

Safety Data Sheet

PRODUCT NAME **Imtrade Linuron 800 WG Herbicide**
APVMA Product Code: 81574

1 - IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Supplier Name **IMTRADE AUSTRALIA PTY LTD**
Address 17 Ocean Street, Kwinana, Western Australia, AUSTRALIA, 6167
Telephone 1800 171 799
Fax 1800 171 788
Emergency In a Transport Emergency Dial 000 – Police or Fire Brigade
Web site <http://www.imtrade.com.au>
Product Use: Agricultural herbicide for use as described on the product label.
Creation Date: **August, 2009**
This version issued: **September, 2016** and is valid for 5 years from this date.
Product type: Linuron is a urea derivative.

SECTION 2 - HAZARDS IDENTIFICATION

Statement of Hazardous Nature

This product is classified as: T, Toxic. N, Dangerous to the environment. Hazardous according to the criteria of SWA.

Not a Dangerous Good according to Australian Dangerous Goods (ADG) Code, IATA and IMSBC criteria.

SUSMP Classification: None allocated.

ADG Classification: None allocated. Not a Dangerous Good under the ADG Code.

UN Number: None allocated



GHS Signal word: DANGER.

Acute Toxicity Oral Category 4

Carcinogenicity Category 2

Reproductive Toxicity Category 1

Specific Target Organ toxicity - repeated exposure Category 2

Hazardous to aquatic environment Short term/Chronic Category 1

HAZARD STATEMENT:

H302: Harmful if swallowed.

H351: Suspected of causing cancer.

H360: May damage fertility or the unborn child.

H373: May cause damage to organs through prolonged or repeated exposure.

H410: Very toxic to aquatic life with long lasting effects.

PREVENTION

P102: Keep out of reach of children.

P201: Obtain special instructions before use.

P202: Do not handle until all safety precautions have been read and understood.

P260: Do not breathe dusts or spray.

P262: Do not get in eyes, on skin, or on clothing.

P264: Wash contacted areas thoroughly after handling.

P270: Do not eat, drink or smoke when using this product.

P273: Avoid release to the environment.

P281: Use personal protective equipment as required.

RESPONSE

P330: Rinse mouth.

P337: If eye irritation persists: seek medical attention.

SAFETY DATA SHEET

P353: Rinse skin or shower with water.

P301+P312: IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell.

P301+P330+P331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P308+P313: If exposed or concerned: Get medical advice.

P370+P378: In case of fire, use carbon dioxide, dry chemical, foam, water fog.

STORAGE

P405: Store locked up.

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: White to off-white powdered solid.

Odour: Characteristic odour.

Major Health Hazards: Linuron is harmful by ingestion, with reported oral LD₅₀ values of 1200 to 1500 mg/kg in rats, and 2250 mg/kg in rabbits. The reported dermal LD₅₀ in rabbits is greater than 5000 mg/kg. It has been reported to be a skin sensitizer in guinea pigs, and an eye irritant in rabbits, but not a skin irritant in rabbits. The 4-hour inhalation LC₅₀ is 6.15 mg/L, which indicates slight toxicity by this route. Limited evidence of a carcinogenic effect, may cause harm to unborn children, harmful if swallowed, possible risk of impaired fertility.

SECTION 3 - COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients	CAS No	Conc,%	TWA (mg/m ³)	STEL (mg/m ³)
Linuron	330-55-2	800g/kg	not set	not set
Other non hazardous ingredients	secret	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 SWA 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 may be equalled (but should not be exceeded) for no longer than 15 minutes and should not be repeated 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 (0800 764 766 in New Zealand) 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: Gently brush away excess solids. Irritation is unlikely. However, if irritation does occur, flush with lukewarm, gently flowing water for 5 minutes or until chemical is removed.

Eye Contact: Quickly and gently brush particles from eyes. First aid is not generally required. If in doubt, contact a Poisons Information Centre or a doctor. Take special care if exposed person is wearing contact lenses.

