

Section 1 - Identification of The Material and Supplier

Four Seasons Agribusiness
287 Boorowa Street
Young NSW 2594 AUSTRALIA

Phone: 1300 449 255
Fax: 02 6386 6633

Chemical nature: Emulsifiable concentrate containing fluroxypyr as the methyl heptyl ester

Trade Name: **F.S.A. Fluroxypyr 400 Herbicide**

APVMA Code: 87961

Product Use: Agricultural herbicide for use as described on the product label.

Creation Date: **November, 2019**

This version issued: **November, 2019** and is valid for 5 years from this date.

Poisons Information Centre: Phone 13 1126 from anywhere in Australia

Section 2 - Hazards Identification

Statement of Hazardous Nature

This product is classified as: Xi, Irritating. T, Toxic. N, Dangerous to the environment. Hazardous according to the criteria of SWA.

Not a Dangerous Good according to Australian Dangerous Goods (ADG) Code, IATA or IMDG/IMSBC criteria.

SUSMP Classification: S5

ADG Classification: None allocated. Not a Dangerous Good according to Australian Dangerous Goods (ADG) Code, IATA or IMDG/IMSBC criteria.

UN Number: None allocated



GHS Signal word: DANGER

Flammable liquids Category 4

Aspiration Hazard Category 1

Skin Irritation Category 2

Eye irritation Category 2B

Specific Target Organ Toxicity - Single Exposure Category 3

Reproductive Toxicity Category 1B

Hazardous to aquatic environment Short term/Chronic Category 1

HAZARD STATEMENT:

H227: Combustible liquid.

H304: May be fatal if swallowed and enters airways.

H315: Causes skin irritation.

H320: Causes eye irritation.

H335: May cause respiratory irritation.

H360: May damage the unborn child.

H410: Very toxic to aquatic life with long lasting effects.

PREVENTION

P210: Keep away from heat, sparks, open flames and hot surfaces. - No smoking.

P261: Avoid breathing fumes, mists, vapours or spray.

P262: Do not get in eyes, on skin, or on clothing.

P264: Wash contacted areas thoroughly after handling.

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

P273: Avoid release to the environment.

P281: Use personal protective equipment as required.

RESPONSE

P362: Take off contaminated clothing and wash before reuse.

P301+P310: IF SWALLOWED: Immediately call a POISON CENTRE or doctor.

P301+P330+P331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P302+P352: IF ON SKIN: Wash with plenty of soap and water.

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

SAFETY DATA SHEET

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.

P332+P313: If skin irritation occurs: Get medical advice.

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

P391: Collect spillage.

P370+P378: In case of fire, use carbon dioxide, dry chemical, foam.

STORAGE

P410: Protect from sunlight.

P402+P404: Store in a dry place. Store in a closed container.

P403+P235: Store in a well-ventilated place. Keep cool.

DISPOSAL

P501: Dispose of contents and containers as specified on the registered label.

Emergency Overview

Physical Description & Colour: Amber to brown coloured liquid.

Odour: Hydrocarbon odour.

Major Health Hazards: Acute toxicity. Fluroxypyr MHE has low acute toxicity. The rat oral LD₅₀ is >5000 mg/kg, the rabbit dermal LD₅₀ is >2000 mg/kg, and the rat inhalation LC₅₀ is >1.0 mg/L, the maximum attainable concentration. Fluroxypyr MHE is not a skin sensitizer in guinea pigs, has no dermal irritation in rabbits, and shows mild ocular irritation in rabbits.

May cause harm to unborn children, irritating to eyes, respiratory system and skin, irritating to respiratory system and skin, if aspirated, may cause lung damage.

