



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

<b>PRODUCT: CARBARYL 500 Flowable Insecticide</b>	<b>Infosafe No: NU02K</b> <b>ISSUED: May 97</b>
---	--

**Hazardous according to criteria of Worksafe Australia**

<b>UN NO. ....: 2992</b>	<b>D.G. CLASS: 6.1</b>	<b>CAS NO. ....:</b>
<b>HAZCHEM. ....: 2X</b>	<b>SUB. RISK:</b>	
<b>SUSDP. ....: 6 (FED) 6 (NSW) 6 (VIC) 6 (SA) 6 (WA) 6 (Qld) 6 (Tas) 6 (NT)</b>	<b>SPEC. EPG. ....:</b>	<b>PACK. GRP: III</b>
<b>G.T. EPG. ....: 6A1</b>		

PRODUCT IDENTIFICATION

**CORRECT SHIPPING NAME:**  
CARBAMATE PESTICIDES, LIQUID, TOXIC, N.O.S. (CARBARYL)

**OTHER NAMES:**

<b>TRADENAMES. .:</b>	<b>MANUF. .:</b>	<b>MANCODE:</b>
Flowable Carbaryl 500 Insecticide	NUFARM	1025

<b>INGREDIENTS:</b>	<b>CAS NO:</b>	<b>PROPORTION:</b>
<b>CHEMICAL ENTITY:</b>		
Carbaryl technical	63-25-2	500 g/L
Ethylene glycol	107-21-1	50- 100g/L
Mixed surfactants/stabilisers		30- 60g/L
Water		balance

**PHYSICAL DESCRIPTION/PROPERTIES**

**APPEARANCE:**

Opaque white liquid with mild odour.

**BOILING POINT.....:** approximately 100°C (for water)

**VAPOUR PRESSURE.....:** 0.041 mPa @ 23.5°C for carbaryl

**VOLATILE COMPONENT.:** 45%

**SPECIFIC GRAVITY...:** 1.115

**FLASH POINT.....:** Not applicable (water based product)

**FLAMMABILITY LIMITS:** Not applicable

**OTHER PROPERTIES:**

Carbaryl is essentially insoluble in water but additives in this formulation disperse the active ingredient when product is mixed with water.

**USE:**

For the control of pests on fruit trees, vegetables, pastures and field crops; and also for the control of some industrial and domestic pests as specified in the Directions for Use Table.



**MATERIAL SAFETY DATA SHEET**

<b>PRODUCT: CARBARYL 500 Flowable Insecticide</b>	<b>Infosafe No: NU02K</b> <b>ISSUED: May 97</b>
---	--

HEALTH HAZARD INFORMATION

**ACUTE EFFECTS**

**SWALLOWED:**

Product is toxic by ingestion presenting a moderate, to severe hazard. Ingestion of a large quantity of the product may lead to severe effects such as respiratory depression and convulsions may occur.

**EYE:**

May cause some discomfort if contact is prolonged.

**SKIN:**

Carbaryl is rapidly absorbed through the skin; this is the most likely route of absorption during use.

**INHALED:**

Unlikely route of exposure when handling the concentrate. Exposure to spray should be avoided. When spraying, respiratory protection is advisable.

**CHRONIC EFFECTS**

Regular exposure may result in lowering of cholinesterase activity. No other adverse effects have been noted in populations regularly using the product. At doses toxic to maternal animals, carbaryl has been shown to produce developmental toxicity in a number of species. No such effects have been observed in the absence of maternal toxicity. The balance of evidence supports the conclusion that carbaryl and its metabolites do not present a quantifiable mutagenic risk to humans. Carcinogenicity studies in animals have been shown to be negative.

**OTHER HEALTH HAZARD INFORMATION**

Symptoms of over exposure to large quantities of product: rapid onset of nausea, vomiting, abdominal pains, diarrhea, pinpoint pupils, blurred vision, profuse sweating, salivation, muscle twitching and temporary paralysis. More severe poisoning may depress respiration and convulsions may occur. Usually recovery is rapid.

**FIRST AID**

**SWALLOWED:**

If poisoning occurs, contact a doctor or Poisons Information Centre. Never give fluids or induce vomiting to a person who is unconscious or having convulsions. If product has been swallowed, give one atropine tablet (0.6mg) every five minutes until dryness of the mouth occurs. Get to a doctor or hospital promptly.

**EYE:**

Wash with copious amounts of water for 15 minutes with eyelids held open.



**MATERIAL SAFETY DATA SHEET**

<b>PRODUCT: CARBARYL 500 Flowable Insecticide</b>	<b>Infosafe No: NU02K</b> <b>ISSUED: May 97</b>
---	--

**SKIN:**

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

**INHALED:**

Remove to fresh air until recovered. If not breathing, commence resuscitation. If breathing is difficult, oxygen may be given by a trained person. Obtain medical attention.

**FIRST AID FACILITIES:**

If carbaryl is regularly used, a supply of atropine tablets (0.06 mgm) should be kept (Check State Regulations).

**ADVICE TO DOCTOR:**

The product is a carbamate, a cholinesterase inhibitor. The effects of overexposure are reversible.

