



Totril® Selective Herbicide

Version 1 / AUS
102000017476

1/11
Revision Date: 14.08.2017
Print Date: 14.08.2017

SECTION 1: IDENTIFICATION OF THE MATERIAL AND SUPPLIER

1.1 Product identifier

Trade name Totril® Selective Herbicide
Product code (UVP) 06069029

1.2 Relevant identified uses of the substance or mixture and uses advised against

Use Herbicide

1.3 Details of the supplier of the safety data sheet

Supplier Bayer Cropscience Pty Ltd
ABN 87 000 226 022
Level 1, 8 Redfern Road
3123 Hawthorn East
Victoria
Australia

Telephone (03) 9248 6888

Telefax (03) 9248 6800

Responsible Department 1800 804 479 Technical Information Service

Website www.crop.bayer.com.au

1.4 Emergency telephone no.

Emergency telephone no. 1800 033 111 IXOM Operations Pty Ltd

SECTION 2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification in accordance with Australian GHS Regulation

Acute toxicity: Category 4

H302 Harmful if swallowed.

Eye Damage/Irritation: Category 2A

H319 Causes serious eye irritation.

Skin sensitisation: Category 1

H317 May cause an allergic skin reaction.

Carcinogenicity: Category 2

H351 Suspected of causing cancer.

Reproductive toxicity: Category 2

H361 Suspected of damaging fertility or the unborn child.

Aspiration hazard: Category 1

H304 May be fatal if swallowed and enters airways.

Acute aquatic toxicity: Category 1

H400 Very toxic to aquatic life.

Chronic aquatic toxicity: Category 1

H410 Very toxic to aquatic life with long lasting effects.



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2.2 Label elements

Hazard label for supply/use required.

Hazardous components which must be listed on the label:

Ioxynil octanoate
Solvent Naphtha (petroleum), heavy aromatic

Signal word: Danger

Hazard statements

H302 Harmful if swallowed.
H319 Causes serious eye irritation.
H317 May cause an allergic skin reaction.
H351 Suspected of causing cancer.
H361 Suspected of damaging fertility or the unborn child.
H304 May be fatal if swallowed and enters airways.

Precautionary statements

P202 Do not handle until all safety precautions have been read and understood.
P261 Avoid breathing mist and spray.
P264 Wash hands and face thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor/ physician.
P330 Rinse mouth.
P331 Do NOT induce vomiting.
P302 + P352 IF ON SKIN: Wash with plenty of water/ soap.
P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.
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.
P308 + P313 IF exposed or concerned: Get medical advice/ attention.
P363 Wash contaminated clothing before reuse.
P405 Store locked up.
P501 Dispose of contents/container in accordance with local regulation.

2.3 Other hazards

No other hazards known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical nature

Ioxynil 250g/l
Emulsifiable concentrate (EC)

Chemical name	CAS-No.	Concentration [%]
Ioxynil octanoate	3861-47-0	31.30
Solvent Naphtha (petroleum), heavy aromatic	64742-94-5	>= 55.00 - <= 65.00
Naphthalene	91-20-3	<= 6.50
2-Ethylhexan-1-ol	104-76-7	< 3.00



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Other ingredients (non-hazardous) to 100%		
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SECTION 4. FIRST AID MEASURES

If poisoning occurs, immediately contact a doctor or Poisons Information Centre (telephone 13 11 26), and follow the advice given. Show this Safety Data Sheet to the doctor.

4.1 Description of first aid measures

Inhalation	Move the victim to fresh air and keep at rest. If symptoms persist, call a physician. In case of respiratory arrest induce breathing with a respiratory device. Seek medical advice.
Skin contact	Take off contaminated clothing and shoes immediately. Wash off thoroughly with plenty of soap and water, if available with polyethyleneglycol 400, subsequently rinse with water. If symptoms persist, call a physician.
Eye contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention if irritation develops and persists.
Ingestion	Keep patient warm and at rest. Obtain medical attention. Do NOT induce vomiting. Never give anything by mouth to an unconscious person.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms	Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea. Inhalation of high vapour concentrations can cause CNS-depression and narcosis. Ingestion of larger amounts may cause defects to the central nervous system (e.g. dizziness, headache). Aspiration may cause pulmonary oedema and pneumonitis. Symptoms of Overexposure, Tiredness, Thirst, Fever, Anxiety, Hyperventilation, Tachycardia, Muscle rigidity, Hypothermia, Pulmonary oedema.
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4.3 Indication of any immediate medical attention and special treatment needed

