Agfuran 10 G (Carbofuran 100 g/kg)

Safety Data Sheet

according to SANS 10234:2019 and SANS 11014:2010
Issue date: 9/8/2022 Version: 1.0

SECTION 1: Identification

1.1. Product identifier

Product form	:	Mixture
Trade name	:	Agfuran 10 G (Carbofuran 100 g/kg)
Type of product	:	Insecticide
CAS-No.	:	1563-66-2
Product group	:	End product

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture	:	A systemic granular insecticide and nematicide for the control of pests mentioned on the crops listed
Restricted use:		This remedy is restricted due to acute toxicity. This remedy may only be sold to and used by a registered pest control operator, or by someone under the supervision of a registered pest control operator, and only for those uses covered by the pest control operator's scope of registration, and only as directed on the label.

1.3. Supplier's details

Supplier
Farm-Ag International (Pty) Ltd
Old Mill Industrial Park
61, Marshall Drive
P.O. Box 1523
4300 Mount Edgecombe – Durban KwaZulu Natal
South Africa
T 031 003 3486

1.4. Emergency telephone number

Emergency number	:	24 Hr Emergency Number: In case of Poisoning: Poison Information Helpline : 0861 555 777 In case of Spillage: HAZMAT:0800 147 112

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to the United Nations GHS

Acute toxicity (oral), Category 2	H300
Acute toxicity (dermal), Category 4	H312
Acute toxicity (inhalation:dust,mist) Category 2	H330
Hazardous to the aquatic environment – Acute Hazard, Category 1	H400
Hazardous to the aquatic environment – Chronic Hazard, Category 2	H411

Full text of H-statements: see section 16

2.2. Label elements

Labelling according to the United Nations GHS

Hazard pictograms (GHS ZA) :

Signal word (GHS-ZA) : Danger

Hazardous ingredients : Carbofuran 97% TC

Hazard statements (GHS ZA) : H300+H330 - Fatal if swallowed or if inhaled
H312 - Harmful in contact with skin.
H400 - Very toxic to aquatic life.
H411 - Toxic to aquatic life with long lasting effects.

Precautionary statements (GHS ZA) : P101 - If medical advice is needed, have product container or label at hand.
P102 - Keep out of reach of children.
P103 - Read label before use.
P260 - Do not breathe dust.
P264 - Wash hands, forearms and face thoroughly after handling.
P270 - Do not eat, drink or smoke when using this product.
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.
P284 - In case of inadequate ventilation wear respiratory protection.
P301+P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor.
P302+P352 - IF ON SKIN: Wash with plenty of soap and water.
P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P310 - Immediately call a POISON CENTER or doctor.
P312 - Call a POISON CENTER or doctor if you feel unwell.
P320 - Specific treatment is urgent (see ANTIDOTE, supplemental first aid instruction on this label).
P330 - Rinse mouth.
P362+P364 - Take off contaminated clothing and wash it before reuse.
P391 - Collect spillage.
P403+P233 - Store in a well-ventilated place. Keep container tightly closed.
P405 - Store locked up.
P501 - Dispose of contents and container to an approved waste disposal plant.

2.3. Other hazards

Adverse physicochemical, human health and environmental effects : Fatal if inhaled,Fatal if swallowed,Harmful in contact with skin,Very toxic to aquatic life,Toxic to aquatic life with long lasting effects.

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	Classification according to the United Nations GHS
Silica sand	CAS-No.: 14808-60-7	≥ 85 – < 90	Not classified
Carbofuran 97% TC	CAS-No.: 1563-66-2	≥ 10 – < 15	Acute Tox. 2 (Oral), H300 Acute Tox. 4 (Dermal), H312 Acute Tox. 1 (Inhalation:dust,mist), H330 Aquatic Acute 1, H400 (M=10) Aquatic Chronic 1, H410
Sodium lignosulfonate	CAS-No.: 8061-51-6	≥ 1 – < 5	Acute Tox. Not classified (Oral) Eye Irrit. 2A, H319 Aquatic Acute Not classified

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : Proper care should be taken during occupational uses to avoid any inhalation of dust and spray particles, and to prevent accidental contamination of food products and water.

