

MATERIAL SAFETY DATA SHEET

Page 1 of Total 5
Date of Issue: June 2013
MSDS No. FMC/MET720/1

SECTION 1 IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product Name: FMC Metolachlor 720 Herbicide

Other Names: Metolachlor, a Group K herbicide. Chloroacetanilide herbicide.
Use: Agricultural herbicide to control certain grasses and broadleaf weeds.
Company: FMC Crop Protection Pty Ltd.
Address: 5 Palmer Place, Murarrie, Qld 4172
Telephone Number: 07 3908 9222 **Fax Number:** 07 3908 9221
Emergency Telephone Number: 1800 033 111 (All hours - Australia wide).

SECTION 2 HAZARDS IDENTIFICATION

**Classified as Hazardous according to criteria of the Safe Work Australia.
Not classified as a Dangerous Good according to the ADG Code.
Combustible Liquid (C1).**

Risk Phrases: R65 Harmful: may cause lung damage if swallowed.
Safety Phrases: S2 Keep out of reach of children.
S13 Keep away from food, drink and animal feeding stuffs.
S24/25 Avoid contact with skin and eyes.
S36/37/39 Wear suitable protective clothing, gloves and eye/face protection.
Other Information: Poisons Schedule S5.

SECTION 3 COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients:	CAS NUMBER	PROPORTION
CHEMICAL		
Metolachlor	51218-45-2	720 g/L
Liquid hydrocarbon	64742-94-5	10-30 %
Other ingredients considered non-hazardous		Balance

SECTION 4 FIRST AID MEASURES

Ingestion: If swallowed DO NOT induce vomiting. Wash mouth out with water and give water to drink. Do not give anything by mouth to a semi-conscious or unconscious person. Obtain medical advice.

Skin: Immediately wash affected areas thoroughly with soap and water until chemical is removed. Remove contaminated clothing and launder before re-use.

Eye: If in eyes, hold eyelids open and wash with copious amounts of water until chemical is removed. Seek medical advice if irritation develops or persists.

Inhalation: Remove affected person to fresh air until recovered. Obtain medical assistance.

Advice to Doctor: If aspirated into the lung, e.g. from vomiting, the presence of solvent may result in chemical pneumonitis or other lung damage. If lavage is performed, suggest endotracheal and/or oesophageal control. Danger from lung aspiration must be weighed against toxicity when considering emptying the stomach. No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

SECTION 5 | FIRE FIGHTING MEASURES

Specific Hazard: Combustible liquid (C1). Eruption of containers is likely if confined at high temperatures. Cool intact containers with water to reduce drum pressure.

Extinguishing media: Extinguish fire using carbon dioxide, foam (alcohol-resistant) or dry agent. If waterspray is used, contain all runoff. DO NOT use a solid water stream as it may scatter and spread the fire. Contain all runoff.

Hazards from combustion products: Combustible liquid and when burnt will produce toxic and noxious fumes. Will not polymerise.

Precautions for fire-fighters and special protective equipment: Isolate fire area. Evacuate downwind. Wear full protective clothing and self-contained breathing apparatus. Do not breathe or contact smoke, gases or vapours generated.

SECTION 6 | ACCIDENTAL RELEASE MEASURES

Emergency procedures: Isolate and post spill area. Wear cotton overalls buttoned to the neck and wrist or equivalent clothing, elbow length chemical resistant gloves. In the case of spillage, stop leak if safe to do so, and contain spill. Absorb spilled material with absorbent material such as sand, clay or cat litter and dispose of waste as indicated in section 13 or according to the Australian Standard 2507 - Storage and Handling of Pesticides. Keep out unprotected persons and animals.

Material and methods for containment and cleanup procedures: To decontaminate spill area, tools and equipment, wash with detergent and water and add the solution to the drums of wastes already collected and label contents. Absorb, as above, any excess liquid and add both solutions to the drums of waste already collected. Dispose of drummed wastes, including decontamination solution in accordance with the requirements of Local or State Waste Management Authorities.

Do NOT allow spilled product or wash solution to enter sewers, drains, dams, creeks or any other waterways.