Section 3 - Composition/Information on Ingredients

Ingredients	CAS No	Conc, g/L	TWA (mg/m ³)	STEL (mg/m ³)
Fluroxypyr methylheptyl ester	81406-37-3	400	not set	not set
Aromatic hydrocarbons	64742-94-5	316	not set	not set
N-Methyl-2-pyrrolidone	872-50-4	100	103	309
Other non hazardous ingredients	secret	to 1 L	not set	not set

This is a commercial product whose exact ratio of components may vary slightly. Minor quantities of other non hazardous ingredients are also possible.

The SWA TWA exposure value is the average airborne concentration of a particular substance when calculated over a normal 8 hour working day for a 5 day working week. The STEL (Short Term Exposure Limit) is an exposure value that may be equalled (but should not be exceeded) for no longer than 15 minutes and should not be repeated more than 4 times per day. There should be at least 60 minutes between successive exposures at the STEL. The term "peak" is used when the TWA limit, because of the rapid action of the substance, should never be exceeded, even briefly.

Section 4 - First Aid Measures

General Information:

You should call The Poisons Information Centre if you feel that you may have been poisoned, burned or irritated by this product. The number is 13 1126 from anywhere in Australia (0800 764 766 in New Zealand) and is available at all times. Have this SDS with you when you call.

Inhalation: If irritation occurs, contact a Poisons Information Centre, or call a doctor. Remove source of contamination or move victim to fresh air. If breathing is difficult, oxygen may be beneficial if administered by trained personnel, preferably on a doctor's advice. In severe cases, symptoms of pulmonary oedema can be delayed up to 48 hours after exposure.

Skin Contact: Wash gently and thoroughly with warm water (use non-abrasive soap if necessary) for 10-20 minutes or until product is removed. Under running water, remove contaminated clothing, shoes and leather goods (e.g. watchbands and belts) and completely decontaminate them before reuse or discard. If irritation persists, repeat flushing and seek medical attention.

Eye Contact: Immediately flush the contaminated eye(s) with lukewarm, gently flowing water for 15 minutes or until the product is removed, while holding the eyelid(s) open. Take care not to rinse contaminated water into the unaffected eye or onto the face. Obtain medical attention immediately. Take special care if exposed person is wearing contact lenses.

Ingestion: If swallowed, do NOT induce vomiting. Wash mouth with water and contact a Poisons Information Centre, or call a doctor.

SAFETY DATA SHEET

Section 5 - Fire Fighting Measures

Fire and Explosion Hazards: The major hazard in fires is usually inhalation of heated and toxic or oxygen deficient (or both), fire gases. There is no risk of an explosion from this product under normal circumstances if it is involved in a fire.

Fire decomposition products from this product are likely to be toxic and corrosive if inhaled. Take appropriate protective measures.

Extinguishing Media: In case of fire, use carbon dioxide, dry chemical or foam.

Fire Fighting: If a significant quantity of this product is involved in a fire, call the fire brigade.

Flash point: >62°C

Upper Flammability Limit: No data.

Lower Flammability Limit: No data.

Autoignition temperature: No data.

Flammability Class: Flammable Category 4 (GHS), C1 combustible (AS 1940)

Section 6 - Accidental Release Measures

Accidental release: In the event of a major spill, prevent spillage from entering drains or water courses. Wear full protective clothing including eye/face protection. All skin areas should be covered. See below under Personal Protection regarding Australian Standards relating to personal protective equipment. No special recommendations for clothing materials. Eye/face protective equipment should comprise, as a minimum, protective goggles. If there is a significant chance that vapours or mists are likely to build up in the cleanup area, we recommend that you use a respirator. Usually, no respirator is necessary when using this product. However, if you have any doubts consult the Australian Standard mentioned below (section 8).

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. 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.

Section 7 - Handling and Storage

Handling: Keep exposure to this product to a minimum, and minimise the quantities kept in work areas. Check 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.

Storage: Note that this product is GHS Flammable Class 4 and therefore, for Storage, meets the definition of Dangerous Goods. If you store large quantities (tonnes) of such products, we suggest that you consult your state's Dangerous Goods authority in order to clarify your obligations regarding their storage.

