


## Glyphosate 360

### 1. PRODUCT & COMPANY IDENTIFICATION

<b>Product Identification/Name:</b>	Glyphosate 360
<b>Product Use:</b>	Herbicide
<b>Company Identification:</b>	Rainbow & Brown Limited 68A Tallyho Street, Rotorua, New Zealand  PO Box 10049, Mail Centre, Rotorua, 3046
<b>Telephone:</b>	+64 7 350 2009
<b>Fax:</b>	+64 7 350 2008
<b>Toll-Free Phone:</b>	0508 299 299
<b>After Hours Emergency</b>	+64 27 498 2574
<b>National Poisons Centre</b>	0800 764 766
<b>Website:</b>	<a href="http://www.rainbowbrown.co.nz">www.rainbowbrown.co.nz</a>
<b>Date of Issue:</b>	26 November 2018
<b>Latest Revision Date:</b>	26 November 2018

### 2. HAZARDS IDENTIFICATION

<b>Classification of the substance or mixture (HSNO):</b>	6.1D inhalation – Acutely toxic substance via inhalation (low hazard) 6.4A – Eye irritant 9.1B – Toxic to aquatic life with long lasting effects
<b>Classification of the substance or mixture (GHS):</b>	Acute toxicity: Inhalation Category 4 Serious eye damage/eye irritation Category 2 Aquatic toxicity (chronic) Category 2
<b>Label Elements:</b>	
<b>Pictogram</b>	
<b>Signal Word</b>	<b>WARNING</b>
<b>Hazard Statements</b>	H332 Harmful if inhaled

	H319 Causes serious eye irritation H411 Toxic to aquatic life with long lasting effects
<b>Precautionary Statements</b>	
<b>Prevention:</b>	P102 – Keep out of reach of children P261 – Avoid breathing mist/spray P264 - Wash hands, exposed skin, thoroughly after use. P271 – Use only outdoors or in a well-ventilated area. P280 – Wear eye protection/face protection. P273 – Avoid release to the environment.
<b>Response:</b>	P304 + P340 – IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing. P312 – Call a POISON CENTER or doctor/physician if you feel unwell. P305 + P351 + P338 – IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337 + P313 – If eye irritation persists: Get medical advice/attention. P391 – Collect spillage.
<b>Disposal:</b>	P501 – In accordance with the EPA Hazardous Substances (Disposal) Notice 2017. Refer to Section 13 of this SDS.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Main Component	CAS Number	Concentration
Glyphosate acid as the IPA salt	1071-83-6	36% w/v
Tallowamine ethoxylate	61791-26-2	10-20% w/v
Ingredients not contributing to hazard	Proprietary	Balance

### 4. FIRST AID MEASURES

<b>Eye Contact:</b>	Hold eyes open, flush with water for at least 15 minutes. Seek medical attention if irritation develops and persists.
---------------------	---

<b>Skin:</b>	Wash skin with plenty of soap and water. Wash contaminated clothing before re-use. Seek medical attention if skin irritation develops and persists.
<b>Ingestion:</b>	Do not induce vomiting unless high doses have been swallowed. Drink plenty of water to dilute. Contact a doctor or Poisons Information Centre (0800 POISON – 0800 764 766)
<b>Inhalation:</b>	Remove to fresh air. If effects persist seek medical attention.
<b>Advice to Doctor:</b>	No specific antidote. Treat symptomatically.

## 5. FIRE FIGHTING MEASURES

<b>Flash Point:</b>	None
<b>Flammable Limits:</b>	Not flammable
<b>Extinguishing Media:</b>	Water spray/fog, dry chemical, foam, CO <sub>2</sub>
<b>Fire &amp; Explosion Hazards:</b>	Not a fire or explosion hazard.
<b>Fire Fighting Equipment:</b>	Vapours of heated material may be toxic. Use self-contained breathing apparatus.
<b>Fire Fighting Instructions:</b>	Addition of water may cause excessive foaming. Do not allow runoff to drains.