SECTION 7 | HANDLING AND STORAGE

Precautions for Safe Handling: Ensure containers are kept closed until using product. Avoid contact with eyes and skin. Repeated exposure may cause allergic disorders. Sensitive workers should use protective clothing. After use and before eating, drinking or smoking, wash hands, arms and face thoroughly with soap and water.

Conditions for Safe Storage: DO NOT store near (or allow to contact) fertilizers, fungicides or pesticides. Store in the closed original container, in a cool well ventilated area, out of direct sunlight. Store in a room or place away from children, animals, food, feed stuffs, seed and fertilizers. Not classified as a Dangerous Good. This product is a Schedule 5 Poison (S5) and must be stored, transported and sold in accordance with the relevant Health Department regulations.

SECTION 8 | EXPOSURE CONTROLS / PERSONAL PROTECTION**National Exposure Standards:**

Exposure guidelines have not been established for this product by safe Work Australia.

Biological Limit Values:

No biological limit allocated.

Engineering controls:

Use in ventilated areas only. Use local exhaust at all process locations. Ventilate all transport vehicles prior to unloading. Keep containers closed when not in use.

Personal Protective equipment (PPE):

General: Repeated exposure may cause allergic disorders. Sensitive workers should use protective clothing. After use and before eating, drinking or smoking, wash hands, arms and face thoroughly with soap and water.

SECTION 8 | EXPOSURE CONTROLS / PERSONAL PROTECTION (Continued)**Personal Protective equipment (PPE):** (Continued)

Personal Hygiene: Clean water should be available for washing in case of eye or skin contamination. Wash skin before eating, drinking or smoking. Shower at the end of the workday.

SECTION 9 | PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Clear yellow to brown coloured liquid.
Odour:	Mild aromatic odour.
Solubility in Water:	Emulsifies in water.
Specific Gravity:	Approximately 1.1.
pH Value:	No data available
Flash Point:	Approximately 71°C.
Flammability:	Combustible liquid C1.
Poison Scheduling:	This product is a Schedule 5 (S5) poison.
Formulation type:	Emulsifiable concentrate.

SECTION 10 | STABILITY AND REACTIVITY

Chemical Stability: Product is considered stable in ambient conditions for a period of at least 2 years after manufacture.

Conditions to avoid: Do not store for prolonged periods in direct sunlight. Keep away from strong oxidizing agents. Keep away from sources of heat, flame or sparks.

Incompatible materials: Strong acids, strong bases and strong oxidising agents.

Hazardous decomposition products: When burned can emit toxic and noxious fumes. Will not polymerise.

Hazardous reactions: Avoid contact of the concentrate with strong alkalis and alkaline materials such as lime. Polymerisation is unlikely.

SECTION 11 | TOXICOLOGICAL INFORMATION

No specific data is available for this product as no toxicity tests have been conducted on this product. Information presented is our best judgement based on similar products and/or individual components. As with all products for which limited data is available, caution must be exercised through the use of protective equipment and handling procedures to minimise exposure.

Potential Health Effects:**ACUTE EFFECTS**

Ingestion: Low acute toxicity. Acute Oral LD₅₀ 2780 mg/kg (rats) - metolachlor. Ingestion of the concentrate in relatively large amounts can result in headache, nausea, lethargy, motor weakness and incoordination.

Skin: This product may be irritating to the skin and may be sensitising. Acute dermal LD₅₀ > 2,000 mg/kg. Sensitive workers should use protective clothing.

Eye: The concentrate may cause irritation of the eyes.

Inhalation: Inhalation of mists or sprays may produce respiratory irritation. High vapour concentrations of the solvent while handling the concentrate are irritating to the eyes and the respiratory tract, may cause headaches and dizziness, and may have other central nervous system effects

Acute toxicity:

Exposure to humans is most commonly occurs through skin or eye contact. Signs of intoxication include abdominal cramps, anaemia, shortness of breath, dark urine, convulsions, diarrhoea, jaundice, weakness, nausea and dizziness.

SECTION 11 TOXICOLOGICAL INFORMATION (Continued)*Chronic toxicity:*

While metolachlor is not readily absorbed by the skin, repeated exposure may create skin sensitisation. There is no evidence of reproductive, teratogenic, mutagenic or carcinogenic effects from exposure to metolachlor.