Protect this product from light. Store in the closed original container in a dry, cool, well-ventilated area out of direct sunlight. Make sure that the product does not come into contact with substances listed under "Incompatibilities" in Section 10. Some liquid preparations settle or separate on standing and may require stirring before use. Check packaging - there may be further storage instructions on the label.

Section 8 - Exposure Controls and Personal Protection

The following Australian Standards will provide general advice regarding safety clothing and equipment:

Respiratory equipment: **AS/NZS 1715**, Protective Gloves: **AS 2161**, Occupational Protective Clothing: AS/NZS 4501 set 2008, Industrial Eye Protection: **AS1336** and **AS/NZS 1337**, Occupational Protective Footwear: **AS/NZS2210**.

SWA Exposure Limits	TWA (mg/m ³)	STEL (mg/m ³)
N-Methyl-2-pyrrolidone	103	309

No special equipment is usually needed when occasionally handling small quantities. The following instructions are for bulk handling or where regular exposure in an occupational setting occurs without proper containment systems.

Ventilation: This product should only be used in a well ventilated area. If natural ventilation is inadequate, use of a fan is suggested.

SAFETY DATA SHEET

Eye Protection: 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.

Skin Protection: Prevent skin contact by wearing impervious gloves, clothes and, preferably, apron. Make sure that all skin areas are covered. See below for suitable material types.

Protective Material Types: We suggest that protective clothing be made from the following materials: PVC.

Respirator: Usually, no respirator is necessary when using this product. However, if you have any doubts consult the Australian Standard mentioned above.

Eyebaths or eyewash stations and safety deluge showers should, if practical, be provided near to where this product is being handled commercially.

Section 9 - Physical and Chemical Properties:

Physical Description & colour:	Amber to brown coloured liquid.
Odour:	Hydrocarbon odour.
Boiling Point:	Not available.
Freezing/Melting Point:	No specific data. Liquid at normal temperatures.
Volatiles:	No data.
Vapour Pressure:	No data.
Vapour Density:	No data.
Specific Gravity:	No data.
Water Solubility:	Emulsifiable.
pH:	No data.
Volatility:	No data.
Odour Threshold:	No data.
Evaporation Rate:	No data.
Coeff Oil/water Distribution:	No data.
Autoignition temp:	No data.

Section 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.

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.

Incompatibilities: strong acids, strong bases, strong oxidising agents.

Fire Decomposition: 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 hydrogen fluoride gas and other compounds of fluorine. Carbon monoxide poisoning produces headache, weakness, nausea, dizziness, confusion, dimness of vision, disturbance of judgment, and unconsciousness followed by coma and death.

Polymerisation: This product will not undergo polymerisation reactions.

Section 11 - Toxicological Information

Toxicity: Genotoxicity studies show a lack of genotoxicity.

Reproductive and developmental toxicity. Studies show that fluroxypyr and fluroxypyr MHE are not teratogenic nor will they interfere with in utero development.

Subchronic toxicity. Fluroxypyr MHE showed a NOEL of 1,000 mg/ kg/day in a 90-day rat dietary study and a 21-day rabbit dermal study. Ninety day feeding studies with fluroxypyr showed NOELs of 80 mg/kg/day (Wistar rats), 700 mg/kg/day (Fischer 344 rats), 1342 mg/kg/day (male mice), and 1,748 mg/kg/day (female mice). In a 4-week dietary, range finding study with fluroxypyr in dogs the NOEL was >50 mg/kg/day.

Chronic toxicity. NOELs found in chronic dietary studies are as follows: 150 mg/kg/day (dog), 300 mg/kg/day (mouse), 80 mg/kg/day (Wistar rats), 100 mg/kg/day (male Fischer 344 rats), and 500 mg/kg/day (female Fischer 344 rats).

