

SAFETY DATA SHEET

SYNERGY 2,4-D ESTER 680

1: Identification of the Substance and Supplier

Product Name	SYNERGY 2,4-D ESTER 680
Recommended Use	Herbicide
Company Details	Orion AgriScience Ltd Unit 1, 15 Sir Gil Simpson Drive, Harewood, Christchurch, 8053 PO Box 39 071, Harewood, Christchurch, 8545 www.orionagriscience.co.nz
Web Address	www.orionagriscience.co.nz
Email Address	orders@orionagriscience.co.nz
Telephone Number	(03) 928 2386 (office hours), 0800 674 6627 (free phone)
Emergency Telephone	0800 CHEMCALL (0800 243 622) (24 hours)
National Poison Centre	0800 POISON (0800 764 766) (24 hours)
Date of Issue/Revision	July 2015

2: Hazards Identification

Hazard Pictograms	
Priority Identifiers:	Harmful, Ecotoxic, Keep Out of Reach of Children
HSNO Classes:	Secondary Identifiers:
6.1D	May be harmful if swallowed, inhaled or absorbed through the skin
6.3B	May cause mild skin irritation
6.5B	May cause sensitization from prolonged skin contact
6.9A	May cause organ damage from repeated ingestion at high doses
9.1A	Very toxic to aquatic organisms
9.2A	Very toxic to some plant species
9.3C	Harmful to terrestrial vertebrates

3: Composition/ Information on Ingredients

Ingredient	CAS No	Content (% w/v)
2,4 D ethylhexyl ester (active ingredient)	1928-43-4	90
Aromatic hydrocarbon solvents	64742-94-5	<10
Other ingredients, 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 if irritation persists.
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. If gastric lavage or emesis is considered necessary, inhalation of hydrocarbons must be prevented.
National Poison Centre	0800 POISON (0800 764 766) (24 hours)

5: Fire-Fighting Measures

Fire/Explosion Hazard	Non-Flammable (but will be combustible in a fire)
HAZCHEM Code	3Z
ERP Guide No	47

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Extinguishing Media

Water spray, foam, dry chemical or CO₂. 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 a suitable landfill.

7: Storage, Handling and Use

Storage:	Keep out of reach of children. Store in the original, tightly closed container, in a secure and well ventilated area away from feed or foodstuffs.
Handling and Use:	Keep out of reach of children. Avoid contact with eyes and skin. Avoid inhalation of vapour or spray mist. When mixing, using 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.
Approved Handler	Required if applied in a wide dispersive manner, or by a commercial contractor.
Tracking	Not required.
Record Keeping	Record of use must be kept if applied where members of the public may be lawfully present, or where it is likely to enter air or water and leave that place.
REI	Until spray has dried
Site Requirements under the HSNO Act 1996 and HSNO Regulations:	<ul style="list-style-type: none"> • A location test certificate is not required • A hazardous atmosphere zone is not required • Fire extinguishers are not required • Signage is required for 100 litres or more • Emergency information is required for 0.1 litre or more • An emergency plan is required for more than 100 litres • Secondary containment is required for more than 100 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

Tolerable Exposure Limit	None established.
Workplace Exposure Standards	<p>Product – None established (Use lowest practicable level).</p> <p>Active ingredient – None established (Use lowest practicable level). (Note: 2,4-D as acid 10 mg/m³ (8hr TWA))</p> <p>Excipients – None established (Use lowest practicable level). Recommendation: Hydrocarbon solvent 15 ppm (8 hr TWA) 30 ppm (15 min STEL)</p>
Engineering Controls	Limited given nature of use.
Personal Protection:	
Eye	Safety glasses/goggles (or full face respirator incorporating visor) when mixing or applying.
Skin	Cotton overalls snugly fitting at the neck, wrist and ankle, chemical resistant boots and gloves (barrier multilayer, nitrile, neoprene).
Respiratory	Not required where vapour or spray mist is not inhaled. Otherwise, respirator (organic vapour and particulate matter) is required.

