



SAFETY DATA SHEET

Section 1. Identification of the material and the supplier

Product: **Iotril 240 EC**
Chemical name of active Ing: 4-cyano-2,6 diiodophenyl octanoate
Product Use: Herbicide: For control of broadleaved weeds in garlic and onions.
Restriction of Use: Refer to Section 15
New Zealand Supplier: ADAMA New Zealand Ltd
Address: Level 1/93 Bolt Road
Tahunanui, Nelson
Telephone: +64 3 543 8275
Fax Number: +64 3 543 8274
Emergency Telephone: 0800 764 766 (National Poison Centre)
Date of SDS Preparation: 4 October 2018

Section 2. Hazards Identification

This substance is hazardous according to the Hazardous Substances (Classification) Notice 2017

EPA Approval No: HSR000524

Pictograms



Flammable Toxic-Acute Toxic-Chronic Ecotoxic

Signal Word: **DANGER**

| HSNO Classification | Hazard Code | Hazard Statement | GHS Category |
|---------------------|-------------|--|-----------------|
| 3.1C | H226 | Flammable liquid and vapour. | Flam. Liq. 3 |
| 6.1C (dermal) | H311 | Toxic in contact with skin. | Acute Tox. 3 |
| 6.3A | H315 | Causes skin irritation. | Skin Irrit. 2 |
| 6.4A | H319 | Causes serious eye irritation. | Eye Irrit. 2A |
| 6.5B | H317 | May cause an allergic skin reaction. | Skin Sens. 1 |
| 6.8B | H361 | Suspected of damaging fertility or the unborn child. | Repr. 2 |
| 6.9B | H373 | May cause damage to organs through prolonged or repeated exposure. | STOT RE 2 |
| 9.1A | H400 | Very toxic to aquatic life. | Aquatic Acute 1 |
| 9.3C | H433 | Harmful to terrestrial vertebrates. | |

| Prevention Code | Prevention Statement |
|------------------------|---|
| P102 | Keep out of reach of children. |
| P103 | Read label before use. |
| P201 | Obtain special instructions before use. |
| P202 | Do not handle until all safety precautions have been read and understood. |
| P210 | Keep away from heat, sparks, open flames or hot surfaces. No smoking. |
| P233 | Keep container tightly closed. |
| P240 | Ground/bond container and receiving equipment. |
| P241 | Use explosion-proof electrical/ventilating/lighting. |
| P242 | Use only non-sparking tools. |
| P243 | Take precautionary measures against static discharge. |
| P260 | Do not breathe fumes, mist, vapours or spray. |
| P264 | Wash hands thoroughly after handling. |
| P270 | Do not eat, drink or smoke when using this product. |
| P272 | Contaminated work clothing should not be allowed out of the workplace. |
| P273 | Avoid release to the environment. |
| P280 | Wear protective clothing as detailed in Section 8. |
| P281 | Use personal protective equipment as required. |

| Response Code | Response Statement |
|----------------------|--|
| P101 | If medical advice is needed, have product container or label at hand. |
| P312 | Call a POISON CENTER or doctor/physician if you feel unwell. |
| P330 | Rinse mouth. |
| P361 | Remove/Take off immediately all contaminated clothing. |
| P363 | Wash contaminated clothing before reuse. |
| P391 | Collect spillage. |
| P301 + P312 | IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. |
| P303 + P361+P353 | IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. |
| P305 + P351+P338 | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
| P308 + P313 | IF exposed or concerned: Get medical advice/ attention. |
| P333 + P313 | If skin irritation or rash occurs: Get medical advice/attention. |
| P337 + P313 | If eye irritation persists: Get medical advice/attention. |
| P370 + P378 | In case of fire: Use dry chemical, water spray, foam or carbon dioxide for extinction. |

| Storage Code | Storage Statement |
|---------------------|--|
| P403 + P235 | Store in a well-ventilated place. Keep cool. |
| P405 | Store locked up. |

| Disposal Code | Disposal Statement |
|----------------------|---|
| P501 | Wherever possible completely use material by using according to label instructions. Dispose of unwanted product and wastes from spillages as hazardous substances in accordance with local and national regulations using a licensed waste disposal company. Triple rinse containers and add rinsate to spray tank before puncturing and offering for recycling or landfill. Do not allow product to enter waterways. Do not burn product or container. |

Section 3. Composition / Information on Ingredients

| Ingredients | Wt% | CAS NUMBER. |
|--------------------|------------|--------------------|
| Ioxynil octanoate | 29-33 | 3861-47-0 |
| Xylene | 56-61 | 1330-20-7 |

Section 4. First Aid Measures

Product Name: Iotril 240 EC
Date of SDS: 4 October 2018

Issued by: Technical Compliance Consultants (NZ) Ltd
Tel: 64 9 475 5240 www.techcomp.co.nz

