

Country: RSA, NAM, BOT, ZAM, MOZ
 Language: English
 Version: 1

SDS Number: 000016
 Issue Date: 2024-05-01
 Print Date: 2026-03-20

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Product identifier				
Product form		Mixtures		
Trade name		Karbawash		
Product code		50g 12041 (6001379012964)		
Registration Number		G0196; N-AR0148		
SDS Number		000016		
1.1. Relevant identified uses of the substance or mixture and uses advised against				
1.1.1. Relevant identified uses				
Main use category		Insecticide – for Dogs		
Industrial/Professional use spec		Home and Garden.		
Use of the substance/mixture		Insecticide.		
1.1.2. Uses advised against				
		See product label for restrictions.		
1.3. Details of the supplier of the safety data sheet				
		Agro-Serve (Pty) Ltd 15 Diesel Road, Isando, 1600, South Africa P.O. Box 652147, Benmore, 2010, South Africa		
Telephone		+27 861 333 586 08h00 – 17h00 Monday to Friday		
Email		info@efekto.co.za		
Website		www.efekto.co.za		
1.4. Emergency telephone number				
Country	Organisation/Company	Address	Emergency number	Comment
Poisons Centre				
South Africa	Griffon Poisons Centre		082 446 8946	Dr Gerhard H Verdoorn
Spillage				
South Africa	Spill Tech		086 100 0366	

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture	
Classification according to Regulation (EC) No. 1272/2008 [CLP]Mixtures	
	Acute toxicity, oral: Category 5: H303 May be harmful if swallowed.
	Specific target organ toxicity, single exposure; Respiratory tract irritation: Category 3: H335 May cause respiratory irritation.
	Carcinogenicity: Category 2: H351 Suspected of causing cancer.
	Acute aquatic toxicity: Category 1: H400 Very toxic to aquatic life.
	Chronic aquatic toxicity: Category 1: H410 Very toxic to aquatic life with long lasting effects.
See Section 16 for the full text of the H statements declared above.	
See Section 11 for more detailed information on health effects and symptoms.	
2.2. Label elements	
Labelling according to Regulation (EC) No. 1272/2008 [CLP]	
	 
Hazard pictograms	GHS08 GHS09
Hazardous components which must be listed on the label	• Carbaryl
CLP Signal word	Warning
Hazard statements	H302: Harmful if swallowed.
	H332: Harmful if inhaled.
	H351: Suspected of causing cancer.
	H400 - Very toxic to aquatic life.
	H410 - Very toxic to aquatic life with long lasting effects.
Precautionary statements	
General Statement	P101: If medical advice is needed, have product container or label at hand.
	P102: Keep out of reach of children.
	P103: Read carefully and follow all instructions.
Prevention Statement	P261: Avoid breathing dust/mist/vapors/spray.
	P264: Wash hands thoroughly after handling.
	P270: Do not eat, drink or smoke when using this product.

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	P271: Use only outdoors or in a well-ventilated area.
	P273: Avoid release to the environment.
	P280: Wear protective gloves/protective clothing/eye protection/face protection.
Response Statements	P317: Get emergency medical help.
	P318: If exposed or concerned, get medical advice.
	P301+P317: IF SWALLOWED: Get medical help.
	P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.
	P330: Rinse mouth.
	P391: Collect spillage.
Storage Statements	P403+P233: Store in a well-ventilated place. Keep container tightly closed.
Disposal Statements	P501: Dispose of contents/container to a licensed hazardous-waste disposal contractor or collection site except for empty clean containers which can be disposed of as non-hazardous waste.
2.3. Other hazards	
	Not applicable.

