

MATERIAL SAFETY DATA SHEET

STATEMENT OF HAZARDOUS NATURE:

Hazardous according to the criteria of NOHSC Australia

COMPANY DETAILS:

Syngenta Crop Protection Pty Limited
ABN 33 002 933 717
140-150 Bungaree Rd.,
PENDLE HILL, NSW, 2145

Telephone No.: (02) 9688 0444
24 Hours Emergency No.: 1 800 033 111

IDENTIFICATION

PRODUCT NAME: FUSILADE POST-EMERGENCE SELECTIVE HERBICIDE

Formulation type:	emulsifiable concentrate	UN number:	3082
Active ingredient:	fluazifop-p butyl	Dangerous goods class:	9 (for marine transport)
Product code:		Subsidiary risk:	none allocated
Chemical type:	aryloxyphenoxypropionate	Hazchem code:	2X
Poisons schedule:	6	Packing group:	III
		EPG/IERG:	none allocated

USE: A selective herbicide for control of a wide range of grass weeds.

PHYSICAL DESCRIPTION/PROPERTIES

Appearance:	clear dark amber liquid	Flash Point:	70°C
Odour:	hydrocarbon odour	Flammability limits:	0.6 – 7
Boiling point:	226 - 279°C (solvent)	Combustibility:	combustible (C1)
Vapour pressure:	not available	Solubility in water:	emulsifiable
Specific gravity:	1.04 g/cm ³ at 20°C	% volatile by volume	80 % approx.

OTHER PROPERTIES

pH (1% aqueous):	not available	Auto-ignition temperature:	260 °C
Stability:	Reacts with oxidising agents and chlorine bleach (ammonia)	Rel. vapour density:	> 1

INGREDIENTS

	CAS No.	Content (%w/v)
Fluazifop-p technical grade 212 g/L (present as the butyl ester)	79241-46-6	20 – 30%
Hydrocarbon solvent	64742-95-6	70%
Emulsifiers	----	< 10%

HEALTH HAZARD INFORMATION

HEALTH EFFECTS

ACUTE TOXICITY

This product is harmful according to NOHSC Australia.

Swallowed: **NOT HARMFUL**
Tests on rats indicate this product is NOT HARMFUL following single oral doses of the active ingredient.
LD₅₀ male rat = 3680 mg/kg
LD₅₀ female rat = 2451 mg/kg

Dermal absorption: **NOT HARMFUL**
Tests on rats indicate this product is NOT HARMFUL following skin contact with the active ingredient.
LD₅₀ > 2076 mg/kg

Inhaled: **NOT HARMFUL**
 Tests on rats indicate this product is NOT HARMFUL due to inhalation of the active ingredient, fluazifop -p butyl.
 $LC_{50} > 5.24$ mg/L (4hr)

Irritation

Eye: **SLIGHT IRRITANT**
 Skin: **SLIGHT IRRITANT**

Sensitisation

Skin: **NOT A SKIN SENSITISER** (active ingredient)

Poisoning symptoms:

Swallowing can result in nausea, vomiting and central nervous system depression. Small amounts of the solvent aspirated into the respiratory system during ingestion or from vomiting may cause bronchopneumonia, pulmonary edema and lung scarring. Skin contact with the solvent may have a degreasing action on the skin. Repeated or prolonged skin contact may lead to irritant contact dermatitis. Vapour concentrations above recommended exposure levels may be irritating to the eyes and respiratory tract. Inhalation of vapour may cause headaches, dizziness and possible nausea. Inhalation of high concentrations can produce central nervous system depression, which can lead to loss of coordination, impaired judgement and if exposure is prolonged, unconsciousness.

CHRONIC TOXICITY

Fluazifop-p butyl technical – results from animal tests indicated that repeated or prolonged exposure produced liver and kidney disorders and embryo/foetotoxic effects. Short term tests have shown that fluazifop-p is unlikely to be carcinogenic. The ADI (Acceptable Daily Intake) for humans is 0.003 mg/kg/day.

FIRST AID

In case of poisoning by any exposure route contact a doctor or Poisons Information Centre. Phone 13 11 26.

Swallowed: Rinse mouth with water. DO NOT induce vomiting. Seek immediate medical assistance.

Eye: Irrigate with copious quantities of water for at least 15 minutes. Eyelids to be held open. Seek immediate medical assistance.

Skin: Wash contaminated skin with plenty of soap and water. Remove contaminated clothing and wash before re-use. If irritation occurs seek medical advice.

Inhaled: Move person to fresh air and keep at rest until recovered. If breathing laboured and patient cyanotic (blue), ensure airways are clear and have qualified person give oxygen through a face mask. If breathing has stopped apply artificial respiration at once. In event of cardiac arrest, apply external cardiac massage. Seek immediate medical assistance.

ADVICE TO DOCTOR

No specific antidote exists. Treat symptomatically.