Ingestion: If swallowed, do NOT induce vomiting. Wash mouth with water and contact a Poisons Information Centre, or call 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. Violent steam generation or eruption may occur upon application of direct water stream on hot liquids.

Fire decomposition products from this product may be toxic if inhaled. Take appropriate protective measures.

Extinguishing Media: Suitable extinguishing media are carbon dioxide, dry chemical, foam, water fog.

Fire Fighting: If a significant quantity of this product is involved in a fire, call the fire brigade.

Flash point: No data

Upper Flammability Limit: No data.

Lower Flammability Limit: No data.

Autoignition temperature: No data.

Flammability Class: No data.

SAFETY DATA SHEET

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Accidental release: In the event of a major spill, prevent spillage from entering drains or water courses. As a minimum, wear overalls, goggles and gloves. Suitable materials for protective clothing include rubber, PVC. Eye/face protective equipment should comprise as a minimum, protective goggles. If there is a significant chance that dusts are likely to build up in cleanup area, we recommend that you use a suitable Dust Mask. Use a P1 mask, designed for use against mechanically generated particles eg silica & asbestos.

Stop leak if safe to do so, and contain spill. Sweep up and shovel or collect recoverable product into labelled containers for recycling or salvage, and dispose of promptly. Consider vacuuming if appropriate. Recycle containers wherever possible after careful cleaning. Refer to product label for specific instructions. 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: Protect this product from light. Store in the closed original container in a dry, cool, well-ventilated area out of direct sunlight. Make sure that the product does not come into contact with substances listed under "Incompatibilities" in Section 10. 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/m³)****STEL (mg/m³)**

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

The ADI for Linuron is set at 0.01mg/kg/day. The corresponding NOEL is set at 1.25mg/kg/day. ADI means Acceptable Daily Intake; NOEL means No-observable-effect-level. Taken from Australian ADI List, Dec 2008.

No special equipment is usually needed when occasionally handling small quantities. The following instructions are for bulk handling or where regular exposure in an occupational setting occurs without proper containment systems.

Ventilation: This product should only be used in a well ventilated area. If natural ventilation is inadequate, use of a fan is suggested.

Eye Protection: Eye protection is not normally necessary when this product is being used. However, if in doubt, wear suitable protective glasses or goggles.

Skin Protection: The information at hand indicates that this product is not harmful and that normally no special skin protection is necessary. However, we suggest that you routinely avoid contact with all chemical products and that you wear suitable gloves (preferably elbow-length) when skin contact is likely.

Protective Material Types: We suggest that protective clothing be made from the following materials: rubber, PVC.

Respirator: If there is a significant chance that dusts are likely to build up in the area where this product is being used, we recommend that you use a suitable Dust Mask. Any general purpose mask should suffice.

Safety deluge showers should, if practical, be provided near to where this product is being used.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES:

Physical Description & colour:	White to off-white granular solid.
Odour:	Characteristic odour.
Boiling Point:	Not available.
Freezing/Melting Point:	Linuron melts 93-95°C.
Volatiles:	No specific data. Expected to be low at 100°C.
Vapour Pressure:	Negligible at normal ambient temperatures.
Vapour Density:	No data.
Specific Gravity:	No data.
Water Solubility:	Slightly soluble.
pH:	No data.
Volatility:	Negligible at normal ambient temperatures.

SAFETY DATA SHEET

Odour Threshold:	No data.
Evaporation Rate:	No data.
Coeff Oil/water Distribution:	No data
Autoignition temp:	No data.

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: Protect this product from light. Store in the closed original container in a dry, cool, well-ventilated area out of direct sunlight.

Incompatibilities: strong acids, strong bases, 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 in reducing atmospheres. Hydrogen chloride gas, other compounds of chlorine. Water. Carbon monoxide poisoning produces headache, weakness, nausea, dizziness, confusion, dimness of vision, disturbance of judgment, and unconsciousness followed by coma and death.

