

SAFETY DATA SHEET



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Date of Issue: September 2014
MSDS No. FMC/AST400/1

SECTION 1 IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product Name: FMC ASTROID 400EC HERBICIDE

Other Names: Fluroxypyr meptyl. Group I Herbicide.
Use: An agricultural broadleaf weed herbicide.
Company: FMC Australasia Pty Ltd.
Address: 5 Palmer Place, Murarrie, Qld 4172
Telephone Number: 07 3908 9208 **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 Safe Work Australia.
Not classified as a Dangerous Good according to the ADG Code.
Combustible Liquid (C1).**

GHS classification of the substance/mixture

Flammable Liquids: Category 4.
Toxic to Reproduction: Category 1.
Aspiration Hazard: Category 1.

Signal Word: DANGER.

Hazard Statements:

H227 Combustible liquid.
H304 May be fatal if swallowed and enters airways.
H360 May damage fertility or the unborn child.

Precautionary statements:

Prevention

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/hot surfaces: — No smoking.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P281 Use personal protective equipment as required.

Response

P301+P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P308 + P313 IF exposed or concerned: Get medical advice/ attention.
P331 Do NOT induce vomiting.
P370+ P378 In case of fire: Use carbon dioxide, foam or dry agent. If not available, use waterfog or fine water spray for extinction.

Disposal

P501 Dispose of contents/container in accordance with national regulations.

Pictogram:



SECTION 3 COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients:

CHEMICAL	CAS NUMBER	PROPORTION
Fluroxypyr-meptyl	81406-37-3	400 g/L
Solvent naphtha petroleum, heavy aromatic	64742-94-5	316 g/L
N-Methyl-2-pyrrolidone	872-50-4	100 g/L
Other ingredients determined not to be hazardous		Balance

SECTION 4 FIRST AID MEASURES

FIRST AID

Ingestion: If swallowed do NOT induce vomiting. Rinse mouth with water and give water to drink. If poisoning occurs, contact a Doctor or Poisons Information Centre. Phone 131 126.

Eye contact: Immediately hold eyes open and flood with plenty of clean water. Ensure irrigation under eyelids by occasionally lifting them. Do not try to remove contact lenses unless trained. If irritation occurs and persists, seek medical advice.

Skin contact: Immediately remove contaminated clothing and wash skin with soap and water until chemical is removed. If skin irritation persists, seek medical advice.

Inhalation: Remove to fresh air and observe until recovered. If effects persist, seek medical advice.

Advice to Doctor: The formulation contains liquid hydrocarbons that can cause severe pneumonitis or fatal pulmonary oedema if aspirated. Consideration should be given to gastric lavage with an endotracheal tube in place. For acute or short term repeated exposures to petroleum distillates or related hydrocarbons. Primary threat to life, from pure petroleum distillate ingestion and/or inhalation, is respiratory failure. Patients should be quickly evaluated for signs of respiratory distress.

SECTION 5 FIRE FIGHTING MEASURES

Specific Hazard: Combustible liquid (C1). Flash point > 62°C. Sealed, overheated containers may present an explosion hazard. Intact containers exposed to excessive heat should be cooled with water to reduce drum pressure.

Extinguishing media: Extinguish fire using carbon dioxide, foam or dry agent. If not available, use waterfog or fine water spray but ensure all runoff is contained.

Hazards from combustion products: Thermal decomposition and burning will produce toxic by-products. Fire-fighters to wear self-contained breathing apparatus and suitable protective clothing if risk to of exposure to vapour or smoke.

Precautions for fire-fighters and special protective equipment: Isolate fire area. Evacuate downwind. Firefighters to wear self-contained breathing apparatus and suitable protective clothing if risk to of exposure to vapour or smoke. Do not breathe or contact smoke, gases or vapours generated.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Emergency procedures: Isolate and post spill area. Eliminate all sources of ignition. Wear cotton overalls buttoned to the neck and wrist and a washable hat, elbow length PVC gloves, face shield or goggles. Large spills should be dyked or covered to prevent dispersal. Vacuum, shovel or pump spilled material into an approved container and dispose of as listed below. If there is a significant chance that vapours or mists are likely to build up in the cleanup area, the use of a respirator is recommended. 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. When opening the container, preparing the spray and using the prepared spray wear cotton overalls buttoned to the neck and wrist and a washable hat, elbow length PVC gloves, a face shield or goggles. Wash hands after use. After each day's use, wash gloves, face shield or goggles and contaminated clothing.