## 6. ACCIDENTAL RELEASE MEASURES

<b>Personal precautions:</b>	Clear area of all unprotected personnel. Keep unnecessary and unprotected personnel from entering area. Use appropriate protective clothing and equipment including respiratory protection if there is a risk of inhaling vapours/mist/spray.
<b>Spills:</b>	<p>Ensure there is appropriate and adequate personal protective equipment, trained personnel and clean up materials for management of accidental release. Avoid release to the environment.</p> <p>Large spills: dike and pump as much as possible to a salvage container. Absorb remaining liquid and any smaller spills with clay, sand or other absorbent material and collect in a waste container. Cover the spill area with water and absorb residue. Spills may be slippery and should be cleaned up promptly.</p> <p>Label salvage and waste containers. Dispose of waste</p>

	in accordance with Section 13.
--	--------------------------------

## 7. HANDLING AND STORAGE

<b>Label:</b>	Read the storage/handling precautions on the product label.
<b>Handling:</b>	Avoid contact with skin and eyes. Avoid inhaling vapours/mist/spray. Do not eat, drink or smoke when using this product. Remove contaminated clothing and wash hands and face before entering eating areas. Wash clothing after use.
<b>Storage:</b>	Do not store in galvanised or unlined steel containers. Store in tightly closed original container in a cool, dry, well-ventilated and secure area when not in use. Do not store with food, feedstuffs, seeds or fertilisers. Keep out of reach of children.

## 8. EXPOSURE CONTROLS & PERSONAL PROTECTION

<b>Exposure Guidelines:</b>	No established workplace exposure standard in NZ.
<b>Engineering Controls:</b>	Normal room ventilation is sufficient.
<b>Respiratory Protection:</b>	No special precautions are necessary for respiratory protection under normal handling conditions. If exposed to heated material or unusually high concentrations of vapour/mist/spray, then use a respirator with organic vapour canister.
<b>Skin Protection:</b>	Wear overalls and chemical resistant gloves while mixing or spraying.
<b>Eye Protection:</b>	Wear splash goggles while mixing or spraying.
<b>Dust:</b>	Not applicable

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance:</b>	Amber liquid
<b>Odour:</b>	Slight amine odour
<b>Odour Threshold:</b>	Not determined
<b>Boiling Point:</b>	Approx. 100°C
<b>Melting point:</b>	Not applicable
<b>Freezing point:</b>	Not available

<b>pH:</b>	4-6 (1% solution)
<b>Solubility:</b>	Fully soluble in water
<b>Evaporation rate:</b>	Not determined
<b>Flash Point:</b>	Not applicable
<b>Flammability:</b>	Not flammable or combustible
<b>LEL/UEL:</b>	Not applicable
<b>Vapour Pressure:</b>	Not available
<b>Decomposition Temperature:</b>	Not determined
<b>Autoignition Temperature:</b>	Not determined
<b>Density:</b>	1.17 g/L
<b>Partition Coefficient:</b>	Not determined
<b>Viscosity:</b>	Not determined

## 10. STABILITY AND REACTIVITY

<b>Stability:</b>	Stable under normal conditions.
<b>Reactivity:</b>	Not reactive under normal conditions of use.
<b>Conditions to Avoid:</b>	Avoid using galvanised or unlined steel containers.
<b>Incompatibility:</b>	Avoid strong oxidisers, strong acids and strong alkalis. Keep away from food, feedstuffs, seeds and fertilisers.
<b>Hazardous Decomposition Products:</b>	Oxides of nitrogen or phosphorous.
<b>Hazardous Polymerisation:</b>	Will not occur.

## 11. TOXOLOGICAL INFORMATION

<b>ACUTE EFFECTS:</b>	
<b>Acute Effects: Ingestion:</b>	LD <sub>50</sub> > 5000 mg/kg (rat)
<b>Acute Effects: Inhalation:</b>	LC <sub>50</sub> > 1.3 mg/L @ 4 hr exposure (rat). Harmful by inhalation.
<b>Acute Effects: Skin:</b>	LD <sub>50</sub> > 5000 mg/kg (rat). Not expected to be harmful by skin contact. Not expected to be a skin irritant.
<b>Acute Effects: Eye:</b>	May cause eye irritation.
<b>Sensitisation:</b>	Not expected to be a respiratory or skin sensitiser.
<b>CHRONIC EFFECTS:</b>	

<b>Carcinogenicity, Reproductive Toxicity, or Mutagenicity:</b>	No known carcinogenic, reproductive/developmental or mutagenic effects.
<b>Specific Target Organ Toxicity:</b>	No known effects.

