

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product name:	Methograin® Delta IGR Grain Protectant
Other means of identification:	Deltamethrin 50 g/L, S-methoprene 30 g/L, Piperonyl Butoxide 400 g/L
Recommended use of the chemical and restrictions on use:	Sprayable insecticide for treatment of cereals products before storage, usage after dilution.
Supplier:	AgNova Technologies Pty Ltd.
Street address:	Unit 4. 482 Kingsford Smith Drive, Hamilton, QLD 4007 Australia
Telephone no.:	(03) 9899 8100
Website:	agnova.com.au
Manufacturer:	Bábolna Bioenvironmental Centre Plc. H-1107 Budapest, Szállás u. 6, Hungary
Emergency telephone:	Poisons Information Centre 13 11 26 (24 hours) IXOM ERS 1800 033 111 (24 hours)

2. HAZARDS IDENTIFICATION

Classification of the substance mixture: This material is classified as hazardous according to the Globally Harmonised System of Classification and labelling of Chemicals (GHS) including Work, Health and Safety regulations, Australia.

Classification of the substance or mixture:

Acute oral toxicity – Category 3
Acute inhalation toxicity – Category 4
Eye damage/irritation – Category 2
Toxicity to reproduction – Category 1
Aspiration – Category 1
Flammable liquid – Category 4

SIGNAL WORD: DANGER



Hazard Statement(s):

H227 – Combustible liquid
H301 – Toxic if swallowed.
H332 – Harmful if inhaled.
H319 – Causes serious eye irritation.
H304 – May be fatal if swallowed and enters airways.
H336 – May cause drowsiness or dizziness.
H360 – May damage fertility or the unborn child

Precautionary Statement(s):

Prevention:

P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.

Safety Data Sheet: Methograin® Delta IGR Grain Protectant

Date of Issue: 12 April 2023

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P261 Avoid breathing fumes, mists, vapours or spray.

P264 Wash contacted areas thoroughly after handling.

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

P271 Use only outdoors or in a well-ventilated area.

P280 Wear protective gloves/eye protection/face protection.

P281 Use personal protective equipment as required.

Response:

P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician

P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

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.

P337 + P313 If eye irritation persists: Get medical advice/attention.

P312 Call a POISON CENTER or doctor/physician if you feel unwell.

P321 Specific treatment (see medical advice on this label).

P330 Rinse mouth.

P331 Do NOT induce vomiting.

P370 + P378 In case of fire: Use carbon dioxide, dry chemical, foam, water fog or fine water spray for extinction.

Storage:

P405 Store locked up

P403 + P233 + P235 Store in a well-ventilated place. Keep cool and container tightly closed.

Disposal:

P501 - Dispose of contents/container as per container label, in accordance with local/state/territory government regulations.

The following health hazard categories fall outside the scope of the Workplace Health and Safety Regulations:

Acute dermal toxicity – Category 5

Acute hazard to the aquatic environment – Category 1

Chronic hazard to the aquatic environment – Category 1

Classified as Dangerous Goods according to the Australian Code for the Transport of Dangerous Goods by Road and Rail. (7th edition).

3. COMPOSITION/INFORMATION ON INGREDIENTS

Components	CAS Number	Proportion (w/w)
Deltamethrin	52918-63-5	5.1 %
Liquid hydrocarbons (< 2% aromatics)	64742-48-9	25 %
N-methyl-2-pyrrolidone	872-50-4	4.1 %
Other components are not considered hazardous in this formulation and therefore are not required to be disclosed according to the WHS Regulations. Following is the information for the active constituents which are not classified as hazardous in this formulation.		
S-methoprene	65733-16-6	3.1 %
Piperonyl Butoxide	51-03-6	41 %

4. FIRST AID MEASURES

Speed in treatment is essential. If poisoning occurs, contact a Poisons Information Centre. Phone Australia 131126; New Zealand 0800 764 766 or a doctor. Have this SDS or the label with you.

- Inhalation:** If inhaled, bring affected person to fresh air. If symptoms develop, contact a Poisons Information Centre or a doctor at once. If breathing is difficult, oxygen may be beneficial if administered by trained personnel, preferably on a doctor's advice. DO NOT allow victim to move about unnecessarily. Symptoms of pulmonary oedema can be delayed up to 48 hours after exposure.
- Skin contact:** Remove contaminated clothing and wash with plenty of water and soap. If symptoms develop, seek medical attention.
- Eye contact:** If in eyes, hold eyelids apart and flush the eye continuously with running water. Continue flushing until advised to stop by a Poisons Information Centre or a doctor, or for at least 15 minutes. Seek medical advice. Take special care if exposed person is wearing contact lenses.
- Ingestion:** If swallowed, wash mouth with water and contact a Poisons Information Centre, or call a doctor. Do not induce vomiting.
- First aid facilities:** Eyewash and normal washroom facilities.
- Medical attention and special treatment needed:** Treat Symptomatically