Conditions for Safe Storage: Store in the closed, original container, in a cool, well-ventilated area. DO NOT store for prolonged periods in direct sunlight. This product is classified as a C1 (Combustible Liquid) for the purpose of storage and handling, in accordance with the requirements of AS 1940. Refer to state regulations for storage and transport requirements. Do not store or use near naked flame, or heat sources. Do not cut or weld container.

SECTION 8 | EXPOSURE CONTROLS / PERSONAL PROTECTION

National Exposure Standards:

Exposure guidelines have not been established for this product by Safe Work Australia. However the following standards may apply:

Atmospheric Contaminant	Exposure Standard (TWA)	STEL (mg/m ³)
Aromatic hydrocarbons	100 ppm	Not set
N-Methyl-2-pyrrolidone	103 mg/m ³	309 mg/m ³

TWA = Time-weight Average STEL = Short Term Exposure Limit

'SK' notice - absorption through the skin may be a significant source of exposure.

Biological Limit Values:

No biological limit allocated.

Engineering controls:

Keep containers closed when not in use. Use in ventilated areas adequate to keep exposure below the TWA. Ensure that the work environment remains clean and that vapours and mists are minimised..

Personal Protective equipment (PPE):

General: When opening the container, preparing the spray and using the prepared spray wear cotton overalls buttoned to the neck and wrist and a washable hat, elbow length PVC gloves, a face shield or goggles. Wash hands after use. After each day's use, wash gloves, face shield or goggles and contaminated clothing.

Personal Hygiene: Avoid contact with eyes and skin. Clean water should be available for washing in case of eye or skin contamination. Shower at the end of the workday.

SECTION 9 | PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Amber to brown coloured liquid.
Odour:	Hydrocarbon odour.
Boiling point:	No data available.
Freezing point:	No data available.
Specific Gravity:	Approximately 1 g/mL.
pH:	No data.
Solubility in Water:	Emulsifies in water.
Flammability:	Combustible liquid (C1).
Flashpoint (°C):	> 63°C.
Flammability Limits (%):	Not established.
Poison Schedule:	Product is a schedule 5 (S5) poison.
Formulation type:	Emulsifiable Concentrate (EC).

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: Store in the closed original container in a cool, well ventilated area. Do not store for prolonged periods in direct sunlight.

Incompatible materials: Avoid strong oxidizing agents and strong acids or bases.

Hazardous decomposition products: Carbon dioxide, and if combustion is incomplete, carbon monoxide and smoke and other toxic gases.

Hazardous reactions: Heating may cause expansion or decomposition leading to violent rupture of containers. Avoid contamination with oxidising agents i.e. nitrates, oxidising acids, chlorine bleaches, pool chlorine etc. as ignition may result. Polymerisation is unlikely.

SECTION 11 TOXICOLOGICAL INFORMATION***Potential Health Effects:***

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.

Acute

Swallowed: Low toxicity. Acute Oral LD₅₀ > 2,000 mg/kg. Swallowing of the liquid may cause aspiration into the lungs with the risk of chemical pneumonitis; serious consequences may result.

Eye: The concentrate can cause irritation of the eyes. May cause redness, pain and discomfort. In the event of chemical exposure, begin eye irrigation immediately and remove contact lens as soon as practicable. Lens should be removed at the first signs of eye redness or irritation - lens should be removed in a clean environment only after workers have washed hands thoroughly.

Skin: May cause skin irritation. The material may accentuate any pre-existing dermatitis condition. Acute dermal LD₅₀ > 2,000 mg/kg.

Inhaled: The material can cause respiratory irritation in some persons. Inhalation of high concentrations of gas/vapour causes lung irritation with coughing and nausea, central nervous depression with headache and dizziness, slowing of reflexes, fatigue and incoordination. Inhalation hazard is increased at higher temperatures. If exposure to highly concentrated solvent atmosphere is prolonged this may lead to narcosis, unconsciousness, even coma and possible death.

Chronic toxicity:

In animal studies, fluroxypyr meptyl has shown no evidence of oncogenic effects, no carcinogenic effect no teratogenic potential and is not mutagenic. Fluroxypyr is absorbed from the gastrointestinal tract and eliminated principally in the urine.

Long-term exposure to respiratory irritants may result in disease of the airways involving difficult breathing and related systemic problems. Skin contact with the material is more likely to cause a sensitisation reaction in some persons compared to the general population. Constant or exposure over long periods to mixed hydrocarbons may produce stupor with dizziness, weakness and visual disturbance, weight loss and anaemia, and reduced liver and kidney function. Skin exposure may result in drying and cracking and redness of the skin. Chronic exposure to lighter hydrocarbons can cause nerve damage, peripheral neuropathy, bone marrow dysfunction and psychiatric disorders as well as damage the liver and kidneys.