First-aid measures after inhalation : Acute exposure:
When inhaled, the first effects of cholinesterase inhibition are usually respiratory and may include nasal hyperaemia and watery discharge, chest discomfort, dyspnea and wheezing due to increased bronchial secretions and bronchoconstriction. Other systemic effects may begin within a few minutes or several hours of exposure. Symptoms may include nausea, vomiting, diarrhoea, abdominal cramps, headache, vertigo, ocular pain, ciliary muscle spasm, blurring or dimness of vision, miosis, or in some cases mydriasis, lacrimation, salivation, sweating and confusion. Other reported central nervous system or neuromuscular effects include ataxia, slurred speech, weakness, fatigue, twitching, fasciculation, tremor, and eventually paralysis of the extremities and possibly of the respiratory muscles. In severe cases, there may also be involuntary defecation and urination, bradycardia, hypotension, pulmonary oedema, convulsions, coma and death from respiratory failure or cardiac arrest. Carbofuran does not accumulate in mammalian tissue and the cholinesterase inhibition reverses rather rapidly. In non-fatal cases, the illness generally lasts less than 24 hours.
Chronic exposure:
Prolonged or repeated exposure may cause effects as described in acute exposure.
First aid:
Remove from exposure area to fresh air immediately. If breathing has stopped, give mechanical artificial respiration (not direct mouth-to-mouth). Maintain airway and blood pressure and administer oxygen if available. Keep affected person warm and at rest. Treat symptomatically and supportively. Administration of oxygen should be performed by qualified personnel. Get medical attention immediately.

First-aid measures after skin contact : Acute exposure:
Some compounds may cause irritation. Localized sweating and fasciculations may occur at the site of contact. If sufficient amounts are absorbed through the skin, other effects of cholinesterase inhibition may occur as described in acute inhalation. Symptoms may be delayed for 2-3 hours, usually no more than 8 hours.
Chronic exposure:
Repeated or prolonged exposure may cause effects as described in acute exposure.
First aid:
Remove contaminated clothing immediately. Wash contaminated areas with soap and water followed by alcohol. Emergency personnel should wear gloves and avoid contamination. Treat respiratory difficulty with mechanical artificial respiration. Get medical attention immediately.

First-aid measures after eye contact : Acute exposure:
Direct contact may cause pain, hyperaemia, lacrimation, twitching of the eyelids, miosis and ciliary muscle spasm with loss of accommodation, blurred or dimmed vision and browache. Sometimes mydriasis may occur instead of miosis. With sufficient exposure, other symptoms of cholinesterase inhibition may occur as described in acute inhalation.
Chronic exposure:
Prolonged exposure may cause effects as described in acute exposure. Some compounds have caused toxic effects on the crystalline lens, conjunctival thickening and obstruction of nasolacrimal canals when used as miotic drops.
First aid:
Irrigate eyes with water or saline solution. If symptoms of poisoning occur, treat respiratory difficulty with mechanical artificial respiration and oxygen. Observe patient for at least 24-36 hours. Get medical attention immediately. Oxygen should be administered by qualified medical personnel.

First-aid measures after ingestion : Acute exposure:
When ingested, the first effects may be nausea, vomiting, anorexia, abdominal cramps and diarrhoea. With absorption from the gastrointestinal tract, the other effects of cholinesterase inhibition as described in acute inhalation may occur. Symptoms may begin within minutes or be delayed several hours.
Chronic exposure:
Repeated ingestion may cause effects as described in acute exposure.
First aid:
If person is alert and respiration in not depressed, dive syrup of Ipecac followed by water (if vomiting occurs, keep head below hips to prevent aspiration). If consciousness level declines or vomiting has not occurred in 15 minutes empty stomach by gastric lavage with aid of cuffed endotracheal tube using isotonic saline or 5% sodium bicarbonate follow with activated charcoal. Establish and maintain airway. Treat respiratory difficulty with artificial respiration and oxygen.

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

Symptoms/effects after inhalation	:	Fatal if inhaled.
Symptoms/effects after skin contact	:	Harmful in contact with skin.
Symptoms/effects after ingestion	:	Fatal if swallowed.

4.3. Indication of any immediate medical attention and special treatment needed

Do not give morphine, aminophylline, phenothiazines, reserpine, furosemide, or ethacrynic acid. Drugs like 2PAM are not effective in poisoning with Carbofuran. THEY SHOULD NOT BE USED.
Treat symptomatically and supportively. Administration of oxygen and gastric lavage must be performed by qualified medical personnel. Get medical attention immediately.