Treatment	Treat symptomatically. There is no specific antidote. In the event of a mouthful or more being ingested, the following measures should be considered: Monitor: respiratory, cardiac and central nervous system. In case of ingestion a gastric lavage within the first hour after ingestion and after intubation only with consecutive application of activated charcoal and sodium sulphate should be performed. In case of aspiration intubation and bronchial lavage should be considered. In case of hyperthermia physical cooling is advisable; in case of muscle rigidity muscle relaxants and mechanical ventilation may support in counteracting hyperthermia.
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SECTION 5. FIRE FIGHTING MEASURES

5.1 Extinguishing media

Suitable Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Special hazards arising from the substance or mixture In the event of fire the following may be released:., Carbon dioxide (CO₂), Carbon monoxide (CO), Nitrogen oxides (NO_x), Hydrogen iodide (HI)

5.3 Advice for firefighters

Special protective equipment for firefighters Wear self-contained breathing apparatus and protective suit.

Further information Whenever possible, contain fire-fighting water by diking area with sand or earth. Avoid contact with spilled product or contaminated surfaces. Evacuate personnel to safe areas. Remove product from areas of fire, or otherwise cool containers with water in order to avoid pressure being built up due to heat. Do not allow run-off from fire fighting to enter drains or water courses.

Hazchem Code •3Z

SECTION 6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Precautions Avoid contact with spilled product or contaminated surfaces. When dealing with a spillage do not eat, drink or smoke. Keep unauthorized people away. Ensure adequate ventilation. Remove all sources of ignition. Use personal protective equipment.

6.2 Environmental precautions Contain contaminated water and fire fighting water. Do not allow to get into surface water, drains and ground water. If the product contaminates rivers and lakes or drains inform respective authorities.

6.3 Methods and materials for containment and cleaning up

Methods for cleaning up Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Collect and transfer the product into a properly labelled and tightly closed container. Clean contaminated floors and objects thoroughly, observing environmental regulations.

6.4 Reference to other sections Information regarding safe handling, see section 7.
Information regarding personal protective equipment, see section 8.
Information regarding waste disposal, see section 13.

SECTION 7. HANDLING AND STORAGE

7.1 Precautions for safe handling



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Advice on safe handling Use only in area provided with appropriate exhaust ventilation.

Hygiene measures Contact with eyes and skin must be avoided. Wash thoroughly with soap and water after handling. Before removing gloves clean them with soap and water. Remove soiled clothing immediately and clean thoroughly before using again. Wash hands immediately after work, if necessary take a shower.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers Keep out of the reach of children. Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from direct sunlight. Store at room temperature. Protect from freezing.

Advice on common storage Keep away from food, drink and animal feedingstuffs.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters

Components	CAS-No.	Control parameters	Update	Basis
loxynil octanoate	3861-47-0	0.21 mg/m ³ (SK-SEN)		OES BCS*
Naphthalene	91-20-3	79 mg/m ³ /15 ppm (STEL)	12 2011	AU NOEL
Naphthalene	91-20-3	52 mg/m ³ /10 ppm (TWA)	12 2011	AU NOEL
Naphthalene	91-20-3	10 ppm (TLV)		OES BCS*

*OES BCS: Internal Bayer AG, Crop Science Division "Occupational Exposure Standard"

8.2 Exposure controls

Respiratory protection Use respiratory protection for organic vapours.

Hand protection Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time.
Wash gloves when contaminated. Dispose of when contaminated inside, when perforated or when contamination outside cannot be removed.

Material	Nitrile rubber
Rate of permeability	> 480 min
Glove thickness	> 0.4 mm
Protective index	Class 6
Directive	Protective gloves complying with EN 374.

Eye protection Face-shield

Skin and body protection Wear standard coveralls and Category 3 Type 4 suit. If there is a risk of significant exposure, consider a higher protective type suit. Wear two layers of clothing wherever possible. Polyester/cotton or



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General protective measures cotton overalls should be worn under chemical protection suit and should be professionally laundered frequently.
In normal use and handling conditions please refer to the label and/or leaflet. In all other cases the above mentioned recommendations would apply.

Engineering Controls

Advice on safe handling Use only in area provided with appropriate exhaust ventilation.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Form Liquid, clear
Colour yellow to brown
Odour of aromatic hydrocarbons
Flash point 66 °C
Density ca. 1.07 g/cm³ at 20 °C
Partition coefficient: n-octanol/water Ioxynil octanoate: log Pow: 6.0

9.2 Other information Further safety related physical-chemical data are not known.

SECTION 10. STABILITY AND REACTIVITY

10.1 Reactivity

Thermal decomposition Stable under normal conditions.

10.2 Chemical stability Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions No hazardous reactions when stored and handled according to prescribed instructions. Stable under normal conditions.