Safe Work Australia has classified N-Methyl-Pyrrolidone in the occupational environment as a reproduction category 2 substance – which indicates that there is sufficient evidence to provide a strong presumption that human exposure to the substance may result in impaired fertility.

SECTION 12 ECOLOGICAL INFORMATION

Environmental Toxicology: No information is available for the product. The following information refers to the active ingredient, fluroxypyr meptyl. Low toxicity to upland game birds (Bobwhite quail LD₅₀ > 2000 mg/kg). Mallard duck LD₅₀ > 2,000 mg/kg. Low toxicity to fish due to the low solubility of fluroxypyr meptyl (~0.9 mg/L). Bees: Oral LD₅₀ > 100 mg/bee, Contact LD₅₀ > 100 mg/bee. LC₅₀ (14 days) for earthworms > 1000 mg/kg. DO NOT contaminate streams, rivers or water courses.

Environmental Properties: The following information refers to the active ingredient, fluroxypyr meptyl. The product is not persistent. Half-life time (t_{1/2}): < 7 days (fluroxypyr meptyl). Degradation is primarily via: hydrolysis. Water: DT₅₀ = 1-3 days. DO NOT contaminate streams, rivers or water courses.

SECTION 13 DISPOSAL CONSIDERATIONS

Spills & Disposal: Isolate and post spill area. Wear cotton overalls buttoned to the neck and wrist and a washable hat, elbow length PVC gloves, face shield or goggles. In case of spillage, contain and absorb spilled material with absorbent material such as clay, sand or cat litter. Large spills should be dyked or covered to prevent dispersal. Keep out animals and unprotected persons. Keep material out of streams and sewers. Vacuum, shovel or pump waste into an approved drum. Dispose of drummed wastes, including decontamination solution in accordance with the requirements of Local or State Waste Management Authorities.

Disposal of empty 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, in compliance with relevant Local, State or Territory government regulations. Empty containers and product should not be burnt.

SECTION 14 TRANSPORT INFORMATION

Transport Information: This product is exempt from classification as a Dangerous Good in packs less than 3,000 kg or litres under the Australian Code for the Transport of Dangerous Goods by Road and Rail. For bulk shipments this product is a class 9, UN 3082.

Storage and Transport: This product is classified as a Marine Pollutant according to International Maritime Dangerous Goods (IMDG) Code and the International Air transport Association (IATA). If transporting by sea or air the following Dangerous Goods Classification applies:- UN 3082, Class 9 (Miscellaneous Dangerous Goods), Packing Group III, Proper Shipping Name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Contains Fluroxypyr). Hazchem code •3Z. Hazard Identification Number (HIN) 90.

SECTION 15 REGULATORY INFORMATION

Not classified as a hazardous substance according to criteria of Safe Work Australia.

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

This product is classified as a Dangerous Good by the International Maritime Dangerous Goods (IMDG) Code or International Air Transport Association (IATA).

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: 22 September 2014. Valid for 5 years. (First issue).

Key to abbreviations and acronyms used in this SDS:

ADG Code:	Australian Dangerous Goods Code (for the transport of dangerous goods by Road and Rail).
Carcinogen:	An agent which is responsible for the formation of a cancer.
Clonic:	An abnormality in neuromuscular activity characterized by rapidly alternating muscular contraction and relaxation.
Combustible Liquid:	Liquids that ignite with a flash point greater than 60°C.
Flammable Liquid:	Liquids that ignite with a flash point less than 60°C.
Genotoxic:	Capable of causing damage to genetic material, such as DNA.
Haematopoietic:	Pertaining to the formation of blood or blood cells.
Lavage:	The irrigation or washing out of an organ, as of the stomach or bowel.
Mutagen:	An agent capable of producing a mutation.
Oedema:	Accumulation of fluid in tissues.
NOHSC:	National Occupational Health and Safety Commission.
Teratogen:	An agent capable of causing abnormalities in a developing foetus.
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 website. (2014).
2. "Approved Criteria for Classifying Hazardous Substances" 3rd Ed. NOHSC Australia. [NOHSC:1008 (2004)]. October 2004.
3. Globally Harmonized System of Classification and Labelling of Chemicals (GHS). United Nations, 2009.

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.

End SDS