## 12. ECOLOGICAL INFORMATION

<b>Ecotoxicity:</b>	EC <sub>50</sub> (algal) 1.2 mg/L  Toxic to aquatic life with long lasting effects. Avoid losses to the environment wherever possible.
<b>Persistence/degradability:</b>	Not readily biodegradable
<b>Bioaccumulation:</b>	Does not bioaccumulate
<b>Soil toxicity:</b>	No evidence of toxicity
<b>Terrestrial vertebrates:</b>	No evidence of toxicity
<b>Terrestrial invertebrates:</b>	No evidence of toxicity
<b>Mobility:</b>	Low mobility in soil

## 13. DISPOSAL CONSIDERATIONS

<b>Disposal Method:</b>	Do not dispose of product down drains or sewers. Dispose via an approved waste disposal contractor.
<b>Container Disposal:</b>	Triple rinse empty containers, adding rinsate to spray tank, before disposal. Recycle through an approved recycling facility or dispose of via an approved waste disposal contractor.

## 14. TRANSPORT INFORMATION

<b>Dangerous Goods Classification:</b>	Classified as a Dangerous Good for transport in accordance with NZS5433:2012, IMDG or IATA.
<b>Shipping Name:</b>	Environmentally hazardous substance, liquid, N.O.S. (Glyphosate 360)
<b>Class:</b>	9
<b>UN Number:</b>	3082
<b>Packaging group:</b>	III
<b>Marine Pollutant:</b>	Yes
<b>EmS Code:</b>	F-A S-F

## 15. REGULATORY INFORMATION

<b>ACVM Registration No:</b>	P5441
<b>EPA Approval No:</b>	HSR000227
<b>Assignment Description:</b>	Soluble concentrate containing 360-450 g/L glyphosate as the isopropylamine salt – Substance A
<b>Certified Handler:</b>	Not required
<b>Tracking:</b>	Not required
<b>Compliance Certificate:</b>	Not required
<b>Quantity that must be secured:</b>	Not required
<b>Emergency Response Plan:</b>	1,000L
<b>Secondary Containment:</b>	1,000L
<b>Signage:</b>	1,000L
<b>Fire Extinguishers:</b>	No fire extinguisher requirement specified.
<b>Training requirements:</b>	<p>All workplace personnel handling this substance are required to be trained on the safe handling and PPE requirements for the hazards associated with this substance in accordance with Clause 4.5 of the Health and Safety at Work (Hazardous Substances) Regulations 2017.</p> <p>When applied onto or into water and water has potential to leave the place containing the application area then application of the substance must be under the control of a qualified person/loader/contractor. Refer to EPA Hazardous Substances (Hazardous Property Controls) Notice 2017 Part 4, Subpart C.</p>

## 16. OTHER INFORMATION

Glossary	
<b>AEL</b>	Acceptable Exposure Limit
<b>DT<sub>50</sub></b>	Time (days) for 50% loss
<b>EC<sub>50</sub></b>	Median effective concentration
<b>EEL</b>	Environmental Exposure Limit
<b>EPA</b>	Environment Protection Authority
<b>GHS</b>	Globally Harmonised System
<b>HSNO</b>	Hazardous Substances & New Organisms Act

<b>Koc</b>	Organic carbon partition coefficient
<b>LFL</b>	Lower Flammability Limit
<b>LC<sub>50</sub></b>	Lethal Concentration in air or water for 50% of test organisms
<b>LD<sub>50</sub></b>	Lethal Dose for 50% of test organisms
<b>NOEL</b>	No Observable Effect Level
<b>OSHA</b>	Occupational Safety & Health Administration (USA)
<b>OSH or Worksafe</b>	Worksafe New Zealand
<b>PEL</b>	Permissible Exposure Level
<b>Pow</b>	Octanol water partition coefficient (ratio of concentration of a chemical in octanol and water at equilibrium and at a specified temp.)
<b>pH</b>	Measure of acidity/alkalinity of a substance on a 1-14 scale (1=strong acid, 14 = strongly alkali)
<b>STEL</b>	Short Term Exposure Limit
<b>TEL</b>	Tolerable Exposure Limit
<b>TLV</b>	Threshold Limit Value – an exposure limit set by a competent authority
<b>TWA</b>	Time Weighted Average – average concentration of a chemical in air over a total exposure time (usually 8 hours)
<b>UFL</b>	Upper Flammability Limit
<b>WES</b>	Workplace Exposure Standard – set by WorkSafe NZ

The data in this Safety Data Sheet relates only to this product alone, and not to its use in combination with other substances or products. In such circumstances, assuming the combination is permitted (refer to product labels, and contact manufacturer if in doubt), be guided by the most hazardous of the substances involved and observe the more stringent of all hazard controls applicable to the products used.

Date of Safety Data Sheet: 26 November 2018

Reason for Revision: 1.0 Review and update to new legislative requirements.

Further Information: Rainbow & Brown Limited  
Toll-Free Phone (0508) 299 299