



103 - 105 PIPE ROAD, LAVERTON NORTH, VIC. AUSTRALIA 3026
Postal Address: PO Box 103, LAVERTON, VIC. AUSTRALIA 3028
Telephone: 03 9282 1000 Fax: 03 9282 1001

Table with 2 columns: PRODUCT: ASSET and Infosafe No: NU0ES ISSUED: Dec 01

Hazardous according to criteria of Worksafe Australia

UN NO....: D.G.CLASS: CAS NO...:
HAZCHEM...: SUB. RISK:
SUSDP....: S6 (FED) S6 (NSW) S6 (VIC) S6 (SA) S6 (WA) S6 (Qld) S6 (Tas) S6 (NT)
G.T.EPG...: SPEC.EPG.: PACK. GRP:

PRODUCT IDENTIFICATION

OTHER NAMES:

TRADENAMES.: Asset Herbicide
MANUF.: MANCODE: NUFARM 0645

INGREDIENTS:

Table with 3 columns: CHEMICAL ENTITY, CAS NO, PROPORTION. Includes Haloxyfop-R-methyl ester, Aromatic solvent, and Other non hazardous ingredients.

PHYSICAL DESCRIPTION/PROPERTIES

APPEARANCE:

Light brown liquid

BOILING POINT.....: 186°C (Solvent)
VAPOUR PRESSURE.....: 1.3x10-6mmHg@25°C haloxyfop, 26mmHg at 38°C (solvent)
VOLATILE COMPONENT.: No specific data, expected to be low at 100°C
SPECIFIC GRAVITY...: 0.945 g/mL at 20°C
FLASH POINT.....: 68°C
FLAMMABILITY LIMITS: 0.6-7.0% (solvent)
FORM.....: Liquid

OTHER PROPERTIES:

Forms an emulsion with water.

USE:

For the post-emergent control of a wide range of annual and perennial grass weeds in grain legume and oilseed crops, lucerne, medic and clover pasture and seed crops, forestry, bananas, citrus, grapes, pineapples, pome fruit, stone fruit, tropical fruit and nut crops as specified in the Directions for Use Table.



**MATERIAL SAFETY DATA SHEET**

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HEALTH HAZARD INFORMATION

**ACUTE EFFECTS**

**SWALLOWED:**

The acute toxicity of this product is low. If the concentrate enters the lung, lung damage may occur due to chemical pneumonia caused by solvents.

**EYE:**

Solvent vapour may irritate eyes. Concentrate in eye may cause moderate to severe irritation and possible corneal injury.

**SKIN:**

The acute dermal toxicity for a similar formulation is low and a single prolonged skin exposure is not likely to result in absorption of harmful amounts. The dermal LD50 (rabbit) is above 2000 mg/kg. Prolonged or repeated contact with the concentrate may cause mild irritation, drying or flaking of the skin. The prepared spray mix is not expected to be irritating to the skin.

**INHALED:**

The acute inhalation toxicity for a similar formulation is low and absorption of harmful amounts by inhalation is unlikely. Prolonged exposure to solvent vapours from the concentrate may cause eye and respirator irritation, headache, dizziness and narcotic effects. The inhalation LC50 (rat) for similar formulation is 4.7 mg/L for 4 hours. Under normal application conditions, exposure to the spray mix is very low and spray mistinhaled is unlikely to cause health effects.

**CHRONIC EFFECTS**

No specific data is available for the product for chronic exposure symptoms: Possible chronic health effects from exposure to Appeal are based on the active ingredient. Repeated oral exposure caused liver toxicity in rats and mice. Rats administered haloxyfop in long-term carcinogenicity studies showed no increase in tumors. A slight increase in liver toxicity was reported in female mice, but this result has been judged to be irrelevant to humans. Studies in rats and rabbits have indicated that haloxyfop does not cause birth defects or interfere with reproduction. Haloxyfop does not cause genetic change and does not accumulate in the body. The ingredients are not listed as carcinogenic in NOHSC's document "Exposure Standards for Atmospheric Contaminants in the Occupational Environment" (May 1995).

**FIRST AID**

**SWALLOWED:**

If swallowed, and if more than 15 minutes from a hospital, induce vomiting, preferably using Ipecac Syrup APF.



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**EYE:**

If in eyes, hold eyes open, flood with running water for at least 15 minutes and see a doctor.

**SKIN:**

If product gets on skin, wash skin to remove materials. No further measures should normally be required.

**INHALED:**

Remove to fresh air and observe until recovered.

**FIRST AID FACILITIES:**

**ADVICE TO DOCTOR:**

Treat symptomatically.