Further Medical treatment:
Advice to physician:
Antidote
The following antidote has been recommended. However, the decision as to whether the severity of poisoning requires administration of any antidote and actual dose required should be made by qualified medical personnel.
For cholinesterase inhibitors: Establish clear airway and tissue oxygenation by aspiration of secretions, and if necessary, by assisted pulmonary ventilation with oxygen. Improve tissue oxygenation as much as possible before administrating atropine to minimise the risk of ventricular fibrillation. Administer atropine sulphate intravenously, or intramuscularly if injection is not possible. In moderately severe poisoning administer atropine sulphate, 0.4-2.0 mg repeated every 15minutes, until atropinization is achieved (tachycardia, flushing, dry mouth, mydriasis). Maintain atropnization be repeated doses for 2-12 hours, or longer, depending on the severity of poisoning. The appearance of rales in the lung bases, miosis, salivation, nausea, bradycardia, are all indications of inadequate atropinization. Severely poisoned individuals may exhibit remarkable tolerance to atropine. Two or more times the dosages suggested above may be needed. Persons not poisoned or only slightly poisoned, however, may develop signs of atropine toxicity from such large dosages: fever, muscle fibrillations, and delirium are main signs of atropine toxicity. If these signs appear while the patient is fully atropinized, atropine administration should be discontinued, at least temporarily. Observe treated patients closely at least 24 hours to ensure that symptoms (possibly pulmonary oedema) do not recur as atropinization wears off. In very severe poisoning, metabolic diposition of toxicant may require several hours or days during which atropinization must be maintained. Markedly lower levels of urinary metabolites indicate that atropine dosage can be tapered off. As dosage is reduced, check the lung bases frequently for rales. If rales are heard or other symptoms return, re-establish atropinization promptly.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	:	Extinguish small fires with carbon, dry chemical, water spray or standard foam. For larger fires, use dry chemical, “alcohol” foam, Halon, or carbon dioxide to fight fire.

5.2. Special hazards arising from the substance or mixture

Hazardous decomposition products in case of fire	:	Toxic fumes may be released.

5.3. Advice for firefighters

Firefighting instructions	:	Move containers from fire area if possible. Fight fire from maximum distance. Stay away from storage tank ends. Contain fire control water for later disposal. Do not scatter material, extinguish only if flow can be stopped. Use flooding amounts of water as a fog, solid streams may be ineffective. Cool containers with flooding amounts of water as far a distance as possible. Do not get water inside the containers. For massive fire, use unmanned hose holders or monitor nozzles; if this is impossible, withdraw from area and let fire burn. Use water spray to absorb toxic vapour. Avoid breathing toxic vapour. Keep unwind. Consider evacuation of downwind area if material is leaking. Fire and explosion hazard: Not flammable. Toxic dust and irritating fumes may be produced during fires.
Protection during firefighting	:	Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.
Personal protection (Emergency response)	:	Wear respiratory protection,Wear protective gloves,Wear protective clothing,Wear high visibility clothing,Face-shield

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

No additional information available

6.1.1. For non-emergency personnel

Emergency procedures : Do not breathe dust. Only qualified personnel equipped with suitable protective equipment may intervene.

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 entering drains or watercourses. Spillage or uncontrolled discharges into water courses (or public waters) to be reported immediately to the Police and to the Department of Water/Environmental Affairs.

6.3. Methods and material for containment and cleaning up

For containment : Collect spillage.

Methods for cleaning up : Small spills: Do not touch spilled material. Stop leak if you can do so without risk. Use water spray to reduce vapours (contain any water used). Neutralise with sodium hydroxide and allow to stand for 4 hours. Sweep up with sand or other suitable absorbent material, such as sawdust, and place into containers for later disposal. Move containers from spill area. Larger spills: Contain material far ahead of spill for later disposal. Keep spectators away. Isolate hazard area and deny entry. Ventilate closed spaces before entering.

Other information : Dispose of materials or solid residues at an authorized site.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Use only outdoors or in a well-ventilated area. Do not breathe dust. Do not get in eyes, on skin, or on clothing. Wear personal protective equipment.

Hygiene measures : Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store locked up. Store in a well-ventilated place. Keep container tightly closed. Keep cool.

Storage area : Store out of reach of unauthorised persons, children and animals.

Information on mixed storage : KEEP SUBSTANCE AWAY FROM: Food supplies. Water supplies.