SECTION 3: Composition/information on ingredients

3.1. Substances

	Wettable Powder (WP)
	Biocidal product

3.2. Mixtures

				According to (EC) 1907/2006 (REACH) amendment Reg. (EU) 2020/878	
Chemical Name	CAS-No.	EC – Number	Conc. % by weight	Classification	Warning Symbols
Carbaryl 1-naphthyl methylcarbamate (Hazard classification of this material is based on the worst possible case)	63-25-2	200-555-0	20 %	Acute Tox. 4: H302. Acute Tox. 4 (Inhalation): H332. Carc. Cat. 2: H351. Aquatic Acute 1, H400. Aquatic Chronic 1, H410.	
Other ingredients (non-hazardous) to 100%		Balance		100 %	

Further information

Carbaryl	63-25-2	M-Factor: 100 (acute); 100 (chronic)
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For the full text of the Hazard statements mentioned in this Section, see Section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

General Advice	Have the product container, label or Safety Data Sheet with you when calling a poison control centre or physician, or going for treatment.
First-aid measures after inhalation	Move the victim to fresh air and keep at rest. Call a physician or poison control centre immediately.
First-aid measures after skin contact	Immediately wash with plenty of soap and water for at least 15 minutes. Warm water may increase the subjective severity of the irritation/paresthesia. This is not a sign of systemic poisoning. In case of skin irritation, application of oils or lotions containing vitamin E may be considered. If symptoms persist, call a physician.
First-aid measures after eye contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Warm water may increase the subjective severity of the irritation/paresthesia. This is not a sign of systemic poisoning. Apply soothing eye drops, if needed anaesthetic eye drops. Get medical attention if irritation develops and persists.
First-aid measures after ingestion	Rinse out mouth and give water in small sips to drink. Do NOT induce vomiting. If swallowed, seek medical advice immediately and show this container or label.

4.2. Most important symptoms and effects, both acute and delayed

	Temporary blurred vision due to contraction of the pupils (miosis) following contact with the eyes.
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4.3. Indication of any immediate medical attention and special treatment needed

	This product is a cholinesterase inhibitor carbamate.
	The product inhibits cholinesterase resulting in stimulation of the central nervous system, the parasympathetic nervous system, and the somatic motor nerves.
	Do not use oximes such as 2-PAM unless organophosphate intoxication is suspected. Watch for pulmonary edema, which may develop in serious cases of poisoning even after 24-48

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	hours. At first sign of pulmonary edema, the patient should be placed in an oxygen tent and treated symptomatically. Contraindications: derivatives of morphine.
	The following antidote is generally accepted: atropine.

SECTION 5: Firefighting measures

5.1. Extinguishing media	
Suitable	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Unsuitable	Water jet.
5.2. Special hazards arising from the substance or mixture	
	Flammable liquid and vapour. Toxic fumes may be released.
5.3. Advice for firefighters	Special protective equipment for fire-fighters
	In the event of fire and/or explosion do not breathe fumes. Firefighters should wear NIOSH approved self-contained breathing apparatus and full protective clothing.
5.3. Further information	
	Keep out of smoke. Fight fire from upwind position. Cool closed containers exposed to fire with water spray. Do not allow run-off from firefighting to enter drains or water courses.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures	
6.1.1. For non-emergency personnel	
Emergency procedures	Keep unauthorized people away. Isolate hazard area. Avoid contact with spilled product or contaminated surfaces. Ventilate spillage area. Avoid contact with skin and eyes.
6.1.2. For emergency responders	
Protective equipment	Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".
6.2. Environmental precautions	
	Do not allow to enter soil, waterways or wastewater canal.
6.3. Methods and material for containment and cleaning up	
For containment	Collect spillage.
Methods for cleaning up	Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Collect and transfer the product into a properly labelled and tightly closed container. Clean contaminated floors and objects thoroughly, observing environmental regulations.
Other information	Dispose of materials or solid residues at an authorized site.
6.4. Reference to other sections	
	Information regarding safe handling, see section 7. Information regarding personal protective equipment, see section 8. Information regarding waste disposal, see section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling	
Precautions for safe handling	Handle and open container in a manner as to prevent spillage. Use only in area provided with appropriate exhaust ventilation. Avoid dust formation.
Hygiene measures	Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, using the toilet or applying cosmetics. Remove Personal Protective Equipment (PPE) immediately after handling this product. Before removing gloves clean them with soap and water. Remove soiled clothing immediately and clean thoroughly before using again. Wash thoroughly and put on clean clothing.
7.2. Conditions for safe storage, including any incompatibilities	
Technical measures	Ground/bond container and receiving equipment.
Storage conditions	Keep containers tightly closed in a dry, cool and well-ventilated place. Store in a place accessible by authorized persons only. Store in original container. Keep away from direct sunlight. Protect from freezing.
Storage temperature	>0°C <40°C
7.3. Specific end use(s)	
	Refer to the label and/or leaflet.