Routes of Exposure:

| | |
|--------------|---|
| If in Eyes | Rinse cautiously with water for 15 minutes. Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice. |
| If on Skin | Wash with plenty of soap and water. Take off contaminated clothing and wash before re-use. If skin irritation or rash occurs: get medical advice/attention. |
| If Swallowed | Wash out mouth thoroughly with water. Never give anything to the mouth of an unconscious person. If vomiting occurs, place victim face downwards, with the head turned to the side and lower than the hips to prevent vomit entering the lungs. Seek medical attention if needed. |
| If Inhaled | Remove person to fresh air. Remove contaminated clothing and loosen remaining clothing. Allow person to assume most comfortable position and keep warm. Keep at rest until fully recovered. Get medical advice if breathing becomes difficult. |

Most important symptoms and effects, both acute and delayed

Symptoms:

| | |
|-------------------|--|
| Inhaled: | Vapours: Headaches, dizziness, nausea. |
| Ingestion: | Harmful if swallowed. Nausea, headaches, cramps, vomiting |
| Skin: | Toxic if in contact with skin. Causes skin irritation. May cause an allergic skin reaction. |
| Eyes: | Causes serious eye irritation. |
| Chronic: | Suspected of damaging fertility or the unborn child. May cause damage to organs through repeated or prolonged contact. |

Section 5. Fire Fighting Measures

| | |
|---|---|
| Hazard Type | Flammable liquid. |
| Hazards from combustion products | Iodide compounds, cyanide and nitrogen oxides. |
| Suitable Extinguishing media | Dry chemical, water spray, foam, carbon dioxide. |
| Precautions for firefighters and special protective clothing | Self-contained breathing apparatus and total protection required in enclosed areas. Flashback may occur along vapour trail. |
| HAZCHEM CODE | 3Y |

Section 6. Accidental Release Measures

Wear full protective clothing as detailed in Section 8. Evacuate area from unnecessary personnel. Keep away from: open flame, sparks and heat.

Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not allow into any sewer, on the ground or into any body of water. Prevent product from entering drains. Local authorities should be advised if significant spillages cannot be contained.

Methods and material for containment and cleaning up

Absorb remainder in sand or other inert material. Dispose of according to Section 13.

Section 7. Handling and Storage

Precautions for Handling:

- Read label before use.
- Obtain special instructions before use.
- Do not handle until all safety precautions have been read and understood.
- Keep away from heat, sparks, open flames or hot surfaces. No smoking.
- Keep container tightly closed.
- Ground/bond container and receiving equipment.
- Use explosion-proof electrical/ventilating/lighting.
- Use only non-sparking tools.
- Take precautionary measures against static discharge.
- Do not breathe fumes, mist, vapours or spray.
- Ventilation required.
- Wash hands thoroughly after handling.
- Do not eat, drink or smoke when using this product.
- Contaminated work clothing should not be allowed out of the workplace.
- Avoid release to the environment.
- Wear protective clothing as detailed in Section 8.
- Use personal protective equipment as required.

Precautions for Storage:

- Store away from incompatible materials listed in Section 10.
- Keep away from children.
- Store in a well-ventilated place. Keep cool.
- Store in the original, unopened container in a cool, dry place, out of direct sunlight and away from stockfeed or foodstuffs and under lock and key.
- As a Class 9 Substance with Ecotoxicity Classifications storage of Iotril Herbicide must be carried out in such a manner as to prevent contamination of waterways. It is recommended that The New Zealand Standard for the Management of Agrichemicals (NZS8409) is followed.
- Packaging materials suitable: Resin-lined metal drums.

Section 8 Exposure Controls / Personal Protection

WORKPLACE EXPOSURE STANDARDS (provided for guidance only)

| Substance | TWA | | STEL | |
|--|-----|-------------------|------|-------------------|
| | ppm | mg/m ³ | ppm | mg/m ³ |
| Xylene (o-, m-, p-isomers) [1330-20-7] | 50 | 217 | | |

Workplace Exposure Standard – Time Weighted Average (WES-TWA). The time-weighted average exposure standard designed to protect the worker from the effects of long-term exposure. Workplace Exposure Standard – Short-Term Exposure Limit (WESSTEL). The 15-minute average exposure standard. Applies to any 15- Minute period in the working day and is designed to protect the worker against adverse effects of irritation, chronic or irreversible tissue change, or narcosis that may increase the likelihood of accidents. The WES-STEL is not an alternative to the WES-TWA; both the short-term and time-weighted average exposures apply. Workplace Exposure Standards and Biological Exposure Indices NOV 2017 9TH EDITION.