10.4 Conditions to avoid Heat, flames and sparks.
Extremes of temperature and direct sunlight.

10.5 Incompatible materials Bases, Strong oxidizing agents, Strong reducing agents

10.6 Hazardous decomposition products Thermal decomposition can lead to release of:
Nitrogen oxides (NO_x)
Carbon oxides
Iodine compounds

SECTION 11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects



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Acute oral toxicity	LD50 (Rat) 602 mg/kg
Acute inhalation toxicity	LC50 (Rat) > 3 mg/l Exposure time: 6 h The value mentioned relates to the active ingredient ioxynil.
Acute dermal toxicity	LD50 (Rat) > 2,000 mg/kg
Skin irritation	. light irritation (Rabbit)
Eye irritation	Irritating to eyes (Rabbit)
Sensitisation	Sensitising (Guinea pig)

Assessment mutagenicity

Ioxynil octanoate was not mutagenic or genotoxic based on the overall weight of evidence in a battery of in vitro and in vivo tests.

Assessment carcinogenicity

Ioxynil octanoate caused at high dose levels an increased incidence of tumours in the following organ(s): Thyroid, Liver. The mechanism that triggers tumours in rodents and the type of tumours observed are not relevant to humans.

Naphthalene caused an increased incidence of tumours after chronic inhalation of high vapour concentrations in the following organ: Respiratory Tract. The tumours seen with naphthalene were caused through a non-genotoxic mechanism, which is not relevant at low doses.

Assessment toxicity to reproduction

Ioxynil octanoate was not a reproductive toxicant at non-maternally toxic dose levels in a two-generation study in rats. Ioxynil octanoate caused a reduced litter size and a reduced pup weight. The reproduction toxicity seen with Ioxynil octanoate is related to parental toxicity.

Assessment developmental toxicity

Ioxynil octanoate caused developmental toxicity only at dose levels toxic to the dams. Ioxynil octanoate caused a delayed ossification of foetuses. The developmental effects seen with Ioxynil octanoate are related to maternal toxicity.

Assessment STOT Specific target organ toxicity – single exposure

Ioxynil octanoate: Based on available data, the classification criteria are not met.

Assessment STOT Specific target organ toxicity – repeated exposure

Ioxynil octanoate caused specific target organ toxicity in experimental animal studies in the following organ(s): Blood, Liver. The observed effects do not appear to be relevant for humans.

Aspiration hazard

May be fatal if swallowed and enters airways.

Information on likely routes of exposure

Inhalation of high vapour concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting. High concentration of vapours may cause irritation to eyes and respiratory system and produce narcotic effects. Inhalation of high vapour concentrations can cause CNS-depression and narcosis.

Prolonged skin contact may cause skin irritation and/or dermatitis. Skin sensitiser

Causes eye irritation.

Harmful if swallowed. May lead to rapid onset of nausea, vomiting, diarrhea, excess salivation, pinpoint pupils, blurred vision, profuse sweating, temporary paralysis, respiratory depression, convulsions. Small



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amounts of the solvent in this product aspirated into the respiratory system during ingestion or vomiting may cause mild to severe pulmonary injury.

Early onset symptoms related to exposure

Refer to Section 4

Delayed health effects from exposure

Refer to Section 11

Exposure levels and health effects

Refer to Section 4

Interactive effects

Not known

When specific chemical data is not available

Not applicable

Mixture of chemicals

Refer to Section 2.1

Further information

No further toxicological information is available.

SECTION 12. ECOLOGICAL INFORMATION

12.1 Toxicity

Toxicity to fish	LC50 (Lepomis macrochirus (Bluegill sunfish)) 0.024 mg/l Exposure time: 96 h The value mentioned relates to the active ingredient ioxynil-octanoate.
Toxicity to aquatic invertebrates	EC50 (Daphnia (water flea)) 0.011 mg/l Exposure time: 48 h The value mentioned relates to the active ingredient ioxynil-octanoate.
Toxicity to aquatic plants	EC50 (Navicula pelliculosa (Freshwater diatom)) 0.24 mg/l Exposure time: 72 h The value mentioned relates to the active ingredient ioxynil-octanoate.
Toxicity to other organisms	LD50 (Coturnix japonica (Japanese quail)) 677 mg/kg The value mentioned relates to the active ingredient ioxynil-octanoate. LD50 (Pheasant) 1,000 mg/kg The value mentioned relates to the active ingredient ioxynil-octanoate. LD50 (Anas platyrhynchos (Mallard duck)) 1,200 mg/kg The value mentioned relates to the active ingredient ioxynil-octanoate.

12.2 Persistence and degradability

Biodegradability	ioxynil octanoate: Not rapidly biodegradable
Koc	ioxynil octanoate: Koc: 289



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12.3 Bioaccumulative potential

Bioaccumulation Ioxynil octanoate: Bioconcentration factor (BCF) 188
Does not bioaccumulate.