SECTION 8: Exposure controls/personal protection

Control parameters				
Components	CAS-No.	Exposure limit(s)	Type of exposure limit	Source
Carbaryl	63-25-2	5 mg/m3	TWA	OSHA Z1A

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RECOMMENDATIONS IN THIS SECTION ARE FOR MANUFACTURING, COMMERCIAL BLENDING AND PACKAGING WORKERS. APPLICATORS AND HANDLERS SHOULD SEE THE PRODUCT LABEL FOR PROPER PERSONAL PROTECTIVE EQUIPMENT AND CLOTHING.

Appropriate engineering controls:	In normal use and handling conditions please refer to the label and/or leaflet. In all other cases the following recommendations would apply.
Hand protection:	Chemical resistant nitrile rubber gloves.
Eye protection:	Tightly fitting safety goggles.
Skin and body protection:	Wear long-sleeved shirt and long pants and shoes plus socks.
Respiratory protection:	When respirators are required, select NIOSH approved equipment based on actual or potential airborne concentrations and in accordance with the appropriate regulatory standards and/or industry recommendations.
	
General protective measures:	Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and warm/tepid water. Keep and wash PPE separately from other laundry.
Environmental exposure controls:	Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Powder
Colour	White
Odour	None
Odour threshold	No data available
Melting point / Freezing point	Carbaryl melts about 142°C.
Boiling point or initial boiling point and boiling range	> 97.8°C
Flammability	Product is not flammable
Lower and upper explosion limit	Product does not present an explosion hazard
Flash point	> 100 °C
Auto ignition temperature	No data available
Decomposition temperature	175 - 190 °C
pH	5.5 – 7.2
Kinematic viscosity	No data available
Solubility	Miscible
Partition coefficient octanol / water (log value)	No data available
Vapour pressure	No data available
Density Solubility	1.100 g/ml (20°C)
Relative density	No data available
Particle characteristics	No data available

9.2. Other information

No additional information available.

SECTION 10: Stability and reactivity

10.1. Reactivity

Stable under normal conditions.

10.2. Chemical stability

Stable under recommended storage conditions.

10.3. Possibility of hazardous reactions

No hazardous reactions when stored and handled according to prescribed instructions.

10.4. Conditions to avoid

Avoid contact with hot surfaces. Heat. No flames, no sparks. Eliminate all sources of ignition.

10.5. Incompatible materials

Store only in the original container.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity	: Not classified
Final acute toxicity classification formulated Product	
LD50 oral rat	LD50 (rat) 2,500 mg/kg
LC50 inhalation rat (mg/l)	LC50 (Rat) 7.5 mg/l