Engineering Controls

Ventilation required.

Personal Protection Equipment



| | |
|-----------------------|--|
| Eyes | Safety goggles or face shield. |
| Hands and Skin | Wear chemical resistant gloves and suitable protective clothing with chemical resistant boots. |

| | |
|--------------------|---|
| Respiratory | Respiratory protection is not required if good ventilation is maintained. |
| General | When handling do not eat, drink or smoke. Wash hands thoroughly after handling. Wash clothing separately before re-use. |

Section 9 Physical and Chemical Properties

| | |
|--|---|
| Appearance | Brown liquid |
| Odour | Aromatic (solvent) |
| Odour Threshold | Not applicable |
| pH | 3.5 - 5 |
| Boiling Point | 155-181°C |
| Melting Point | Not applicable |
| Flash Point | 31°C (Xylene) |
| Flammability | Flammable |
| Explosive properties | Xylene (vapours) may form explosive mixture with air. |
| Upper and Lower Exposure Limits | 1 - 7% volume |
| Vapour Pressure | <0.9e-4mPa @ 45°C (Ioxynil octanoate) |
| Vapour Density (air=1) | Not applicable |
| Density | 1.04 +/-0.002 g/mL @ 20°C |
| Specific Gravity | Not applicable |
| Solubilities | Miscible |
| Auto ignition temp | 450°C (Xylene) |
| Viscosity: | Not applicable |
| Surface tension: | Not applicable |
| Octanol/water partition | log P = 6.12 (Ioxynil octanoate) |

Section 10. Stability and Reactivity

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|---|---|
| Stability of Substance | This product is stable under normal conditions. |
| Conditions to Avoid | Sources of ignition, heat. |
| Incompatible Materials | Oxidizing agents, acids, and alkali. |
| Hazardous Decomposition Products | Iodide compounds, cyanide and nitrogen oxides. |

Section 11 Toxicological Information

Acute Effects:

| | |
|-------------------|---|
| Swallowed | Harmful if swallowed. LD ₅₀ (rat) ~1,000mg/kg |
| Dermal | Toxic if in contact with skin. LD ₅₀ (rat) > 2,000 mg/kg |
| Inhalation | Not triggered. LC ₅₀ (rat)~ 4.36 mg/L (4 hours) |
| Eye | Causes serious eye irritation. |
| Skin | Causes skin irritation. May cause an allergic skin reaction. |

Chronic Effects:

| | |
|-------------------------------|--|
| Carcinogenicity | Not applicable. |
| Reproductive Toxicity | Suspected of damaging fertility or the unborn child. |
| Germ Cell Mutagenicity | Not applicable. |
| Aspiration | Not applicable. |
| STOT/SE | Not applicable. |
| STOT/RE | May cause damage to organs through repeated or prolonged exposure. |

Individual component information:**Acute Toxicity:**

| Chemical Name | Oral – LD50 | Dermal – LD50 | Inhalation – LC50 |
|-------------------|-----------------------|---------------|----------------------------|
| Xylene (133020-7) | 1590 mg/kg (mouse) | - | 27.6mg/l (rat) (vapour) |

Section 12. Ecotoxicological Information

HSNO Classes: 9.1A = Very toxic to aquatic life.
9.3C = Harmful to terrestrial vertebrates.

| | |
|--------------------------------------|-------------------|
| Persistence and degradability | No data available |
| Bioaccumulation | No data available |
| Mobility in Soil | No data available |
| Other adverse effects | No data available |

Common name: **Ioxynil octanoate**

Mobility: **Soil** – not mobile
No risk of underground water contamination

**Persistence/
degradability:** **Soil**
The product is not persistent.
Half-life time (t_{1/2}): ~ 10 days
Degradation is primarily via: hydrolysis and microorganisms.
The product is poorly biodegradable.

Water
DT₅₀: (water) = < 6 days (pH 7,9)
DT₅₀: (water/sediment) ~ 3.8 days

Bioaccumulative potential: BCF: = 116 - 120

Ecotoxicity: **Fish**
LC₅₀ (96 hours) bluegill sunfish (*lepomis macrochirus*) = 0.024 mg/L
NOEC (21 days) rainbow trout (*oncorhynchus mykiss*) = 0.021 mg/L
= 0.0034 mg/L

Daphnia magna
EC₅₀ (48 hours) = 0.011 mg/L
NOEC (21 days) = 0.01 mg/L

Algae (*scenedesmus subspicatus*)
EC₅₀ (96 hours) ≥ 10 mg/L

Birds
Pheasants LD₅₀ = 1,000 mg/kg
Mallard duck (*colinus virginianus*) LD₅₀ = 1,200 mg/kg

Bees
Oral LD₅₀ (48 hours) > 4 µg/bee
Contact LD₅₀ (48 hours) > 200 µg/bee
Very toxic to aquatic organisms. Low toxicity: birds, Non toxic: Bees

Do not allow to enter waterways.