12.4 Mobility in soil

Mobility in soil Ioxynil octanoate: Moderately mobile in soils

12.5 Other adverse effects

Additional ecological information No other effects to be mentioned.

SECTION 13. DISPOSAL CONSIDERATIONS

Metal drums and plastic containers:

Triple or preferably pressure rinse containers before disposal. Add rinsings to spray tank. Do not dispose of undiluted chemicals on site. If recycling, replace cap and return clean containers to recycler or designated collection point. If not recycling, break, crush or puncture and bury empty containers in a local authority landfill. If no landfill is available, bury the containers below 500 mm in a disposal pit specifically marked and set up for this purpose clear of waterways, desirable vegetation and tree roots. Empty containers and product should not be burnt.

Do not reuse container for any other purpose.

SECTION 14. TRANSPORT INFORMATION

ADG

UN number	3082
Transport hazard class(es)	9
Subsidiary Risk	None
Packaging group	III
Description of the goods	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (IOXYNIL OCTANOATE, SOLVENT NAPHTHA (PETROLEUM) LIGHT AROMATIC SOLUTION)
Hazchem Code	•3Z

According to AU01, Environmentally Hazardous Substances in packagings, IBC or any other receptacle not exceeding 500 kg or 500 L are not subject to the ADG Code.

IMDG

UN number	3082
Transport hazard class(es)	9
Subsidiary Risk	None
Packaging group	III
Marine pollutant	YES
Description of the goods	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (IOXYNIL OCTANOATE, SOLVENT NAPHTHA (PETROLEUM) LIGHT AROMATIC SOLUTION)

IATA

UN number	3082
Transport hazard class(es)	9



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Subsidiary Risk	None
Packaging group	III
Environm. Hazardous Mark	YES
Description of the goods	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (IOXYNIL OCTANOATE, SOLVENT NAPHTHA (PETROLEUM) LIGHT AROMATIC SOLUTION)

SECTION 15. REGULATORY INFORMATION

Registered according to the Agricultural and Veterinary Chemicals Code Act 1994
Australian Pesticides and Veterinary Medicines Authority approval number: 31729

SUSMP classification (Poison Schedule)

Schedule 6 (Standard for the Uniform Scheduling of Medicines and Poisons)

SECTION 16. OTHER INFORMATION

Trademark information Totril® is a Registered Trademark of the Bayer Group.

This SDS summarises our best knowledge of the health and safety hazard information of 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 this company.

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.

Abbreviations and acronyms

ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute toxicity estimate
AU OEL	Australia. OELs. (Adopted National Exposure Standards for Atmospheric Contaminants in the Occupational Environment)
CAS-Nr.	Chemical Abstracts Service number
CEILING	Ceiling Limit Value
Conc.	Concentration
EC-No.	European community number
ECx	Effective concentration to x %
EINECS	European inventory of existing commercial substances
ELINCS	European list of notified chemical substances
EN	European Standard
EU	European Union
IATA	International Air Transport Association
IBC	International Code for the Construction and Equipment of Ships Carrying Dangerous



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	Chemicals in Bulk (IBC Code)
ICx	Inhibition concentration to x %
IMDG	International Maritime Dangerous Goods
LCx	Lethal concentration to x %
LDx	Lethal dose to x %
LOEC/LOEL	Lowest observed effect concentration/level
MARPOL	MARPOL: International Convention for the prevention of marine pollution from ships
N.O.S.	Not otherwise specified
NOEC/NOEL	No observed effect concentration/level
OECD	Organization for Economic Co-operation and Development
OES BCS	OES BCS: Internal Bayer AG, Crop Science Division "Occupational Exposure Standard"
PEAK	PEAK: Exposure Standard - Peak means a maximum or peak airborne concentration of a particular substance determined over the shortest analytically practicable period of time which does not exceed 15 minutes.
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SK-SEN	Skin sensitiser
SKIN_DES	SKIN_DES: Skin notation: Absorption through the skin may be a significant source of exposure.
STEL	STEL: Exposure standard - short term exposure limit (STEL): A 15 minute TWA exposure which should not be exceeded at any time during a working day even if the eight-hour TWA average is within the TWA exposure standard. Exposures at the STEL should not be longer than 15 minutes and should not be repeated more than four times per day. There should be at least 60 minutes between successive exposures at the STEL.
TWA	TWA: Exposure standard - time-weighted average (TWA): The average airborne concentration of a particular substance when calculated over a normal eight-hour working day, for a five-day working week.
TWA	Time weighted average
UN	United Nations
WHO	World health organisation

Changes since the last version are highlighted in the margin. This version replaces all previous versions.

END OF SDS