Atropine treatment may be required or treat with up to 10 mg diazepam; curare therapy is contraindicated. Do not give adrenergic amines, aminophylline, succinylcholine, phenothiazines or reserpine alkaloids or oils.

Caution should be maintained to prevent over-atropinisation.

Persons regularly exposed to this product should have pre-exposure and periodic red blood cell cholinesterase level check. (Check appropriate State regulations).

**TOXICITY DATA:**

For carbaryl:

Acute oral LD50 (rat): 264 mg/Kg.

Acute dermal LD50 (rat): >2000 mg/Kg.

Acute inhalation LC50 (rat, 4hr): 2.5 mg/L.

In 2 year feeding trials, rats receiving 200 mg/Kg diet suffered no ill effects.

No occupational deaths have been recorded for carbaryl in many years of use, nor have there been any reported accidental deaths. There has been only one recorded death - a suicide.

Toxicity to fish: LC50 for fish is 5 - 13 mg/L; moderately toxic.

Toxic to honey bees.

The Australian Acceptable Daily Intake (ADI) of carbaryl for a human is 0.01 mg/kg/day, set for the public for daily, lifetime exposure. This is based on the NOEL of 2 mg/kg/day, the level determined to show no effects during long term exposure for the most sensitive indicators and the most sensitive species.

(Reference: Commonwealth Department of Human Services and Health. "ADI List", AGPS, May 1997.)



**MATERIAL SAFETY DATA SHEET**

<b>PRODUCT: CARBARYL 500 Flowable Insecticide</b>	<b>Infosafe No: NU02K</b> <b>ISSUED: May 97</b>
---	--

PRECAUTIONS FOR USE

**EXPOSURE STANDARDS:**

For carbaryl: 5 mg/m<sup>3</sup>, TWA.

**ENGINEERING CONTROLS:**

Natural ventilation only is required. If product has dried out and the possibility of dust generation exists, wear suitable respirator.

**PERSONAL PROTECTION:**

Wear cotton overalls buttoned to the neck and wrist. Avoid contact with eyes and skin. When handling the product, wear elbow length PVC gloves and eye protection. If product gets on to skin, wash off immediately with warm water and soap. Launder any contaminated clothing before re-use. 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 and other safety gear and any contaminated clothing.

**FLAMMABILITY:**

Not a combustible liquid.

**ENVIRONMENT:**

The product is a marine pollutant for transport by sea.  
Carbaryl is toxic to fish.  
Carbaryl is toxic to bees.  
Do NOT spray on vegetation where honey bees are foraging.  
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.

Carbaryl is biodegradable in soil with a half-life of 7 - 28 days, depending upon conditions.

SAFE HANDLING INFORMATION

**STORAGE AND TRANSPORT:**

**STORAGE:**

Store in original sealed container in a cool place, away from children, foodstuffs, seed, fertilisers and other pesticides.  
Ensure that storage complies with State and local regulations.

**TRANSPORT DETAILS:**

CARBAMATE PESTICIDES, LIQUID, TOXIC, N.O.S.

UN No. 2992

Packaging Group: III

Hazchem: 2X

Class: 6.1

Subrisk: -

EPG: 6A1

Continued on next page ...



MATERIAL SAFETY DATA SHEET

Page 5

PRODUCT: CARBARYL 500 Flowable Insecticide

Infosafe No: NU02K  
ISSUED: May 97

**Packaging and Labelling:**

The product is a Schedule 6 poison according to the Standard for the Uniform Scheduling of Drugs and Poisons. The principal labelling requirements are;  
POISON

KEEP OUT OF THE REACH OF CHILDREN

READ SAFETY DIRECTIONS BEFORE OPENING OR USING.

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

**Risk Phrases:**

R22. Harmful if swallowed.

**Safety Phrases:**

S2. Keep out of the reach of children.

S24. Avoid contact with skin.

**SPILLS AND DISPOSAL:**

Contain spill and absorb with sand or other inert absorbent.

Prevent from entering drains, waterways and sewers.

Collect in sealable containers for disposal.

Contaminated earth (after a spill) can be treated with lime.

Carbaryl hydrolyses rapidly in alkaline, wet conditions.

**DISPOSAL:**

Dispose of any collected spilled material by burial at a site approved by State and local authorities.

Triple rinse containers, add rinsate to the spray's 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 is not acceptable.

**FIRE/EXPLOSION HAZARD:**

Not combustible. If involved in a major fire, hazardous decomposition materials may be formed. The smoke from such a fire is expected to be hazardous. Use breathable air apparatus if fighting a fire involving this product. If possible, use water to cool drums involved in the fire and remove drums as soon as safe to do so.

Extinguishing media; use medium appropriate for fire source and nature.

Hazchem: 2X. Make every effort to prevent any fire water from getting into waterways, dams, drains or sewers.

**Reactivity Data:**

Keep away from strong oxidising agents, may react violently.

Carbaryl is stable at temperatures below 70C. It hydrolyses rapidly to

1-naphthol at pH >9.

Polymerisation is not possible

Continued on next page ...



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 6

PRODUCT: CARBARYL 500 Flowable Insecticide

Infosafe No: NU02K  
ISSUED: May 97

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 - 9 April 2001