

SAFETY DATA SHEET

According to
HSNO Hazardous Substances (Safety Data Sheets) Notice 2017

Section 1. Identification of the material and the supplier

Product: **Metafort 60SL**
 Product Use: Insecticide
 Restriction of Use: Refer to Section 15

New Zealand Supplier: **Adria Crop Protection Solutions**
 Address: 407 State Highway 16
 Kumeu 0841,
 Auckland

Telephone: +64 9 412 9817
 Fax: +64 9 412 9807
 Website: www.adria.nz

Emergency No: 0800 734 607 (24hr)
0800 764 766 (National Poison Centre)

Date of SDS Preparation: 29 October 2018

Section 2. Hazards Identification

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

EPA Approval No: HSR000226

Pictograms



Toxic Corrosive Chronic Ecotoxic

Signal Word: **DANGER**

HSNO Classification	Hazard Code	Hazard Statement	GHS Category
3.1D	H227	Combustible liquid.	Flam. Liq. 4
6.1B (oral)	H300	Fatal if swallowed.	Acute Tox. 2
6.1B(dermal)	H310	Fatal in contact with skin.	Acute Tox. 2
6.1B (inh)	H330	Fatal if inhaled.	Acute Tox. 2
6.9A	H372	Causes damage to organs through single, prolonged or repeated exposure.	STOT RE 1
8.2C	H314	Causes severe skin burns and eye damage.	Skin Corr. 1C
8.3A	H318	Causes serious eye damage.	Eye Corr. 1
9.1A	H410	Very toxic to aquatic life with long lasting effects.	Aquatic Chronic 1

9.2B	H422	Toxic to the soil environment.	-
9.3A	H431	Very toxic to terrestrial vertebrates.	-
9.4A	H441	Very toxic to terrestrial invertebrates.	-

Prevention Code	Prevention Statement
P102	Keep out of reach of children.
P103	Read label before use.
P210	Keep away from heat, sparks, open flames or hot surfaces. No smoking.
P260	Do not breathe fumes, mist, vapours or spray.
P262	Do not get in eyes, on skin, or on clothing.
P264	Wash hands thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P271	Use only outdoors or in a well-ventilated area.
P273	Avoid release to the environment.
P280	Wear protective clothing as detailed in Section 8.
P284	Wear respiratory protection.

Response code	Response Statement
P101	If medical advice is needed, have product container or label at hand.
P310	Immediately call a POISON CENTER or doctor/physician.
P361	Remove/Take off immediately all contaminated clothing.
P391	Collect spillage.
P301 + P310	IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P301 + P330+P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303 + P361+P353	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304 + P340	IF INHALED: Remove 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.
P307 + P311	IF exposed: Call a POISON CENTER or doctor/physician.
P370 + P378	In case of fire: Use alcohol foam or dry chemical for extinction.

Storage Code	Storage Statement
P405	Store locked up.
P403 + P233	Store in a well-ventilated place. Keep container tightly closed.
P403 + P235	Store in a well-ventilated place. Keep cool.

Disposal Code	Disposal Statement
P501	Refer to Section 13.

Section 3. Composition / Information on Hazardous Ingredients

Ingredients	Content (%w/v)	CAS NUMBER.
Methamidophos	51.3 to 52.6	10265-92-6
Not hazardous	To bal	

Section 4. First Aid Measures

Routes of Exposure:

If in Eyes 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/attention.

If on Skin	Remove/Take off immediately all contaminated clothing and wash before reuse. Wash affected areas with soap and water. If skin irritation occurs: Get medical advice/attention.
If Swallowed	Rinse mouth. DO NOT induce vomiting. Take to hospital. Keep patient at rest. Give one atropine tablet every 5 minutes until dryness of the mouth occurs. For advice, contact the National Poisons Centre on 0800 POISON (0800 764766) or a doctor immediately.
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. Apply artificial respiration if not breathing. Get medical advice if breathing becomes difficult.

Most important symptoms and effects, both acute and delayed

Symptoms:

Ingestion:	Fatal if swallowed.
Inhalation:	Fatal if inhaled.
Skin:	Fatal if in contact with skin. Causes skin burns.
Eye:	Causes severe eye damage.
Chronic:	Causes damage to organs through single or repeated or prolonged exposure.

Note to physician: Prolonged medical observation may be indicated.