Animal metabolism. Studies show that fluroxypyr MHE is rapidly hydrolysed and the fate of the hydrolysis products, fluroxypyr and 1-methylheptanol, are independent of whether they were given as the ester or the acid. Fluroxypyr, per se, was extensively absorbed and rapidly excreted principally unchanged in the urine. 1-Methylheptanol also was rapidly absorbed and rapidly eliminated. Repeated administration of fluroxypyr MHE was not associated with accumulation in tissues. Also, the metabolism and pharmacokinetics of methylheptanol are comparable to that of the methylheptyl portion of fluroxypyr MHE.

SAFETY DATA SHEET

Carcinogenicity. There was no evidence of carcinogenicity in an 18-month mouse feeding study and a 24-month rat feeding study at all dosages tested. The NOELs shown in the mouse and rat oncogenicity studies were 1,000 and 320 mg/ kg/day, respectively.

N-methyl-2-pyrrolidone is a SWA Class 2 Reproductive risk, may cause harm to the unborn child.

Classification of Hazardous Ingredients

Ingredient	Risk Phrases
Fluroxypyr Methylheptyl Ester	
<ul style="list-style-type: none"> Hazardous to the aquatic environment (acute) – category 1 Hazardous to the aquatic environment (chronic) – category 1 	
Aromatic Hydrocarbons	Conc>=10%: Xn; R65
<ul style="list-style-type: none"> Aspiration hazard – category 1 	
N-methyl-2-pyrrolidone	Conc>=10%: T; R61; R36/37/38
<ul style="list-style-type: none"> Eye irritation – category 2A Skin irritation – category 2 Specific target organ toxicity (single exposure) – category 3 Reproductive toxicity – category 1B 	

Potential Health Effects

Inhalation:

Short Term Exposure: This product is an inhalation irritant. Symptoms may include headache, irritation of nose and throat and increased secretion of mucous in the nose and throat. Other symptoms may also become evident, but they should disappear after exposure has ceased if treatment is prompt.

Long Term Exposure: No data for health effects associated with long term inhalation.

Skin Contact:

Short Term Exposure: This product is a skin irritant. Symptoms may include itchiness and reddening of contacted skin. Other symptoms may also become evident, but if treated promptly, all should disappear once exposure has ceased.

Long Term Exposure: No data for health effects associated with long term skin exposure.

Eye Contact:

Short Term Exposure: This product is an eye irritant. Symptoms may include stinging and reddening of eyes and watering which may become copious. Other symptoms may also become evident. If exposure is brief, symptoms should disappear once exposure has ceased. However, lengthy exposure or delayed treatment may cause permanent damage.

Long Term Exposure: No data for health effects associated with long term eye exposure.

Ingestion:

Short Term Exposure: Significant oral exposure is considered to be unlikely. Because of the low viscosity of this product, it may directly enter the lungs if swallowed, or if subsequently vomited. Once in the lungs, it is very difficult to remove and can cause severe injury or death. However, this product is an oral irritant. Symptoms may include burning sensation and reddening of skin in mouth and throat. Other symptoms may also become evident, but all should disappear once exposure has ceased.

Long Term Exposure: No data for health effects associated with long term ingestion.

Carcinogen Status:

SWA: No significant ingredient is classified as carcinogenic by SWA.

NTP: No significant ingredient is classified as carcinogenic by NTP.

IARC: No significant ingredient is classified as carcinogenic by IARC.

Section 12 - Ecological Information

Very toxic to aquatic organisms, may cause long-term adverse effects to the aquatic environment.

Harmful to aquatic organisms. Not toxic: birds and bees.