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Carbaryl	
LD50 oral rat	LD50 (rat) 850 mg/kg
LD50 dermal rat	LD50 (rat) > 2,000 mg/kg
LC50 inhalation rat (mg/l)	LC50 (Rat) 206.1 mg/l
ATE CLP (vapours)	3.200 mg/l/4h
ATE CLP (dust, mist)	3.200 mg/l/4h
Skin corrosion/irritation	Not irritation (Rabbit)
Serious eye damage/irritation	Will irritate eyes.
Respiratory or skin sensitisation	Non-sensitizing. (guinea pig)
STOT-single exposure	This material has been classified as non-hazardous.
STOT-repeated exposure	Carbaryl caused reversible cholinesterase inhibition without long term effects in animal studies.
Aspiration hazard	Harmful if inhaled. Anti-cholinesterase effects. May cause decreased heart rate, low blood pressure, excessive production of bodily secretions, constriction of the airways, increase in the fluid pressure inside the eye and diarrhoea.
Assessment mutagenicity	Carbaryl was not mutagenic or genotoxic based on the overall weight of evidence in a battery of in vitro and in vivo tests.
Assessment carcinogenicity	Carbaryl caused at high dose levels an increased incidence of tumours in the following organ(s): Liver, Thyroid, Kidney, Cardio-vascular system. The mechanism that triggers tumours in rodents is not relevant for the low exposures encountered under normal use conditions. Listed as a category 3 carcinogen (possibly carcinogenic to humans) by Safe Work Australia. The United States Environmental Protection Agency has classified carbaryl as a Group D, not classifiable as to human carcinogenicity. The International Agency for Research on Cancer (IARC), has also listed it as not classifiable as to human carcinogenicity.
Assessment toxicity to reproduction	Carbaryl did not cause reproductive toxicity in a two-generation study in rats.
Assessment developmental toxicity	Carbaryl did not cause developmental toxicity in rats and rabbits.
Further information	Not applicable.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general: Very toxic to aquatic life with long lasting effects.

Carbaryl

LC50 fish 1	LC50 (Rainbow trout (<i>Oncorhynchus mykiss</i>)) 1.3 mg/l: 96 h
EC50 Daphnia 1	EC50 (<i>Daphnia magna</i> (Water flea)) 6 µg/l: 48 h
ErC50 (algae)	<i>Scenedesmus quadricauda</i> (Green algae) > 0.60 mg/l; Exposure time: 72 h
Bees LD50 (oral)	1 µg/bee.
Bees LC50 (contact)	1.54 - 26.5 µg/bee
Earthworm LC50 (14 days)	0.5 µg/cm ² - 8.3 µg/cm ²
Birds Oral LD50	Mallard ducks: > 5 000 mg/kg

12.2. Persistence and degradability

Persistence and degradability	Readily biodegradable.
Koc	624

12.3. Bioaccumulative potential

Log Pow	Bioconcentration factor (BCF) 44
Bioaccumulative potential	Does not bioaccumulate.

12.4. Mobility in soil

Ecology - soil	Slightly mobile in soils
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12.5. Results of PBT and vPvB assessment

	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII.
	This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods	Dispose of contents/container in accordance with licensed collector's sorting instructions.
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Additional information	Follow container label instructions for disposal of wastes generated during use in compliance with the product label. Never place unused product down any indoor or outdoor drain.
Contaminated packaging	Do not re-use empty containers. Place empty container in trash. Follow advice on product label and/or leaflet.

SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / AND / RID				
ADR	IMDG	IATA	ADN	RID
14.1. UN number				
2757	2757	2757	2757	2757
				
14.2. UN proper shipping name				
Carbamate pesticide, solid, toxic.	Carbamate pesticide, solid, toxic.	Carbamate pesticide, solid, toxic.	Carbamate pesticide, solid, toxic.	Carbamate pesticide, solid, toxic.
Transport document description				
UN 2757 CARBAMATE PESTICIDES, SOLID, TOXIC. (CARBARYL MIXTURE), 6.1, III, (D/E), ENVIRONMENTALLY HAZARDOUS	UN 2757 CARBAMATE PESTICIDES, SOLID, TOXIC. (CARBARYL MIXTURE), 6.1, III, MARINE POLLUTANT/ENVIRONMENTALLY HAZARDOUS	UN 2757 CARBAMATE PESTICIDES, SOLID, TOXIC. (CARBARYL MIXTURE), 6.1, III, ENVIRONMENTALLY HAZARDOUS	UN 2757 CARBAMATE PESTICIDES, SOLID, TOXIC. (CARBARYL MIXTURE), 6.1, III, ENVIRONMENTALLY HAZARDOUS	UN 2757 CARBAMATE PESTICIDES, SOLID, TOXIC. (CARBARYL MIXTURE), 6.1, III, ENVIRONMENTALLY HAZARDOUS
14.3. Transport hazard class(es)				
6.1	6.1	6.1	6.1	6.1
				