9: Physical and Chemical Properties

Appearance	Amber Liquid
Odour	Ester like
Boiling Point	Not available
Flash Point	101°C
Auto ignition Temperature	Not available
Explosive Limits	Not available
Density	1.14 g/ml (approx)
Vapour Pressure	Not available
Vapour Density	> 1 (heavier than air)
Solubility in Water	Emulsifiable
pH	Not applicable
Oxidising Properties	Not an oxidizer
Corrosive Properties	Not a corrosive

10: Stability and Reactivity

Stability	Stable under normal conditions.
Incompatibility	Avoid mixing with strong acids, alkalis, and oxidizing agents such as chlorine compounds, ammonium nitrate, etc.
Decomposition	Decomposition will not occur under normal conditions.
Dangerous Reactions	Products arising from combustion or thermal decomposition may be toxic, corrosive or flammable.

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11: Toxicological Information

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

Swallowed	Nausea, vomiting, diarrhea and gastrointestinal discomfort. The solvent in this product may cause bronchopneumonia or pulmonary oedema if aspirated into the lungs from ingestion or from vomiting.
Eye	Irritation.
Skin	Mild irritation. Prolonged or repeated contact may result in degreasing of the skin and dermatitis. Contact may induce an allergic response in susceptible individuals.
Inhalation	Irritation, headache, dizziness, nausea, vomiting.
Acute Toxicity (Active Ingredient)	<ul style="list-style-type: none">Acute Oral LD50 (Rat) 720 mg/kgAcute Dermal LD50 (Rabbit) > 2000 mg/kg
Sensitisation Effects	Skin sensitisation (allergy) may occur in some individuals
Mutagenic Effects	None
Carcinogenic Effects	None
Reproductive Effects	None
Teratogenic (Birth) Effects	None
Systemic Effects	Long term dietary exposure to 2,4 D may lead to liver dysfunction.

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 the active ingredient:

Ecotoxic Effects	<ul style="list-style-type: none">Acute Oral LD50 (Mallard duck) 663 mg/kgLC50 (96 hr) (Rainbow trout) Greater than solubility in waterLC50 (48 hr) (Daphnia) 5.2 mg/lAlgae EC50 0.23 mg/lNon-toxic to bees.
Environmental Fate	Biodegradable. DT50 (soil) < 8 days.
Partition Co-Efficient (Kow)	LogP = 5.78 (high)
Environmental Exposure Limit:	None established.

13: Disposal Considerations

Product	Dispose of product by using it in accordance with the label. Do not burn. Waste product should be disposed of to a suitable landfill. For disposal of large quantities contact Orion AgriScience Ltd.
Container	Dispose of to a suitable landfill or agricultural recycling scheme. Do not burn. Do not use packaging for any other purpose.

14: Transport Information

Dangerous Goods	
UN Number	3082
Proper Shipping Name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (2,4 D ETHYLHEXYL ESTER 90%)
Class	9
Subsidiary Class	None
Packing Group	III
Additional Information	MARINE POLLUTANT.
MTQ (Non-Commercial)	250 litres
Passenger Service Vehicle:	Maximum quantity 0.1 litre

15: Regulatory

HSNO Approval No	HSR000962
ACVM Registration No	P8289

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

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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.
ERP Guide	Dangerous Goods – Initial Emergency Response Guide SNZ HB 76:2008
HAZCHEM Code	Emergency action code for emergency services
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	Includes a spray diary
REI	Restricted Entry Interval – The length of time after application before entry into the treated area is permitted without the use of protective equipment. For indoor environments, this time period commences once ventilation after treatment begins.
Safety Note	A brief document providing hazardous substance information for transport, storage and emergency management purposes
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
Wide Dispersive Use	A method of application involving equipment such as boom sprayers, mist blowers, vine sprayers, row sprayers, etc., as well as aerial application. Hand gunning within 30m of a property boundary is also classed as wide dispersive use. Knapsack sprayers are not classed as wide dispersive use

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, Safety Note 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 AgriScience 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.