Polymerisation: This product will not undergo polymerisation reactions.

SECTION 11 - TOXICOLOGICAL INFORMATION

Toxicity: Acute toxicity: Linuron is of slight toxicity by ingestion, with reported oral LD₅₀ values of 1200 to 1500 mg/kg in rats, and 2250 mg/kg in rabbits. The reported dermal LD₅₀ in rabbits is greater than 5000 mg/kg. It has been reported to be a skin sensitizer in guinea pigs, and an eye irritant in rabbits, but not a skin irritant in rabbits. The 4-hour inhalation LC₅₀ is 6.15 mg/L, which indicates slight toxicity by this route.

Chronic toxicity: Skin sensitization was seen in guinea pigs repeatedly exposed. Alterations in red blood cells were seen in rats given 2.75 mg/kg/day over 2 years. Anaemia was seen in dogs at doses above 6.25 mg/kg/day.

Reproductive effects: In a three-generation study, no reproductive effects were observed at doses of 12.5 mg/kg/day. These data suggest that reproductive effects are unlikely in humans at expected exposure levels.

Teratogenic effects: Pregnant rabbits fed high doses of Linuron during the sensitive period of pregnancy had normal offspring at doses of up to 25 mg/kg/day, even though maternal weight gain was reduced. In rats, doses of 6.25 mg/kg/day did not produce teratogenic effects. These data suggest that Linuron is not likely to cause birth defects.

Mutagenic effects: Linuron caused mutations in one microbial assay. But in several other mutagenicity and genotoxicity assays, including the Ames assay, E. coli culture assay, Chinese hamster ovary cell culture assay, and whole animal studies, Linuron showed no mutagenic or genotoxic activity. Thus, it appears that Linuron is either nonmutagenic or slightly mutagenic.

Carcinogenic effects: Several animal studies of mice, rats, and dogs have shown that it produces non-malignant liver and testicular tumours. In these studies, doses of 72.5 mg/kg/day in rats caused testicular adenomas and 180 mg/kg/day in mice caused hepatocellular adenoma. These data are not sufficient to determine Linuron's carcinogenicity to humans.

Organ toxicity: Rats and dogs fed Linuron for 2 years had detectable residues of Linuron in their blood, fat, kidney, and spleen, but these did not seem to be associated with adverse effects.

Fate in humans and animals: In rats, Linuron breaks down completely after passing through the liver. It is thus unlikely to bioaccumulate in mammalian systems.

There is no data to hand indicating any particular target organs.

Classification of Hazardous Ingredients

Ingredient	Risk Phrases
Linuron	Conc>=25%: T; R61; R40; R62; R22; R48/22
<ul style="list-style-type: none"> Reproductive toxicity - category 1B Carcinogenicity - category 2 Acute toxicity - category 4 Specific target organ toxicity (repeated exposure) - category 2 Hazardous to the aquatic environment (acute) - category 1 Hazardous to the aquatic environment (chronic) - category 1 	

Linuron is a SWA Class 3 Reproductive risk, possible risk of impaired fertility.

This product is likely to cause decreased fertility in humans.

Potential Health Effects

Inhalation:

Short Term Exposure: Available data indicates that this product is not harmful. In addition product is unlikely to cause any discomfort or irritation.

SAFETY DATA SHEET

Long Term Exposure: No data for health effects associated with long term inhalation.

Skin Contact:

Short Term Exposure: Available data indicates that this product is not harmful. It should present no hazards in normal use. In addition product is unlikely to cause any discomfort in normal use.

Long Term Exposure: No data for health effects associated with long term skin exposure.

Eye Contact:

Short Term Exposure: This product is believed to be not irritating to eyes.

Long Term Exposure: No data for health effects associated with long term eye exposure.