Mobility Soil: Moderately mobile (Fluroxypyr)

Persistence/degradability Soil:

The product is not persistent. Half-life time ($t_{1/2}$): 5-9 days (Fluroxypyr), < 7 days (Fluroxypyr-meptyl)

Degradation is primarily via: microorganisms (Fluroxypyr) and hydrolysis (Fluroxypyr-meptyl)

SAFETY DATA SHEET

Water: DT₅₀ = 1-3 days (Fluroxypyr-methyl)

Ecotoxicity : Fish Fluroxypyr

LC₅₀ (96 hours) rainbow trout > 100 mg/L, golden orfe > 100 mg/L , rainbow trout > 0.9 mg/L, solubility limit (Fluroxypyr-meptyl)

golden orfe > 0.9 mg/L, solubility limit

Daphnia magna: EC₅₀ (48 hours) > 100 mg/L (Fluroxypyr) > 0.9 mg/L, solubility limit (Fluroxypyr-meptyl)

Green algae: EC₅₀ (96 hours) > 100 mg/L (Fluroxypyr) > 0.9 mg/L, solubility limit (Fluroxypyr-meptyl)

Birds: Bobwhite quail LD₅₀ > 2,000 mg/kg (Fluroxypyr-meptyl & Fluroxypyr)

Mallard duck LD₅₀ > 2,000 mg/kg (Fluroxypyr-meptyl & Fluroxypyr)

Bees: Oral LD₅₀ > 100 µg/bee (Fluroxypyr-meptyl), Contact LD₅₀ > 100 µg/bee (Fluroxypyr-meptyl)

Contact LD₅₀ > 25 µg/bee (Fluroxypyr)

Section 13 - Disposal Considerations

Disposal: Special help is available for the disposal of Agricultural Chemicals. The product label will give general advice regarding disposal of small quantities, and how to cleanse containers. However, for help with the collection of unwanted rural chemicals, contact ChemClear 1800 008 182 <http://www.chemclear.com.au/> and for help with the disposal of empty drums, contact DrumMuster <http://www.drummuster.com.au/> where you will find contact details for your area.

Section 14 - Transport Information

UN Number: This product is not classified as a Dangerous Good by ADG, IATA or IMDG/IMSBC criteria. No special transport conditions are necessary unless required by other regulations.

Section 15 - Regulatory Information

AICS: All of the significant ingredients in this formulation are compliant with NICNAS regulations. The following ingredient: N-Methyl-2-pyrrolidone, is mentioned in the SUSMP.

Section 16 - Other Information

This SDS contains only safety-related information. For other data see product literature.

Acronyms:

ADG Code	Australian Code for the Transport of Dangerous Goods by Road and Rail (7 th edition)
AICS	Australian Inventory of Chemical Substances
SWA	Safe Work Australia, formerly ASCC and NOHSC
CAS number	Chemical Abstracts Service Registry Number
Hazchem Code	Emergency action code of numbers and letters that provide information to emergency services especially firefighters
IARC	International Agency for Research on Cancer
NOS	Not otherwise specified
NTP	National Toxicology Program (USA)
SUSMP	Standard for the Uniform Scheduling of Medicines & Poisons
UN Number	United Nations Number

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 MUST REVIEW THIS SDS IN THE CONTEXT OF HOW THE PRODUCT WILL BE HANDLED AND USED IN THE WORKPLACE.

IF CLARIFICATION OR FURTHER INFORMATION IS NEEDED TO ENSURE THAT AN APPROPRIATE RISK ASSESSMENT CAN BE MADE, THE USER SHOULD CONTACT THIS COMPANY SO WE CAN ATTEMPT TO OBTAIN ADDITIONAL INFORMATION FROM OUR SUPPLIERS. OUR RESPONSIBILITY FOR PRODUCTS SOLD IS SUBJECT TO OUR STANDARD TERMS AND CONDITIONS, A COPY OF WHICH IS SENT TO OUR CUSTOMERS AND IS ALSO AVAILABLE ON REQUEST.

Please read all labels carefully before using product.

This SDS is prepared in accord with the SWA document "Preparation of Safety Data Sheets for Hazardous Chemicals - Code of Practice" (Feb 2016)

Copyright © Kilford & Kilford Pty Ltd, November, 2019.

<http://www.kilford.com.au/> Phone (02)8321 8866

SAFETY DATA SHEET