5. FIRE FIGHTING MEASURES

- Suitable extinguishing media:** Combustible Liquid. In case of fire, use carbon dioxide, dry chemical, foam, water fog. Alcohol resistant foam is the preferred firefighting medium but, if it is not available, normal foam can be used. Try to contain spills, minimise spillage entering drains or water courses.
- Specific hazards arising from the substance or mixture:** The major hazard in fires is usually inhalation of heated and toxic or oxygen deficient (or both), fire gases. There is little risk of an explosion from this product if commercial quantities are 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.
- Special protective equipment and precautions for fire-fighters:** In case of fire and/or explosion do not breathe fumes. Wear self-contained breathing apparatus and chemical-protective clothing. Keep containers cool by spraying with water if exposed to fire. Collect contaminated extinguishing water separately. Do not allow contaminated water to reach sewage or effluent systems. Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.
- Hazchem code:** 2X

6. ACCIDENTAL RELEASE MEASURES

- Emergency procedures/ Environmental precautions/ Personal precautions/ Protective equipment:** In the event of a spill, prevent spillage from entering drains or water courses with absorbent material and call emergency services. Wear full protective clothing including eye/face protection. All skin areas should be covered. It is good practice to wear impermeable gloves when handling chemical products. Provide adequate ventilation. If there is a significant chance that vapours or mists are likely to build up in the clean-up area, we recommend that you use a respirator. It should be fitted with a cartridge suitable for agricultural chemicals, such as type G. Otherwise, not normally necessary. Refer to protective equipment as described in Section 8 of this safety data sheet.
- Methods and materials for containment and cleaning up:** Contain - prevent run off into drains and waterways. Stop leak if safe to do so and contain spill. Absorb onto sand, vermiculite or other suitable absorbent material. If spill is too large or if absorbent material is not available, try to create a dike to stop material spreading or going into drains or waterways. Because of the environmentally hazardous nature of this product, special care should be taken to

Safety Data Sheet: Methograin® Delta IGR Grain Protectant

Date of Issue: 12 April 2023

restrict release to waterways or drains. Sweep up and shovel or collect recoverable product into labelled containers for recycling or salvage and dispose of promptly. 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.

7. HANDLING AND STORAGE

Precautions for safe handling: Keep exposure to this product to a minimum, and minimise the quantities kept in work areas. Keep containers closed at all times - check regularly for leaks or spills. Transport and store upright. Refer to 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.

Conditions for safe storage, including any incompatibilities: Store packages of this product in a cool place. Make sure that containers of this product are kept tightly closed. Keep containers dry and away from water. 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.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters: The exposure standard for the constituent, N-methyl-2-pyrrolidone:
TWA = 25ppm (103 mg/m³) STEL = 75ppm (309 mg/m³)
As published by Safe Work Australia Workplace Exposure Standards for Airborne Contaminants.

Appropriate engineering controls: Use in well ventilated areas. If natural ventilation is inadequate, use of a fan is suggested. Keep containers closed when not in use.

Individual protection measures, such as Personal Protective Equipment (PPE): See container label safety directions. The selection of PPE is dependent on a detailed risk assessment. The risk assessment should consider the work situation, the physical form of the chemical, the handling methods, and environmental factors.

Observe good standards of hygiene and cleanliness. Always wash hands, arms and face thoroughly with soap and water before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment with detergent and warm water before storage or re-use.

Respiratory protection: Respiratory protective equipment is not needed under normal and intended conditions of product use. However, if protection is required, consult AS/NZS 1715 and AS/NZS 1716 for further information.

Eye and face protection: Avoid contact with eyes. Protective glasses or goggles should be worn when this product is being used. Failure to protect your eyes may cause them harm. Emergency eye wash facilities are also recommended in an area close to where this product is being used. Consult AS/NZS 1336 and AS/NZS 1337 for further information.

Skin protection: Avoid contact with skin. Elbow-length rubber or chemical resistant gloves must be worn when opening the container and using the product. Always check with the glove manufacturer or your personal protective equipment supplier regarding the correct type of glove to use. Consult AS/NZS 2161 for further information.