Ingestion:

Short Term Exposure: Significant oral exposure is considered to be unlikely. Available data shows that this product is harmful, but symptoms are not available. This product is unlikely to cause any irritation problems in the short or long term.

Long Term Exposure: Limited evidence of a carcinogenic effect, may cause harm to unborn children, harmful if swallowed, possible risk of impaired fertility.

Carcinogen Status:

SWA: Linuron is classified by SWA as a Class 3 Carcinogen, possibly carcinogenic to humans.

See the SWA website for further details. A web address has not been provided as addresses frequently change.

NTP: No significant ingredient is classified as carcinogenic by NTP.

IARC: No significant ingredient is classified as carcinogenic by IARC.

SECTION 12 - ECOLOGICAL INFORMATION

Very toxic to aquatic organisms, may cause long-term adverse effects to the aquatic environment. This product is biodegradable. It will not accumulate in the soil or water or cause long term problems.

Effects on birds: Linuron is slightly toxic to birds; the reported 5- to 8-day dietary LC₅₀ values are greater than 5000 ppm in Japanese quail, 3000 ppm in mallard ducks, and 3500 ppm in pheasants.

Effects on aquatic organisms: Linuron is slightly toxic to fish and aquatic invertebrate species. The reported LC₅₀ for Linuron in trout and bluegill is 16 mg/L. The median threshold levels, i.e. levels at which adverse, sub lethal effects were apparent in 50% of the test animals, are greater than 40 mg/L in crawfish and tadpoles exposed over a 48-hour period.

Effects on other organisms: Linuron is nontoxic to bees.

Environmental Fate:

Breakdown in soil and groundwater: Linuron is moderately persistent in soils, with a field half-life of 30 to 150 days in various soils and under various conditions. A representative field half-life is estimated to be approximately 60 days. Microbial degradation is the major process by which Linuron is lost from soils; photodegradation and volatilization are not important contributors to its breakdown. The metabolites of Linuron (3,4-dichloroaniline and carbon dioxide) are less toxic than Linuron. Linuron is moderately bound to soil, and is soluble in water. Losses may occur through transport of Linuron in runoff water and on suspended colloidal matter. Linuron has been found at very low concentrations in well and groundwater samples in some US states.

Breakdown in water: Linuron is slightly to moderately soluble in water, and is not readily broken down in water.

Breakdown in vegetation: Linuron is more readily absorbed by roots from soil application, than by leaves from foliar application. The rate at which it is absorbed, translocated, and subsequently broken down (or metabolized) differs with various plant species.

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

ADG Code: This product is not classified as a Dangerous Good by ADG, IATA or 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 formulation are compliant with NICNAS regulations.

SECTION 16 - OTHER INFORMATION

This SDS contains only safety-related information. For other data see product literature.

Acronyms:

SAFETY DATA SHEET

ADG Code	Australian Code for the Transport of Dangerous Goods by Road and Rail (7 th edition)
AICS	Australian Inventory of Chemical Substances
SWA	Safe Work Australia, formerly ASCC and NOHSC
CAS number	Chemical Abstracts Service Registry Number
Hazchem Code	Emergency action code of numbers and letters that provide information to emergency services especially firefighters
IARC	International Agency for Research on Cancer
NOS	Not otherwise specified
NTP	National Toxicology Program (USA)
R-Phrase	Risk Phrase
SUSMP	Standard for the Uniform Scheduling of Medicines & Poisons
UN Number	United Nations Number

This SDS summarises our best knowledge of the health and safety hazard information on 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. If clarification or further information is needed to ensure that an appropriate risk assessment can be made the user should contact Imtrade Australia Pty Ltd, or in the event of an emergency, 000. Our responsibility for products sold is subject to our standard terms and conditions, a copy of which is sent to our customers and is also available on request.

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)

Copyright © Kilford & Kilford Pty Ltd, September, 2016.

<http://www.kilford.com.au/> Phone (02)9251 4532

End of Report

SAFETY DATA SHEET