PRECAUTIONS FOR USE

ALWAYS READ AND FOLLOW THE LABEL INSTRUCTIONS AND WARNINGS

EXPOSURE STANDARDS

	TWA		STEL	
	ppm	mg/m ³	ppm	mg/m ³
Fluazifop-p butyl	--	0.5	--	--
Hydrocarbon solvent	100	---	---	---

TWA = The time weighted average airborne concentrations over an eight-hour working day, for a five-day working week over an entire working life.
 STEL = Short Term Exposure Limit - the average airborne concentration over a 15 minute period which should not be exceeded at any time during a normal 8 hour work day.
 Peak Limit - a ceiling concentration which should not be exceeded over a measurement period which should be as short as possible but not exceeding 15 minutes.

Exposure Potential - Swallowing is unlikely under normal conditions of usage. Significant skin uptake does not occur. Inhalation is a possible route of exposure. This product is diluted with water prior to use as a spray. This diluted form is less toxic by all routes of exposure.

Re-entry Period - Do not enter treated areas without protective clothing until spray has dried.

ENGINEERING CONTROLS

Ensure ventilation is adequate and that air concentrations of components are controlled below quoted Exposure Standards. Use with local exhaust ventilation or while wearing organic vapour respirator. Keep containers closed when not in use.

PERSONAL PROTECTION

Avoid contact with eyes and skin. Do not inhale spray mist. Wear overalls, safety glasses or face shield and elbow length PVC gloves. After use and before eating, drinking or smoking, wash hands, arms and face thoroughly with soap and water. After each day's use, wash gloves, goggles, respirator or face piece and contaminated clothing. Only use protective equipment bearing the mark of the Standards Association of Australia. Code G Orica Personal Protection Guide no. 1, 1998.

FLAMMABILITY

This product is flammable and combustible (C1).

SAFE HANDLING INFORMATION

STORAGE AND TRANSPORT

Store in tightly sealed original containers in a dry secure place away from fertilisers, seed, feed and food. Store out of direct sunlight. Keep out of reach of children, unauthorised persons and animals.

Transport Classification – IMDG and Air:

UN No.:	3082	Proper Shipping Name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (CONTAINS FLUAZIFOP-P-BUTYL) MARINE POLLUTANT
Class:	9	Hazchem:	2X
Packing Group:	III		

SPILLS AND DISPOSAL

In case of spillage it is important to take all steps necessary to:

- Avoid eye and skin contact.
- Avoid contamination of waterways.
- Shut off all possible sources of ignition.

Procedure for spill:

- (1) Keep all bystanders away.
- (2) Wear full length clothing and PVC gloves.
- (3) Re-position any leaking containers so as to minimise further leakage.
- (4) Dam and absorb spill with an absorbent material (e.g. sand or soil).
- (5) Shovel the absorbed spill into drums.
- (6) Disposal of the absorbed material will depend upon the extent of the spill.
 - For quantities up to 50L of product bury in a secure landfill site.
 - For quantities greater than 50L seek advice from the manufacturer (use emergency contact number below) before attempting disposal. Contain in a secure location until disposal method is established.
- (7) Decontaminate the spill area with detergent and water and rinse with the smallest volume of water practicable.

Dispose of empty, used containers by:

- (a) Triple rinsing or preferably pressure rinsing containers with water. Add the rinsings to the spray tank. DO NOT dispose of undiluted chemicals on site.
- (b) If recycling, replace cap and return clean containers to recycler or designated collection point.
- (c) 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. Empty containers and product should not be burnt.

Returnable containers:

- (a) Empty contents fully into application equipment.
- (b) Close all valves and return to Syngenta Crop Protection, Pendle Hill, Sydney for re-use.

FIRE/EXPLOSION HAZARD

This product is a combustible liquid. Keep fire-exposed containers cool by spraying with water. On burning will emit toxic fumes. Extinguish warehouse and factory fires using fine water-spray, foam, carbon dioxide or dry chemical powder. When fighting a major fire wear SCBA and structural firefighters uniform. Do not allow fire-water to enter drains.

OTHER INFORMATION

The active ingredient, fluazifop-p butyl, has a high potential to bioaccumulate in aquatic species. Soil mobility is low and there is rapid degradation in most soils. Toxicity to fish is high - rainbow trout LC_{50} (96 h) = 1.07 mg/L. Toxicity to Water flea, *Daphnia magna*, EC_{50} (48 h) > 1 mg/L. Low toxicity to birds - mallard duck LD_{50} > 3528 mg/kg. Very low toxicity to bees – contact LD_{50} > 0.2 mg/kg.

Note: This product is a registered agricultural chemical and must therefore be used in accordance with the container label directions. A comprehensive package of toxicological and environmental data for the active ingredients of this product has been submitted to the Federal health and environment authorities and has been evaluated by expert toxicologists and environmental scientists.

<p>CONTACT POINT: Regulatory Affairs Manager - Crop Protection - (02) 9688 0444 24 HOURS EMERGENCY CONTACT: 1 800 033 111</p>

This Material Safety Data Sheet 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.

® Registered Trademark of a Syngenta Group Company