



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: BROADSIDE HERBICIDE; Infosafe No: NU0CC ISSUED: Nov 00

Hazardous according to criteria of Worksafe Australia

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

PRODUCT IDENTIFICATION

OTHER NAMES:

TRADENAMES.: Broadside Herbicide MANUF.: NUFARM MANCODE: 0145

INGREDIENTS:

Table with 3 columns: CHEMICAL ENTITY, CAS NO, PROPORTION. Includes MCPA, Bromoxynil, Dicamba, Hydrocarbon solvent, and Proprietary surfactant mixture.

PHYSICAL DESCRIPTION/PROPERTIES

APPEARANCE:

Clear, dark-brown liquid with typical solvent odour.
BOILING POINT...: 190-270°C (for solvent present)
MELTING POINT...: <0°C
VAPOUR PRESSURE...: The active ingredients have very low vapour pressures
VOLATILE COMPONENT...: ~30% V/V
SPECIFIC GRAVITY...: 1.089
FLASH POINT...: 75°C (PMCC)
FLAMMABILITY LIMITS: LEL 0.7%, UEL ~5% for solvent present
AUTOIGNITION TEMP...: Not known
REL. VAPOUR DENSITY: ~5 (for solvent present)
DECOMPOSITION TEMP...: Not known
pH...: Neutral
FORM...: Liquid

OTHER PROPERTIES:

Vapour pressure bromoxynil octanoate 1.9x10-4 Pa
MCPA iso-octyl ester estimated @ 5-10 x 10-6 mmHg
Dicamba acid non-volatile
The product emulsifies in water



MATERIAL SAFETY DATA SHEET

PRODUCT: BROADSIDE HERBICIDE	Infosafe No: NU0CC ISSUED: Nov 00
-------------------------------------	----------------------------------------------------

USE:

For selective control of certain broadleaf weeds in wheat, barley, oats and triticale.

HEALTH HAZARD INFORMATION

ACUTE EFFECTS

SWALLOWED:

The concentrate is considered moderately toxic if swallowed. Amounts swallowed incidental to normal handling procedures are not expected to cause injury. However, swallowing of larger amounts may cause injury. If aspirated into the lung eg. from vomiting, the presence of the hydrocarbon solvent may cause chemical pneumonitis. The product has been classified as harmful if swallowed, according to Worksafe Criteria.

EYE:

The concentrate may cause irritation of the eyes. Prolonged contact of the concentrate with eyes may result in some damage.

SKIN:

Acute dermal toxicity has not been determined for this product, but based on data available for its components, dermal toxicity is expected to be moderate. Classification according to Worksafe Criteria results in a classification of harmful by skin absorption. Slight skin irritation may occur after repeated or prolonged contact of the skin with the product. Repeated or proplonged contact of the skin with the concentrate will result in de-fatting of the skin which may lead to dermatitis.

INHALED:

The components of the product are of low volatily and no adverse effects are expected from handling the concentrate. In confined spaces some discomfort may occur due to the presence of some solvent vapour. A moderate hazard exists from inhalation of spray and care should be taken to avoid inhalation of spray mists.

CHRONIC EFFECTS

Chronic Over Exposure: Weight loss and damage to liver and kidneys may be expected if exposure is excessive.

OTHER HEALTH HAZARD INFORMATION

Acute Ovevr Exposure: Headache, nausea and vomiting from solvent, however, other than fever, the acute effects of the active ingredients are poorly documented

FIRST AID



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

MATERIAL SAFETY DATA SHEET

Page 3

PRODUCT: BROADSIDE HERBICIDE	Infosafe No: NU0CC ISSUED: Nov 00
-------------------------------------	----------------------------------------------------

SWALLOWED:

If swallowed, and if more than 15 minutes from a hospital, induce vomiting using Ipecac Syrup APF, if available.
Make every effort to place patient so that vomit is not inhaled.
If poisoning has occurred, contact a doctor or Poisons Information Centre.

EYE:

Immediately irrigate with copious quantity of water for at least 15 minutes.
Eyelids to be held open.

SKIN:

Wash affected areas with copious quantities of soap and water immediately.
Remove contaminated clothing and launder before re-use.

INHALED:

Remove to fresh air, apply artificial respiration if necessary.
Consult a doctor.

FIRST AID FACILITIES:

If poisoning occurs, contact a doctor or Poisons Information Centre.
Obtain a supply of Ipecac Syrup APF, if permitted.

ADVICE TO DOCTOR:

Treat symptomatically.
If vomiting occurs solvent present may cause pulmonary pneumonitis.

TOXICITY DATA:

Technical Dicamba

Acute Oral LD50 Rat: 1700mg/kg
Acute Dermal LD50 Rabbit: >2000mg/kg
Acute Inhalation LC50 Rat: >200mg/L (nominal concentration) for a 4 hour exposure.

Skin Irritation in Rabbit: Mild to moderately irritating (concentrate)
Eye Irritation in Rabbit: Extremely irritating and may be corrosive (dicamba acid)

Other:

Repeated high levels of dermal exposure to rabbits has resulted in skin irritation and toxicity. The liver, kidney and lung appear to be the most sensitive organs affected from repeated oral, dermal and inhalation exposures in experimental animals.

Dicamba has been studied extensively to determine potential health effects. Animal experimentation with dicamba has not demonstrated any carcinogenic, teratogenic or other reproductive effects with the exception of slightly reduced fetal body weights and post-implantation losses reported at the Maximum Tolerated Dose level. The preponderance of experimental data suggests dicamba is not a mutagen.

Technical Bromoxynil octanoate

Continued on next page ...