Section 5. Fire Fighting Measures

Hazard Type	This product is combustible.
Hazards from combustion products	Vapour mixes readily with air, forming explosive mixtures. On exposure to high temperature, may decompose, releasing toxic/flammable vapours. Thermal decomposition generates: Carbon monoxide. Carbon dioxide. Nitrogen oxides. Phosphorus oxides.
Suitable Extinguishing media	Small fire: Dry chemical. Large fire: Alcohol foam. Water spray. Water fog.
Recommended protective clothing & Precautions for firefighters	Wear proper protective equipment. Exercise caution when fighting any chemical fire. High concentrations of toxic or harmful products may remain in the residual liquid once the fire has been extinguished. Avoid (reject) fire-fighting water to enter environment.
HAZCHEM CODE	2X

Section 6. Accidental Release Measures

Personal precautions:

Use protective clothing as per Section 8. Avoid contact with skin, eyes and clothing. Remove contaminated clothes and shoes immediately.

Environmental precautions:

Do not discharge into drains/surface waters/groundwater. Do not discharge into the subsoil/soil.

Spill and Disposal procedures:

Absorb spills with inert material and place in waste containers. Wash area with water and absorb with further inert material. Dispose of waste safely, according to Local Council regulations.

Section 7. Handling and Storage

Precautions for Handling:

- Read label before use.
- Keep away from heat, sparks, open flames or hot surfaces. No smoking.

- Do not breathe fumes, mist, vapours or spray.
- Do not get in eyes, on skin, or on clothing.
- Wash hands thoroughly after handling.
- Do not eat, drink or smoke when using this product.
- Use only outdoors or in a well-ventilated area.
- Avoid release to the environment.
- Apply using calibrated and maintained equipment in accordance with the NZ Standard for the Management of Agrichemicals (NZS8409).
- Metafort 60SL must be applied via ground-based methods only.
- METHOD RESTRICTIONS: This product cannot be applied indoors with high pressure handgun spray equipment.
- Avoid contact with eyes and skin.
- Avoid inhalation of vapour or spray mist.
- When mixing or applying, wear chemical resistant overalls, chemical resistant boots and gloves, chemical resistant footwear plus socks, chemical resistant head gear, eye protection and respirator (organic vapour and particulate matter).
- Clean protective clothing daily after work.
- Remove protective clothing and wash hands and face thoroughly before meals and after work.
- Avoid handling, mixing or use of the product or container near heat, flame or other sources of ignition.
- Do not use near air vents or ducts.
- Apply with well-maintained and calibrated spray equipment.

Precautions for Storage:

- Keep away from children.
- Store in a well-ventilated place. Keep cool.
- Keep container tightly closed.
- Keep in fireproof place.
- Store in well ventilated area below 12°C
- Keep away from: Strong acids. Strong alkalis.
- Keep container closed when not in use.
- Notification is only required for outdoor use, and when used in a wide dispersive manner. The person applying the substance in this situation must:
 - a) Give written notice to anyone likely to be directly affected (such as owners and occupiers of land, property, buildings or houses immediately next to the application area).
 - b) Ensure the notification is given at least 2 working days before, but no more than 4 weeks before, each application of the product.
 - i) Ensure the written notice includes:
 - ii) Where the product will be applied;
 - iii) The date and approximate duration of each application;
 - iv) The steps that notified parties should take to avoid exposure;
 - v) The name of the organisation(s) applying the product;
 - vi) Contact details for the person in charge of the application (phone, email or postal address, including a contact number for immediate contact during application).

Section 8

Exposure Controls / Personal Protection

WORKPLACE EXPOSURE STANDARDS (provided for guidance only)

Substance	TWA		STEL	
	ppm	mg/m ³	ppm	mg/m ³

No ingredients have exposure limits

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

Engineering Controls / Industrial Hygiene

Local exhaust and general room ventilation are both essential to prevent accumulation of flammable vapour or dust mixtures.

Restricted Entry Interval (Rei):

The REI is 48 hours. The person in charge is responsible for making sure no person enters the application area before the end of the REI. A person may only enter the indoor treated area if PPE and RPE is worn as if they were applying the substance.

Personal Protection Equipment



Eyes	Safety goggles with side-shields.
Hands	Wear suitable gloves resistant to chemical penetration.
Skin	Avoid inhalation of vapour or spray mist. When mixing or applying, wear chemical resistant overalls, chemical resistant boots and gloves, chemical resistant footwear plus socks, chemical resistant head gear, eye protection
Respiratory	Respirator (organic vapour and particulate matter) should be used if airborne particles are generated when handling this material.
General	Keep away from food, drink and animal feedstuffs. No eating, drinking or smoking during use. Wash hands and face before breaks and after work.