14.4. Packing group				
III	III	III	III	III
14.5. Environmental hazards				
Dangerous for the environment : Yes	Dangerous for the environment : Yes Marine pollutant : Yes	Dangerous for the environment : Yes	Dangerous for the environment : Yes	Dangerous for the environment : Yes

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture	
Registration No.	G0196; N-AR0148
This chemical is a registered pesticide product and is subject to certain labelling requirements under law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information required on the pesticide label.	
Hazard statements:	Handle with care. Poisonous by swallowing and inhalation. Toxic to fish, bees and wildlife. Store away from food and feed. Keep out of reach of children, uninformed persons and animals.
WHO-classification:	U (Unlikely to present acute hazard in normal use)
Classification according to GHS:	Category 5
IRAC Insecticide Group Code:	1A
15.2. Chemical safety assessment	
No chemical safety assessment has been carried out	

SECTION 16: Other information

Indication of changes:			
Section	Changed item	Change	Comments

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Full text of H- and EUH-statements:	
H302	Harmful if swallowed.
H332	Harmful if inhaled.
H351	Suspected of causing cancer.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:

Acute. tox. 5	H303	Calculation method.
STOT SE 3	H335	Calculation method.
STOT Carc. 2	H351	Calculation method.
Aquatic Acute 1	H400	Calculation method.
Aquatic Chronic 1	H410	Calculation method.

HMIS (Hazardous Materials Identification System, based on the Third Edition Ratings Guide)

Health - 1	Flammability - 1	Physical Hazard - 1	PPE - 1
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0 = minimal hazard, 1 = slight hazard, 2 = moderate hazard, 3 = severe hazard, 4 = extreme hazard

Abbreviations and acronyms

ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways.
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road.
ATE	Acute toxicity estimate.
CAS-Nr.	CAS-Nr. Chemical Abstracts Service number.
CEILING	Ceiling Limit Value
Conc.	Concentration.
EC-No.	European community number.
ECx	Effective concentration to x %.
IATA	International Air Transport Association.
IBC	International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk (IBC Code)
ICx	Inhibition concentration to x %.
IMDG	International Maritime Dangerous Goods.
LCx	Lethal concentration to x %.
LDx	Lethal dose to x %
LOEC/LOEL	Lowest observed effect concentration/level.
MARPOL	MARPOL: International Convention for the prevention of marine pollution from ships.
N.O.S.	Not otherwise specified.
NOEC/NOEL	No observed effect concentration/level
OECD	Organization for Economic Co-operation and Development.
OES	Occupational Exposure Standard.
PEAK	PEAK: Exposure Standard - Peak means a maximum or peak airborne concentration of a particular substance determined over the shortest analytically practicable period of time which does not exceed 15 minutes.
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail.
SK-SEN	Skin sensitizer.
SKIN_DES	SKIN_DES: Skin notation: Absorption through the skin may be a significant source of exposure.
STEL	STEL: Exposure standard - short term exposure limit (STEL): A 15-minute TWA exposure which should not be exceeded at any time during a working day even if the eight-hour TWA average is within the TWA exposure standard. Exposures at the STEL should not be longer than 15 minutes and should not be repeated more than four times per day. There should be at least 60 minutes between successive exposures at the STEL.
TWA	TWA: Exposure standard - time-weighted average (TWA): The average airborne concentration of a particular substance when calculated over a normal eight-hour working day, for a five-day working week.
UN	United Nations.
WHO	World health organisation.

This safety data sheet provides health and safety information. This product is to be used in applications with best use practice. The product information in this data sheet is to the best of our knowledge correct as at the date of publication. Agro-Serve (Pty) Ltd does not accept responsibility for damage caused by incorrect use of this information.

Training and related advice: This document contains important information to ensure the safe storage, handling of this product. It is the responsibility of your organisation to ensure that the information contained in this document is communicated to staff and that all necessary training has been given.

This information is provided in good faith but without express or implied warranty. The customer assumes all responsibility for safety and use not in accordance with label instructions.

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Prepared BY: Nico Lionel van der Westhuis – Technical Support Marketing
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End of Safety data Sheet