Safety Data Sheet: Methograin® Delta IGR Grain Protectant

Date of Issue: 12 April 2023

Trousers, long sleeved shirt /cotton overalls buttoned to the neck and wrist and closed in shoes or safety footwear should also be worn as a general precaution. Consult AS/NZS 2210 and AS/NZS 2919 for further information.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:	Clear liquid
Colour:	Light brown
Odour:	Faint chemical odour
pH (1% emulsion):	5.5–7.5
Specific gravity:	0.980
Melting point/Freezing point:	No information available. Liquid at normal temperatures.
Boiling point/range:	No information available.
Flash point:	>70°C
Upper Flammability Limit:	6%
Lower Flammability Limit:	1%
Evaporation point:	No information available.
Vapour pressure:	No information available.
Vapour density:	No information available.
Solubility:	No information available.
Partition coefficient: n- octanol/water	No information available.
Auto-ignition temperature:	Not relevant.
Decomposition temperature:	No information available.
Viscosity:	No information available.

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.
Chemical stability:	Stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.
Possibility of hazardous reactions:	This product will not undergo polymerisation reactions.
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.
Incompatible materials:	Strong acids, bases, strong oxidising agents.
Hazardous decomposition products:	Combustion forms carbon dioxide, and if incomplete, carbon monoxide and possibly smoke. Water is also formed. May form nitrogen and its compounds, and under some circumstances, oxides of nitrogen. Occasionally hydrogen cyanide gas in reducing atmospheres. May form oxides of sulfur (sulfur dioxide is a respiratory hazard) and other sulfur compounds. Most will have a foul odour. Carbon monoxide poisoning produces headache, weakness, nausea, dizziness, confusion, dimness of vision, disturbance of judgment, and unconsciousness followed by coma and death.

11. TOXICOLOGICAL INFORMATION

Acute toxicity:	Harmful via oral and inhalation routes, according to available test data of the formulated product Acute oral toxicity, LD ₅₀ 50–300 mg/kg bw Acute dermal toxicity, LD ₅₀ >2000 mg/kg bw Acute inhalation toxicity, LC ₅₀ >1.03–4.86 mg/L/4hr
Skin irritation:	Not a skin irritant according to available information. Facial skin contact may cause temporary facial numbness.
Eye irritation:	Serious eye irritant according to available information.
Respiratory or skin sensitisation:	Not a skin sensitiser and not expected to be a respiratory sensitiser according to available information.

Safety Data Sheet: Methograin® Delta IGR Grain Protectant

Date of Issue: 12 April 2023

Germ cell mutagenicity:	Not suspected to cause genetic defects according to available information.
Carcinogenicity:	Not considered to be carcinogenic according to available information.
Reproductive toxicity:	May damage fertility or the unborn child.
STOT-single exposure:	May cause drowsiness or dizziness.
STOT-repeated exposure:	Causes damage to organs through prolonged or repeated exposure according to available information.
Aspiration hazard:	May be fatal if swallowed and enters airways.
Chronic health effects:	Not expected to cause chronic health effects according to available information.

12. ECOLOGICAL INFORMATION

Ecotoxicity: Available information on this product indicates that this product is classified as an acute and chronic aquatic toxicant.

Toxicity data for the active constituent, Deltamethrin:

The below information is based on the WHO SPECIFICATIONS AND EVALUATIONS FOR PUBLIC HEALTH PESTICIDES for DELTAMETHRIN (2017).

Acute Toxicity:

Rainbow Trout 96-hour LC₅₀ 0.688 µg/L
Bluegill Sunfish 96-hour LC₅₀ 0.727 µg/L; NOEC = 0.289 µg/L
Daphnia Magna 48-hour EC₅₀ 0.0753 µg/L
Honeybee, Oral 48-hour LD₅₀ 0.049 µg/bee
Honeybee, 48-hour Contact LD₅₀ 0.032 µg/bee
Bobwhite Quail, Oral LD₅₀ >2000 mg/kg

Toxicity data for the active constituent, Piperonyl Butoxide:

Summary of Effects: Piperonyl Butoxide is highly toxic to fish and aquatic organisms.

Acute Toxicity:

Rainbow Trout 96-hour LC₅₀ 6.12 ppm
Bluegill Sunfish 96-hour LC₅₀ 5.37 ppm
Daphnia Magna 48-hour LC₅₀ 0.51 ppm
Honeybee, acute >25 µg/bee
Bobwhite Quail Oral LD₅₀ >2,250 mg/kg
Bobwhite quail 5-day dietary LC₅₀ >5,620 ppm
Mallard 5-day dietary LC₅₀ >5,620 ppm

Chronic Toxicity:

Fish (Fathead Minnow) Early life stage MATC >0.18 mg/L-<0.42 mg/L
Invertebrate (Daphnia Magna) life cycle MATC >30 µg/L-<47 µg/L

Toxicity data for the active constituent, s-methoprene:

The below information is based on the CLH Report for S-Methoprene (July 2015).