**TOXICITY DATA:**

For Haloxyfop methyl esters

Oral LD50 (male rat)	337 mg/kg
Oral LD50 (female rat)	545 mg/kg
Dermal LD50 (rabbit)	>5000 mg/kg
Oral LD50 (mallard duck)	>2150 mg/kg
Oral LD50 (bob quail)	1159 mg/kg

Honey Bee - Non Toxic

LC50 (48hr) Daphnia 6.2 mg/L

LC50 (96hr) Bluegill sun 0.3mg/L

Haloxyfop-R-methyl ester has high toxicity to fish and moderate toxicity to other aquatic organisms. Haloxyfop-R-methyl ester has low toxicity to birds and earthworms, and is non-toxic to honey bees. Haloxyfop-R-methyl ester is rapidly hydrolyzed to haloxyfop acid which has low toxicity to birds, fish, aquatic organisms, earthworms and honey bees. Haloxyfop does not bioaccumulate in animal systems.

The Australian Acceptable Daily Intake(ADI) of haloxyfop for a human is 0.0003 mg/kg/day, set for the public for daily, lifetime exposure. This is based on the NOEL of 0.03 mg/kg/day, the level determined to show no effects during long term exposure for the most sensitive indicators and the most sensitive species.

(Ref:Comm.Dept.of Health & Aged Care,TGA,"ADI List", August 2001).

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PRECAUTIONS FOR USE

**EXPOSURE STANDARDS:**

A time weighted average (TWA) concentration for an 8 hour day, and 5 day week has not been established by the National Occupational Health and Safety Commission for any of the major ingredients in this product.  
The manufacturers of the solvent have recommended a TLV of 100ppm for the solvent.

**ENGINEERING CONTROLS:**

In industrial situations, concentration values below the TWA value should be maintained. Values may be reduced by process modification, use of local exhaust ventilation, capturing substances at the source, or other methods.  
If you believe air borne concentrations of mists, dusts or vapours are high, you are advised to modify the process or environment to reduce the problem.

**PERSONAL PROTECTION:**

Product will irritate the eyes and may irritate the skin. Avoid contact with eyes and skin. When preparing the spray and using the prepared spray, wear cotton overalls, buttoned to the neck and wrist, a washable hat, elbow-length PVC gloves and face shield and goggles. If product is in the eyes, wash out immediately with water. Wash hands after use. After each day's use, wash gloves, face shield or goggles and contaminated clothing.

**FLAMMABILITY:**

Non flammable.

**ENVIRONMENT:**

Do not spray in high winds.  
Do not contaminate dams, waterways or sewers with pesticide or used containers. Do not use this container for any other purpose. Wash out the container and dispose of it in an approved manner.

Haloxypop-R-methyl ester is rapidly hydrolysed to haloxypop acid in soil, plants and water. Haloxypop acid in soil is degraded by microbial actions, with half-lives ranging between 6 and 133 days (average 53) depending on soil and climatic conditions. Haloxypop has limited potential to leach into soils and residues are generally found in the top 15 to 30 centimetres of a soil profile. If used according to the label directions this product will not be harmful to the environment.



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SAFE HANDLING INFORMATION

**STORAGE AND TRANSPORT:**

**STORAGE:**

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

**TRANSPORT:**

Not classified as a dangerous good. No special storage and transport requirements. Avoid contact with food, foodstuff empties, feedstuffs, fertilisers, seeds, clothing, drugs or other household goods during transport and storage.

**Packaging and Labelling:**

Keep out of Reach of Children

Read Safety Directions Before Opening

This product has been assessed according to Worksafe Criteria for classifying hazardous substances and is classified as Hazardous.

**Risk Phrases:**

R36 Irritating to eyes

R20 Harmful by inhalation

R65 Harmful, may cause lung damage if swallowed

**Safety Phrases:**

S25 Avoid contact with eyes

S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

**SPILLS AND DISPOSAL:**

Wear appropriate clothing whilst cleaning up small spills. Apply absorbent material such as earth, sand, clay granules or cat litter to the spill.

Sweep up material when absorption is completed and contain in a refuse vessel for disposal in the same manner as for containers. If necessary wash the spill area with an alkali detergent and water and absorb the wash liquid for disposal as above. Prevent entry of chemical or used/damaged containers into drains, stream or waterways.

Triple rinse containers, add rinsate to the spray tank, then offer container for recycling/reconditioning or puncture top, sides and bottom and dispose of in landfill in accordance with local regulations. On-site disposal of concentration is not acceptable.

**FIRE/EXPLOSION HAZARD:**

This product is classified as a C1 combustible product. There is a slight risk of an explosion from this product if it is involved in fire.

Extinguishing media: Carbon dioxide, dry chemical, foam, water fog.



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**Reactivity Data:**

Keep away from strong oxidising agents, may react violently. Material is unlikely to spontaneously decompose.

OTHER INFORMATION

User Data:

WSA Haz? :Y

Contact Point:

Normal Hours: Mr. Volker Maier Phone: (03) 9282-1000

After Hours: Shift Supervisor Phone: 1 800 033 498

End: Infosafe printed Material Safety Data Sheet - 10 December 2001