MATERIAL SAFETY DATA SHEET

PRODUCT: BROADSIDE HERBICIDE	Infosafe No: NU0CC ISSUED: Nov 00
-------------------------------------	----------------------------------------------------

TOXICITY DATA: - (continued)

Acute oral LD50 rats 365mg/kg
Acute oral LD50 mice 306mg/kg
Acute dermal LD50 rats >2,000 mg/Kg

Toxicity to fish: Toxic to fish
LC50 (48 hr) rainbow trout: 0.15 mg/L (as bromoxynil)

Toxicity to Birds: Moderately toxic
Acute oral LD50 (pheasants) 175 mg/Kg

Toxicity to Bees: Not toxic to bees.

For iso-octyl ester of MCPA

Toxicity to mammals
Acute oral LD50 (rat): 1500 mg/Kg
Acute dermal LD50 (rabbit): >2,000 mg/Kg
Acute inhalation LC50 (rat, 4hr): >4.5 mg/L (maximum attainable concentration
Skin irritation (rabbit): no irritation
Eye irritation (rabbit): no irritation
Sensitisation (guinea pig): did not cause sensitisation

Toxicity to fish: Moderately toxic to fish
LC50 (96hr) for rainbow trout: 3.2 mg/L

Toxicity to fish.
Threshold value in perch: 200 mg/L
roach: 215 mg/L (3-4 days)
LD50 in rainbow trout: 232 mg/L (96 hours)

Toxicity to bees: Considered not toxic to bees

Biodegradability: Rapidly biodegradable, according to appropriate test procedures. Half-life is approximately 20 days.

The Australian Acceptable Daily Intake (ADI) of bromoxynil for a human is 0.003 mg/kg/day, set for the public for daily, lifetime exposure. This is based on the NOEL of 0.3 mg/kg/day, the level determined to show no effects during long term exposure for the most sensitive indicators and the most sensitive species.

The Australian Acceptable Daily Intake (ADI) of MCPA for a human is



MATERIAL SAFETY DATA SHEET

PRODUCT: BROADSIDE HERBICIDE	Infosafe No: NU0CC ISSUED: Nov 00
-------------------------------------	----------------------------------------------------

TOXICITY DATA: - (continued)

0.01 mg/Kg/day, set for the public for daily, lifetime exposure. This is based on the NOEL of 1.1 mg/kg/day, the level determined to show no effects during long term exposure for the most sensitive indicators and the most sensitive species.

The Australian Acceptable Daily Intake(ADI) of dicamba for a human is 0.03 mg/kg/day, set for the public for daily, lifetime exposure. This is based on the NOEL of 3 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 Human Services and Health, "ADI List", AGPS, May 1997).

PRECAUTIONS FOR USE

EXPOSURE STANDARDS:

No exposure limits have been set for this product or the active ingredients. The supplier of the solvent recommends an occupational exposure limit of 100 ppm, TWA, as total hydrocarbon.

ENGINEERING CONTROLS:

Natural only. When handling concentrate in confined spaces, it is advisable to use a local exhaust to keep the concentration of solvent in the air to a comfortable level.

PERSONAL PROTECTION:

Product is poisonous if swallowed. May irritate the eyes and skin. Avoid contact with eyes and skin. When opening container and preparing spray wear elbow-length PVC gloves, face shield or goggles. If product on skin immediately wash area with soap and water. 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, face shield or goggles and contaminated clothing.

FLAMMABILITY:

Combustible

ENVIRONMENT:

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



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

MATERIAL SAFETY DATA SHEET

PRODUCT: BROADSIDE HERBICIDE	Infosafe No: NU0CC ISSUED: Nov 00
-------------------------------------	----------------------------------------------------

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.
Do not store near insecticides, fertilisers, foodstuffs, or eating utensils.

TRANSPORT

Considered non hazardous for transport by the Australian Code for the Transport of Dangerous Goods by Road and Rail.

Packaging and Labelling:

POISON

NOT TO BE TAKEN

KEEP OUT OF REACH OF CHILDREN

READ SAFETY DIRECTIONS BEFORE OPENING

The product has been assessed according to the Worksafe criteria for classifying hazardous substances and is classified as hazardous:

Risk Phrases:

R20/21/22 Harmful by inhalation, in contact with skin and if swallowed

R63 Possible risk of harm to the unborn child

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

S36/37 Wear suitable protective clothing and gloves

S23 Do not breathe vapour

S24 Avoid contact with skin

S62 If swallowed, and if more than 15 minutes from a hospital, induce vomiting using IPECAC Syrup APF, if available. Make every effort to place the patient so that vomit is not inhaled. If swallowed and medical help is available within 15 minutes, do not induce vomiting: seek medical advice and show the container or label.

SPILLS AND DISPOSAL:

Contain spill and absorb with sand or proprietary absorbent (vermiculite).

Prevent from entering drains, waterways or sewers.

Collect in sealed open top containers for disposal.

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 concentrate is not acceptable.



MATERIAL SAFETY DATA SHEET

PRODUCT: BROADSIDE HERBICIDE	Infosafe No: NU0CC ISSUED: Nov 00
------------------------------	--------------------------------------

FIRE/EXPLOSION HAZARD:

Although material is not flammable, the concentrate is combustible. If involved in a fire, it will emit toxic fumes of hydrogen bromide, hydrogen chloride, hydrogen cyanide or other compounds of bromine, chlorine and nitrogen. Breathable air apparatus may have to be worn in confined spaces. Keep upwind.

Extinguishing media: Water fog, "alcohol" foam, carbon dioxide and dry chemical.

Reactivity Data:

Keep away from oxidising agents, may react violently.
Polymerisation is not possible

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 - 28 November 2000