Fish LC₅₀ = 4.26 mg/L at 96h, s- methoprene is considered acutely toxic.
Aquatic invertebrate *Daphnia magna* EC₅₀ = 0.22 mg/L at 48h, s-methoprene is considered acutely toxic.
Aquatic invertebrate *Daphnia magna* NOEC₅₀ = 0.019 mg/L at 21D, s-methoprene is considered chronically toxic.

Persistence/Degradability: No information available.

Bioaccumulative potential: No information available.

Mobility in soil: No information available

13. DISPOSAL CONSIDERATIONS

Disposal methods: Refer to Waste Management Authority. Dispose of contents/container in accordance with local/regional/national/international regulations. Break, crush or puncture and dispose of empty containers in a local authority landfill. Triple rinse and bury rinsate and empty capsules in a local authority landfill. If no landfill is available, bury the containers below 0.5 m in a disposal pit specifically marked and set up for this purpose clear of waterways, desirable vegetation and tree roots. Empty containers and product must not be burnt. Do NOT re-use containers for any other purpose.

14. TRANSPORT INFORMATION

Road and rail transport: Classified as Dangerous Goods by the criteria of the Australian Dangerous Goods Code (ADG Code) for transport by Road and Rail; DANGEROUS GOODS
 UN Number: 2902
 Proper Shipping Name or Technical Name: PESTICIDE LIQUID, TOXIC, N.O.S. (CONTAINS DELTAMETHRIN)
 Transport Hazard Class: 6.1
 Packaging Group: III
 Hazchem Code: 2X

Marine transport: Classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea; MARINE POLLUTANT
 UN Number: 2902
 Proper Shipping Name or Technical Name: PESTICIDE LIQUID, TOXIC, N.O.S. (CONTAINS DELTAMETHRIN)
 Transport Hazard Class: 6.1
 Packaging Group: III
 IMDG EMS Fire: F - A
 IMDG EMS Spill: S - A

Air transport: Classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air
 UN Number: 2902
 Proper Shipping Name or Technical Name: PESTICIDE LIQUID, TOXIC, N.O.S. (CONTAINS DELTAMETHRIN)
 Transport Hazard Class: 6.1
 Packaging Group: III

15. REGULATORY INFORMATION

Poison schedule (SUSMP): 6
APVMA approval no.: 86506
AICS: All the constituents of this material are either listed on the Australian Inventory of Chemical Substances (AICS), not required due to the nature of the chemical, or have been assessed under the National Industrial Chemicals (Notification and Assessment) Act 1989 as amended.

16. OTHER INFORMATION

General information: None.
Issue number: 003
Issue date: 12 April 2023
 In any event, the review and, if necessary, the re-issue of an SDS shall be no longer than 5 years after the last date of issue.

Reason(s) for issue: Third issue.
 Minor updates to sections 1, 14 and 16.

Literary reference: ADG Code - Australian Code for the Transport of Dangerous Goods by Road and Rail (7th edition)

Safety Data Sheet: Methograin® Delta IGR Grain Protectant

Date of Issue: 12 April 2023

AICIS – Australian Industrial Chemicals Introduction Scheme (formerly NICNAS)
AIIC - Australian Inventory of Industrial Chemicals
APVMA – Agricultural Pesticides and Veterinary Medicines Australia
GHS - Globally Harmonised System of Classification and Labelling of Chemicals (7th revised edition) 2017
Preparation of Safety Data Sheets for Hazardous Chemicals Code of Practice (July 2020)
STEL - Short term exposure limit means the average airborne concentration of a substance calculated over a 15-minute period. The STEL should not be exceeded at any time during a normal eight hour working day.
SUSMP - Standard for the Uniform Scheduling of Medicines & Poisons
SWA - Safe Work Australia, formerly ASCC and NOHSC
TWA - Time-weighted average means the average airborne concentration of a particular substance when calculated over an eight-hour working day, for a five-day working week.
WHS – Workplace Health and Safety

The physical values and properties described in this SDS are typical values based on scientific literature and material produced to date, and are believed to be reliable. The supplier provides no warranties, either expressed or implied and assumes no responsibility for the accuracy or completeness of the data contained herein. The information is supplied upon the condition that the persons receiving information will make their own determination as to the suitability for their purposes prior to use of this product. Due care should be taken to ensure that the use of this product and its disposal is in compliance with all relevant Federal, State and Local Government regulations.

*Methograin is a registered trademark of Bábolna Bioenvironmental Centre Plc.

End of SDS