Number** | Emergency action code of numbers and letters that provide information to emergency services especially firefighters |
| **IARC** | International Agency for Research on Cancer |
| **SWA** | Safe Work Australia, formerly ASCC and NOHSC |
| **NTP** | National Toxicology Program (USA) |
| **SUSMP** | Standard for the Uniform Scheduling of Medicines & Poisons |
| **UN Number** | United Nations Number |

Contact Points:

**Call Adama on (02)9431 7800** **Fax: (02)9431 7700 and ask for the technical manager.**

| | |
|---|---|
| **Police and Fire Brigade:** | **Dial 000** |
| **Emergency contact:** | **1800 024 973 (24 hours)** |

**If ineffective:** **Dial Poisons Information Centre (13 1126 from anywhere in Australia)**

The information contained in this Safety Data Sheet is provided in good faith and is believed to be correct at the date hereof. However, it is expected that individuals receiving the information will exercise their independent judgement in determining its appropriateness for a particular purpose. Adama Australia Pty Ltd makes no representation as to the accuracy or comprehensiveness of the information and to the full extent allowed by law excludes all liability whatsoever, whether with respect to negligence or otherwise, for any loss or damage arising from or connection with the supply or use of the information in this Safety Data Sheet.

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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