



# TURBO SAFETY DATA SHEET

## 1: Identification of the Substance and Supplier

**Product Name:** TURBO  
**Recommended Use:** Herbicide  
**Company Details:** Orion Crop Protection Ltd  
14 – 22 Triton Drive, North Harbour, Auckland  
PO Box 100 570, North Shore Mail Centre, 0745  
New Zealand  
**Telephone Number:** (09) 415 1679 (office hours)  
**Emergency Telephone:** 0800 CHEMCALL (0800 243 622) (24 hours)  
**National Poison Centre:** 0800 POISON (0800 764 766) (24 hours)  
**Date of Issue/Revision:** June 2009

## 2: Hazards Identification

**Priority Identifiers:** Harmful, Ecotoxic, Keep Out of Reach of Children  
**HSNO Classes:**  
6.1E May be harmful if swallowed, inhaled or absorbed through the skin  
6.3A May cause skin irritation  
6.4A May cause eye irritation  
9.1B Toxic to aquatic organisms

## 3: Composition/ Information on Ingredients

Ingredient	CAS No	Content (% w/v)
Glyphosate dimethylammonium (active ingredient)	38641-94-0	38
Other ingredients, water, surfactants, etc	Proprietary	Remainder

## 4: First Aid Measures

**Skin Contact:** In case of contact, immediately wash affected area with soap and water. Wash contaminated clothing before reuse. Seek medical advice if irritation persists.  
**Eye Contact:** Hold eyes open and rinse with water for at least 15 minutes. Remove contact lenses if easy to do so. Seek medical advice immediately.  
**Ingestion:** Do not induce vomiting. Seek medical advice immediately.  
**Inhalation:** Immediately move to fresh air and rest. Maintain half upright position if breathing is difficult. Seek medical advice immediately.  
**Workplace Facilities:** Hand wash facility. Eye wash facility.  
**Advice to Doctor:** No specific antidote. Treat symptomatically.

**National Poison Centre:** 0800 POISON (0800 764 766) (24 hours)

## 5: Fire-Fighting Measures

**Fire/Explosion Hazard:** Non-Flammable.  
**HAZCHEM Code:** 3Z  
**ERP Guide No:** 47  
**Extinguishing Media:** Water spray, foam, dry chemical or CO<sub>2</sub>. Avoid water jet.  
**Fire Fighting Instructions:** During a fire, toxic fumes may be emitted. Wear self-contained breathing apparatus. Contain runoff.

## 6: Accidental Release Measures

Caution: Floors may be slippery if wet. When dealing with spills wear personal protective clothing and equipment as described in section 8. Prevent further spillage or leakage. Keep bystanders away. Absorb spillage with inert material such as spill kit, sand or cat litter. Collect and place in a sealable container for disposal. Wash down affected area with water and detergent. Absorb and collect washings for disposal. Dispose of safely to an approved landfill.

## 7: Storage, Handling and Use

**Storage:** Keep out of reach of children. Store in the original, tightly closed container, in a secure area away from foodstuffs.

**Handling and Use:** Keep out of reach of children. Avoid contact with eyes and skin. Avoid inhalation of spray mist. When mixing or applying, wear protective clothing as described in section 8. Do not eat, drink or smoke while using. Wash hands and face after use. Wash protective clothing after use. This product should only be mixed, contained in or sprayed by, equipment made from stainless steel, fibreglass, plastic, aluminium, brass or copper. A highly flammable gas (hydrogen) may be formed from the contact of this product with galvanised or unlined steel. All spray equipment, including pumps, spray tanks, lines, nozzles, and landing gear (aircraft) should be thoroughly washed with water after each day of spraying

**Approved Handler:** Not required (unless applied onto or into water, and where that water may leave the application area, e.g., streams, etc).

**Tracking:** Not required.

**Record Keeping:** Not required.

**Site Requirements under the HSNO Act 1996 and HSNO Regulations:**

- A location test certificate is not required
- A hazardous atmosphere zone is not required
- Fire extinguishers are not required
- Signage is required for 1000 litres or more
- Emergency information is required for 5 litre or more
- An emergency plan is required for more than 1000 litres
- Secondary containment is required for more than 1000 litres.
- Separation/Segregation from incompatible substances is not applicable.

**Additional Requirements:** All aspects of storage, handling, use, disposal and record keeping must be in accordance with NZS 8409:2004 'Management of Agrichemicals', and relevant local and regional council plans.

## 8: Exposure Control / Personal Protection

<b>Tolerable Exposure Limit:</b>	None established.
<b>Workplace Exposure Standards:</b>	<b>Product</b> – None established (Use lowest practicable level). <b>Active ingredient</b> – None established (Use lowest practicable level). <b>Excipients</b> – None established (Use lowest practicable level).
<b>Engineering Controls:</b>	Not limited given nature of use.
<b>Personal Protection:</b>	
<b>Eye:</b>	Safety glasses/goggles when mixing or applying.
<b>Skin:</b>	Cotton overalls snugly fitting at the neck, wrist and ankle, boots and waterproof gloves.
<b>Respiratory:</b>	Not required where spray mist is not inhaled. Otherwise, respirator (organic vapour and particulate matter) is required.