Section 13. Disposal Considerations

Disposal Method: Triple rinse empty container and add rinsate to spray tank. Burn in an appropriate incinerator, if circumstances such as wind direction permit. Otherwise crush or puncture and bury in a suitable landfill, or if appropriate, recycle.



Precautions: Do not allow product to enter waterways.

Disposal methods to avoid: Do not allow product to enter waterways.

This product is classified as a Dangerous Good for transport in NZ; NZS 5433:2012



Road and Rail Transport

UN No: 1993
 Class-primary 3
 Packing Group III
 Proper Shipping Name: FLAMMABLE LIQUID N.O.S. (Xylene)

Air Transport

UN No: 1993
 Class-primary 3
 Packing Group III
 Proper Shipping Name: FLAMMABLE LIQUID N.O.S. (Xylene)

Marine Transport

UN No: 1993
 Class-primary 3
 Packing Group III
 Proper Shipping Name: FLAMMABLE LIQUID N.O.S. (Xylene)
 Marine Pollutant Yes

Special Provisions:

If the product's individual container is below 5L, it can be transported as a non-DG as long as the product packaging is still labelled as per DG requirements and the driver is given safety information in accordance with Chapter 3.4 of the UNRTDG.

National transport regulations: Do not carry this product on a passenger service vehicle.

Section 15

Regulatory Information

This substance is hazardous according to the *Hazardous Substances (Classification) Notice 2017*

EPA Approval Code: HSR000524

HSNO Classification: 3.1C, 6.1C(dermal), 6.3A, 6.4A, 6.5B, 6.8B, 6.9B, 9.1A, 9.3C

| HSW (HS) Regulations 2017 | Trigger Quantity |
|---|--|
| Certified Handlers | Not required |
| Location Certificate | 500L (>5L), 1500L (<5L), 250L open |
| Signage Trigger Quantities (Schedule 3) | 100L(9.1A) |
| Fire Extinguishers (Schedule 4) | 500L – 2 extinguishers |
| Emergency Response Plan (Schedule 5) | 100L(9.1A) |
| Secondary Containment (Schedule 5) | 100L(9.1A) |
| Tracking (Schedule 26) | Not required |
| Record Keeping | Records of use must be kept under certain circumstances – see The New Zealand Standards for Management of Agrichemicals (NZS8409) for details. |
| HSNO Additional Controls (Restrictions of use) | |
| 77A | a) This substance must not be applied onto or into water. |
| Hazardous Property Controls Notice 2017 | |
| HPC Notice Part 4 Clause 47 | Equipment for class 9 substances must be appropriate |

| | |
|---|---|
| HPC Notice Part 4 Clause 48 | Records of application of class 9 pesticides and plant growth regulators |
| HPC Notice Part 2 | Certain substances restricted to workplace only. |
| HPC Notice Part 3 | Hazardous substances in a place other than a workplace. |
| HPC Notice Part 4 Subpart A | Site and storage controls for class 9 substances |
| HPC Notice Part 4 Subpart C | Qualifications required for application of class 9 pesticides |
| For all further controls: | Refer to EPA website www.epa.govt.nz for controls document - HSR000524 |
| ACVM Act and Regulations | |
| ACVM Approval No | P7256 |
| See www.foodsafety.govt.nz for registration conditions. | |

Section 16 Other Information

Glossary

| | |
|------|---|
| EC50 | Median effective concentration. |
| EEL | Environmental Exposure Limit. |
| EPA | Environmental Protection Authority |
| HSNO | Hazardous Substances and New Organisms. |
| LC50 | Lethal concentration that will kill 50% of the test organisms inhaling or ingesting it. |
| LD50 | Lethal dose to kill 50% of test animals/organisms. |
| LEL | Lower explosive level. |
| OSHA | American Occupational Safety and Health Administration. |
| TEL | Tolerable Exposure Limit. |
| TLV | Threshold Limit Value-an exposure limit set by responsible authority. |
| UEL | Upper Explosive Level |
| WES | Workplace Exposure Limit |

References:

1. EPA Hazardous Substances (Safety Data Sheets) Notice 2017
2. Workplace Exposure Standards and Biological Exposure Indices Nov 2017 edition.
3. Assigning a hazardous substance to a HSNO Approval (Aug 2013).
4. Transport of Dangerous goods on land NZS 5433:2012
5. HSW (Hazardous Substances) Regulations 2017

Disclaimer

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Please contact the New Zealand distributor, if further information is required.

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Review Date:

4 October 2023