Section 9 Physical and Chemical Properties

Appearance	Liquid
Colour	Yellow
Odour	Characteristic
Odour Threshold	Not available
pH	3.2
Melting Point/Boiling Point	< -10
Freezing Point	Not available
Flash Point	>70°C
Flammability	Not available
Upper and Lower Explosive Limits	Not available
Vapour Pressure	Not available
Vapour Density	Not available
Density	1.15(20°C)
Water Solubility	Good
Partition Coefficient:	Not available
Ignition Temperature	Not available
Decomposition Temperature	Not available
Viscosity	28.9 cPs
Particle Characteristics	Not available

Section 10. Stability and Reactivity

Stability of Substance	This product is stable under normal conditions. In use, may form flammable/explosive vapour-air mixture.
Possibility of hazardous reactions	Reacts violently with: Strong oxidizing agents. Acids. Alkali.
Conditions to Avoid	None known.
Incompatible Materials	Strong acids. Strong bases.

Hazardous Decomposition Products	Thermal decomposition generates: Toxic and combustible vapours. Carbon monoxide. Carbon dioxide. Nitrogen oxides. Sulphur compounds. Phosphate.
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Section 11 Toxicological Information

Acute Effects:

Swallowed	Fatal if swallowed.
Dermal	Fatal in contact with skin.
Inhalation	Fatal if inhaled.
Eye	Causes serious eye damage.
Skin	Causes severe skin burns.

Chronic Effects:

Carcinogenicity	Not applicable.
Reproductive Toxicity	Not applicable.
Germ Cell Mutagenicity	Not applicable.
Aspiration	Not applicable.
STOT/SE	Causes damage to organs through single exposure.
STOT/RE	Causes damage to organs through prolonged or repeated exposure.

Acute Toxicity -

Chemical Name	LD50 (Oral)	LD50 (Dermal)	LC50 (inhalation)
Methamidophos (10265-92-6)	10mg/kg (Rabbit)	50mg/kg (rat-m)	0.16 mg/l (rat) Dust/mist

Section 12. Ecotoxicological Information

Ecological effects information	9.1A = Very toxic to aquatic life with long lasting effects. 9.2B = Toxic to the soil environment. 9.3A = Very toxic to terrestrial vertebrates. 9.4A = Very toxic to terrestrial invertebrates.
Persistence and degradability	No data available
Bioaccumulation	No data available
Mobility in Soil	No data available
Other adverse effects	No data available
Acute fish toxicity:	Acute: Sheepshead minnow (Cyprinodon variegatus) LC50 = 5.6mg/l (96h) Chronic: Oncorhynchus mykiss (Fish, fresh water) LC50 = 18.7mg/l (21days)
Toxicity for daphnia:	Acute: 48 Hour-EC50 - Daphnia magna = 0.026mg/L Chronic: 21 days - NOEC - Daphnia Magna = 0.026mg/L
Ecotoxic in the soil environment	Eisenia fetida (earthworm) = LC50 = 28.8mg/kg soil (14 days). Hence EC50 is 2.88 mg/kg soil, resulting in classification as 9.2B
Very ecotoxic to terrestrial vertebrates	Anas platyrhynchos mallard duck. LD50 = 8.48 mg/kg bw (14 days)
Very ecotoxic to terrestrial invertebrates	Honey bee (Apis mellifera) LD50 = 1.37ug/body (48hr)
Bees:	THIS PRODUCT IS VERY TOXIC TO BEES. Do not apply this product to any plant or tree likely to be visited by bees: a) At the time of application; or b) Immediately after application until spray has dried; or In areas where bees are foraging.
Precautions:	Do not allow to enter waterways.

Section 13. Disposal Considerations

Disposal Method:

Triple rinse container and add residue to spray tank. Return empty container to an AgRecovery collection point for disposal.



Empty container precautions:

Avoid contamination of any water supply with chemical or empty container.

Precautions or methods to avoid: Avoid release to the environment.

Section 14 Transport Information

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



Road, Rail, Sea and Air Transport

UN No	3018
Class - Primary	6.1
Packing Group	II
Proper Shipping Name	ORGANOPHOSPHORUS PESTICIDE, LIQUID, FLAMMABLE, TOXIC (Methamidophos)
Marine Pollutant	Yes
Special Provisions-Limited Quantities	If the product's individual container is below 100ml, 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.

Section 15 Regulatory Information

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

EPA Approval Code: HSR000226

HSNO Classification: 3.1D, 6.1B (oral, dermal & inh), 6.9A, 8.2C, 8.3A, 9.1A, 9.2B, 9.3A, 9.4A

HSW (HS) Regulations 2017	Trigger Quantity
Certified Handlers	Yes, any quantity
Location Certificate	250L
Signage Trigger Quantities (Schedule 3)	100L (9.1A)
Emergency Response Plan (Schedule 5)	100L (9.1A)
Secondary Containment (Schedule 5)	100L (9.1A)
Tracking (Schedule 26)	Yes, any quantity
For all further controls	Refer to EPA www.epa.govt.nz for controls document - HSR000226
HSNO Additional Controls (Restrictions of use)	
77A	a) This substance must not be applied onto or into water.

b) CONTROL R-3: Application parameters:
i) The person in charge of the application of a substance and any person applying the substance must ensure that application of the substance is carried out in accordance with the following application restrictions:

The substance may be applied at a maximum rate of 900 g methamidophos / ha.

ii) Label Statement:

A person must not supply a hazardous substance to any other person unless the substance label shows the following information:

(a) the maximum application rate;

(b) the maximum application frequency if one is set.

iii) A person who is in charge of a hazardous substance must ensure that the substance label shows the information required by (2).

c) CONTROL R-4: Spray drift mitigation

i) No person may apply the substance in a manner that results in adverse effects beyond the boundary of the subject property.