SECTION 12 ECOLOGICAL INFORMATION

Environmental Toxicology: No data is available on this product. The active ingredient, metolachlor, has low toxicity to birds with and $LD_{50} > 2000$ mg/kg (Mallard duck) and 4500 mg/kg (Bobwhite quail). Moderate toxicity to fish with 96 hour LC_{50} 3 mg/L (Rainbow trout); 15 mg/L (Bluegill sunfish) and 5 mg/L (Carp). Non toxic to bees and earthworms.

Environmental Properties: Metolachlor is biodegradable. It will not accumulate in the soil or water or cause long term problems. Half lives in soil 15 to 70 days. Soils with higher water content show more rapid degradation. Metolachlor is moderately mobile in soils. Metolachlor is more stable in water with a half life greater than 200 days in acid waters and 97 days in alkaline waters.

SECTION 13 DISPOSAL CONSIDERATIONS

Spills & Disposal: Isolate and post spill area. Wear prescribed protective clothing and equipment. Large spills should be dyked or covered to prevent dispersal. Keep out animals and unprotected persons. Keep material out of streams and sewers. Dispose of drummed wastes, including decontamination solution in accordance with the requirements of Local or State Waste Management Authorities. In rural areas contact ChemClear <http://www.chemclear.com.au> for help with collection of unwanted rural chemicals.

Disposal of empty containers: Triple or preferably pressure rinse containers before disposal. Add rinsings to tank mix. Do not dispose of undiluted chemicals on-site. If not recycling, break, crush, or puncture and deliver empty packaging for appropriate disposal to an approved waste management facility. If an approved waste management facility is not available, bury the empty packaging 500 mm below the surface in a disposal pit specifically marked and set up for this purpose clear of waterways, desirable vegetation and tree roots, in compliance with relevant Local, State or Territory government regulations. DO NOT burn empty containers or product.

SECTION 14 TRANSPORT INFORMATION

Road & Rail Transport: This product is not classified as a Dangerous Good under the Australian Code for the Transport of Dangerous Goods by Road and Rail.

Marine and Air Transport: Not classified as a Dangerous Good.

SECTION 15 REGULATORY INFORMATION

Classified as a hazardous substance according to criteria of the Safe Work Australia. (Xn - Harmful). Under the Standard for Uniform Scheduling of Medicines and Poisons (SUSMP), this product is a schedule 5 poison.

This product is registered under the Agricultural and Veterinary Chemicals Code Act 1994. Product Registration No. 68255.

Product is not classified as a Dangerous Good according to the ADG Code (7th Ed).

Requirements concerning special training:

Check State or Territory regulations that require people who use pesticides in their job or business to have training in the application of the materials.

SECTION 16 OTHER INFORMATION

Issue Date: 28 June 2013. Valid for 5 years. (First issue).

Key to abbreviations and acronyms used in this MSDS:

ADG Code: Australian Dangerous Goods Code (for the transport of Dangerous Goods by Road and Rail).

ASCC: Australian Safety & Compensation Council (formally known as the National Occupational Health & Safety Commission (NOHSC)).

Carcinogen: An agent which is responsible for the formation of a cancer.

Genotoxic: Capable of causing damage to genetic material, such as DNA.

Lacrimation: The production, secretion, and shedding of tears.

Lavage: A general term referring to cleaning or rinsing.

NOHSC: National Occupational Health and Safety Commission.

Pneumonitis: A general term that refers to inflammation of lung tissue.

PPE: Personal protective equipment.

Teratogen: An agent capable of causing abnormalities in a developing foetus.

TWA: The Time Weighted Average airborne concentration over an eight-hour working day, for a five day working week over an entire working life.

Safe Work Australia: Formally known as Australian Safety & Compensation Council (ASCC) which was formally known as the National Occupational Health & Safety Commission (NOHSC).

References

1. "Search Hazardous Substances". Safe Work Australia HSIS website. (2013).
2. "Approved Criteria for Classifying Hazardous Substances" 3rd Ed. NOHSC Australia. [NOHSC:1008 (2004)]. October 2004.
3. Standard for the Uniform Scheduling of Medicines and Poisons. No. 3. Medicines and Poisons Scheduling Secretariat. June 2012.

This MSDS 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 MSDS 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.

End of MSDS