## 9: Physical and Chemical Properties

<b>Appearance:</b>	Blue Liquid
<b>Odour:</b>	Faint amine or odourless
<b>Boiling Point:</b>	>100°C
<b>Flash Point:</b>	Will not flash
<b>Auto ignition Temperature:</b>	Not applicable
<b>Explosive Limits:</b>	Not applicable
<b>Density:</b>	1.14 g/mL (approx)
<b>Vapour Pressure:</b>	Not volatile
<b>Vapour Density:</b>	Not volatile
<b>Solubility in Water:</b>	Soluble
<b>pH:</b>	4.5 – 5.5
<b>Oxidising Properties:</b>	Not an oxidizer
<b>Corrosive Properties:</b>	Not a corrosive

## 10: Stability and Reactivity

<b>Stability:</b>	Stable under normal conditions.
<b>Incompatibility:</b>	Avoid mixing with strong acids and strong alkalis. Do not place in unlined steel or galvanised equipment.
<b>Decomposition:</b>	Decomposition will not occur under normal conditions.
<b>Dangerous Reactions:</b>	Products arising from combustion, reaction, or thermal decomposition may be toxic, corrosive or flammable.

## 11: Toxicological Information

This section describes effects which could occur if this material is not handled in accordance with this data sheet.

<b>Swallowed:</b>	Burning sensation in throat and chest, nausea, vomiting, diarrhoea.
<b>Eye:</b>	Irritation.
<b>Skin:</b>	Irritation.
<b>Inhalation:</b>	Irritation.
<b>Acute Toxicity:</b>	Acute Oral LD50 (Rat) >5000 mg/kg
<b>(Data for comparable active ingredient)</b>	Acute Dermal LD50 (Rabbit) >5000 mg/kg Inhalation LC50 (4 hr) (Rat) >1.3 mg/l

<b>Sensitisation Effects:</b>	None
<b>Mutagenic Effects:</b>	None
<b>Carcinogenic Effects:</b>	None
<b>Reproductive Effects:</b>	None
<b>Teratogenic (Birth) Effects:</b>	None
<b>Systemic Effects:</b>	None

## 12: Ecotoxicity Information

This section describes effects which could occur if this material is not handled in accordance with this data sheet.

**The following information is presented in respect of a comparable active ingredient:**

<b>Ecotoxic Effects:</b>	LC50 (96 hr) (Rainbow trout) >1000 mg/l LC50 (48 hr) (Daphnia) >930 mg/l LC50 (96 hr) (Green Algae) 72.9 mg/l Very toxic to plant species (herbicide) Non - toxic to bees.
<b>Environmental Fate:</b>	Biodegradable. DT50 (soil) 3 - 174 days
<b>Partition Co-Efficient (Kow):</b>	LogP = -5.4 (Low)
<b>Environmental Exposure Limit:</b>	<b>Product:</b> None set <b>Active Ingredient:</b> 3.6 mg/l as glyphosate (in water); equivalent to 1 ml Turbo per 85 litres of water

## 13: Disposal Considerations

<b>Product:</b>	Dispose of product by using it in accordance with the label. Waste product should be disposed of to an approved landfill. For disposal of large quantities contact Orion Crop Protection Ltd.
<b>Container:</b>	Dispose of to an approved landfill or agricultural recycling scheme. Do not burn. Do not use packaging for any other purpose.

## 14: Transport Information

<b>Dangerous Goods:</b>	
<b>UN Number:</b>	3082
<b>Proper Shipping Name:</b>	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (GLYPHOSATE DIMETHYLAMMONIUM 38%)
<b>Class:</b>	9
<b>Subsidiary Class:</b>	None
<b>Packing Group:</b>	III
<b>Additional Information:</b>	MARINE POLLUTANT
<b>MTQ (Non-Commercial)</b>	250 litres
<b>Passenger Service Vehicle:</b>	Maximum quantity 1 litre

## 15: Regulatory Information

HSNO Approval No: HSR000223  
ACVM Registration No: P4602

## 16: Other Information

### Glossary

Approved Handler	For some hazardous substances, persons storing, handling and using must be trained and certified
DT50	Time (days) for 50% reduction in concentration
EC50	Concentration required to produce an effect in 50% of organisms
Environmental Exposure Limit	Maximum concentration limit of a substance in an environmental medium, e.g., water, soil.
ERMA	Environmental Risk Management Authority
ERP Guide	Dangerous Goods – Initial Emergency Response Guide SNZ HB 76:2008
HAZCHEM Code	Emergency action code for emergency services
HAZNOTE	A brief document providing hazardous substance information for transport, storage and emergency management purposes
HSNO	Hazardous Substances and New Organisms
LC50	Concentration that will kill 50% of organisms
LD50	Dose that will kill 50% of organisms
MTQ	Maximum Transport Quantity. The maximum amount of dangerous goods that can be transported by road by the user
Partition Co-Efficient Kow	Ratio of concentration between octanol and water. Values are given as the log value. A high value indicates a substance may bioaccumulate
Record Keeping	Spray diary
STEL	Short term exposure level
Tolerable Exposure Limit	Maximum concentration limit of a substance above which persons must not be exposed
Tracking	For some hazardous substances, a record must be kept of the transport, storage, sale and use of the product
TWA	Time weighted average
Workplace Exposure standard	An occupational health standard limiting concentrations of specified substances to which persons are exposed

### Please Note

Users must ensure that the most up to date version of this safety data sheet is used. This Safety Data Sheet summarises information on this product, and how to safely handle and use the product. Each user should familiarise themselves with the product label, HazNote and Safety data Sheet, and consider the information in the context of how the product will be handled and used, including in conjunction with other products. Orion Crop Protection Ltd assumes no responsibility for the accuracy, completeness or suitability of this information. The user is responsible for determining the suitability and accuracy of this information for their particular purposes. If clarification or further information is needed to ensure that an appropriate risk assessment can be made, the user should contact this company. Always read the product label before use.