(ii) Any person applying the substance must take all reasonable care to avoid off-target movement of the substance.

LABEL STATEMENT

(iii) The following statement must appear on the substance label:

The person applying this substance must not cause adverse effects beyond the boundary of the treated property and must also avoid adverse effects from spray drift occurring. Mitigation measures employed must be recorded as part of the application records.

(iv) A person must not supply a hazardous substance to any other person unless the substance label includes the statement specified in (iii).

(v) A person who is in charge of a hazardous substance must ensure that the substance label shows the information required by (iii).

d) CONTROL/LABEL STATEMENT R-8: Identification as an organophosphate or carbamate substance

(1) A person must not supply a hazardous substance to any other person unless the substance label clearly states that the substance is an organophosphate - containing substance.

(2) A person who is in charge of a hazardous substance must ensure that the substance label shows the information required by (1).

e) CONTROL/LABEL STATEMENT R-9: Label warning of effects on bees R-9

A person must not supply a hazardous substance to any other person unless the substance label shows the following statement (or equivalent):

This product is toxic to bees. Do not apply this product to any plant or tree likely to be visited by bees—

(a) at the time of application; or

(b) immediately after application until spray has dried; or

(c) in areas where bees are foraging.

	<p>(2) A person who is in charge of a hazardous substance must ensure that the substance label shows the information required by (1).</p> <p>f) (1) For wide-dispersive applications, no person may apply, or engage another person to apply, the substance unless that person has given written notice of the proposed application to any person likely to be directly affected by the application, including occupiers and owners of land, dwellings or buildings or property that is immediately abutting the application area.</p> <p>(2) The notice referred to in subclause (1) must—</p> <p>(a) be given at least 2 working days but no more than 4 weeks in advance of each application; and</p> <p>(b) specify the following:</p> <p>(i) the location of application area that the substance will be applied to;</p> <p>(ii) the date and approximate duration of each application;</p> <p>(iii) the steps to be taken by the notified parties to avoid exposure;</p> <p>(iv) the name of the organisation/s undertaking the application;</p> <p>(v) contact details for the person in charge of the application (phone, email or postal address, including a contact number for immediate contact during application).</p> <p>LABEL STATEMENT</p> <p>(3) A person must not supply a hazardous substance to any other person unless the substance label shows that notification of affected parties and neighbours, in accordance with the requirements of (1) and (2), must be carried out in advance of the application.</p> <p>(4) A person who is in charge of a hazardous substance must ensure that the substance label shows the information required by (3).</p>
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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 workplaces 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.

ACVM Act and Regulations

ACVM Approval No See www.foodsafety.govt.nz for registration controls	P5629
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Section 16 Other Information

For proper and safe use of this product, please refer to the approval conditions laid down on the product label. The data contained in this safety data sheet is based on our current knowledge

and describes the product only with regard to safety requirements. The data does not describe the products properties. Neither should any agreed property nor the suitability of the product for any specific purpose be deduced from the data contained in the safety data sheet. It is the responsibility of the recipient of the product to ensure any existing laws and legislation are observed.

Glossary

EC ₅₀	Median effective concentration.
EEL	Environmental Exposure Limit.
EPA	Environmental Protection Authority
HSNO	Hazardous Substances and New Organisms.
HSW	Health and Safety at Work.
LC ₅₀	Lethal concentration that will kill 50% of the test organisms inhaling or ingesting it.
LD ₅₀	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

This document has been prepared by TCC (NZ) Ltd and serves as the suppliers Safety Data Sheet ('SDS'). It is based on information concerning the product which has been provided to TCC (NZ) Ltd or obtained from third party sources and is believed to represent the current state of knowledge as to the appropriate safety and handling precautions for the product at the time of issue. Further clarification regarding any aspect of the product should be obtained directly from the manufacturer. While TCC (NZ) have taken all due care to include accurate and up-to-date information in this SDS, it does not provide any warranty as to accuracy or completeness. As far as lawfully possible, TCC (NZ) Ltd accept no liability for any loss, injury or damage (including consequential loss) which may be suffered or incurred by any person as a consequence of their reliance on the information contained in this SDS

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Please contact Adria, if further information is required.

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