Maximum storage period : 2 years

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Carbofuran 97% TC (1563-66-2)	
South Africa - Occupational Exposure Limits (Recommended Limits)	
Local name	Carbofuran
OEL TWA	0 mg/m³ (IFV: inhalable fraction and vapour)
Regulatory reference	Government Notice No. R. 280, 2021
South Africa - Occupational Exposure Limits (Airborne Pollutants)	
Local name	Carbofuran
OEL TWA	0 mg/m³

Carbofuran 97% TC (1563-66-2)	
Regulatory reference	Government Notice No. R 904

kaolin (1332-58-7)	
South Africa - Occupational Exposure Limits (Airborne Pollutants)	
Local name	Kaolin
OEL TWA	3 mg/m³ respirable particulate
Regulatory reference	Government Notice No. R 904

Silica sand (14808-60-7)	
South Africa - Occupational Exposure Limits (Recommended Limits)	
Local name	Quartz, crystalline
OEL TWA	0 mg/m³ respirable dust
Regulatory reference	Government Notice. R: 1179
South Africa - Occupational Exposure Limits (Airborne Pollutants)	
Local name	Quartz (Silica, crystalline)
OEL TWA	0 mg/m³ respirable particulate
Regulatory reference	Government Notice No. R 904

8.2. Appropriate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station.
Environmental exposure controls : Avoid release to the environment.

8.3. Individual protection measures, such as personal protective equipment (PPE)

Hand protection : Protective gloves
Eye protection : Safety glasses
Skin and body protection : Wear suitable protective clothing
Respiratory protection : In case of inadequate ventilatio wear respiratory protection.

Personal protective equipment symbol(s):

8.4. Exposure limit values for the other components

No additional information available

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Solid
Appearance : Granule.
Colour : Violet.
Odour : Phenol odour.
Odour threshold : No data available
pH : No data available
pH solution : No data available
Relative evaporation rate (butylacetate=1) : No data available
Relative evaporation rate (ether=1) : No data available
Melting point : No data available
Freezing point : Not applicable
Boiling point : No data available

Flash point	:	Not applicable
Auto-ignition temperature	:	Not applicable
Decomposition temperature	:	No data available
Flammability (solid, gas)	:	Non flammable.
Vapour pressure	:	No data available
Vapour pressure at 50 °C	:	No data available
Relative vapour density at 20 °C	:	No data available
Relative density	:	0.74 – 0.84
Relative density of saturated gas/air mixture	:	No data available
Density	:	No data available
Relative gas density	:	No data available
Solubility	:	No data available
Partition coefficient n-octanol/water (Log Pow)	:	No data available
Partition coefficient n-octanol/water (Log Kow)	:	No data available
Viscosity, kinematic	:	Not applicable
Viscosity, dynamic	:	No data available
Explosive properties	:	No data available
Oxidising properties	:	No data available
Explosive limits	:	Not applicable
Lower explosion limit	:	No data available
Upper explosion limit	:	No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral)	:	Fatal if swallowed.
Acute toxicity (dermal)	:	Harmful in contact with skin.
Acute toxicity (inhalation)	:	Fatal if inhaled.

Agfuran 10 G (Carbofuran 100 g/kg) (1563-66-2)	
ATE ZA (oral)	8.863 mg/kg bodyweight
ATE ZA (Dermal)	1023.055 mg/kg bodyweight

Agfuran 10 G (Carbofuran 100 g/kg) (1563-66-2)	
ATE ZA (dust, mist)	0.055 mg/l/4h
Unknown acute toxicity (GHS ZA)Unknown acute toxicity (GHS ZA)	86.75% of the mixture consists of ingredient(s) of unknown acute toxicity (Oral) 88.46% of the mixture consists of ingredient(s) of unknown acute toxicity (Dermal) 88.46% of the mixture consists of ingredient(s) of unknown acute toxicity (Inhalation (Dust/Mist))

Carbofuran 97% TC (1563-66-2)	
LD50 oral rat	7 mg/kg (Rat, Experimental value, Oral)
LD50 oral	14.4 mg/kg Mice
LD50 dermal rat	1000 – 2000 mg/kg
LC50 Inhalation - Rat (Dust/Mist)	0.05 mg/l/4h

Sodium lignosulfonate (8061-51-6)	
LD50 oral	6030 mg/kg Mouse

Mineral oil (8042-47-5)	
LD50 oral rat	> 5000 mg/kg bodyweight (Equivalent or similar to OECD 401, Rat, Male / female, Read-across, Oral, 14 day(s))
LD50 dermal rabbit	> 2000 mg/kg bodyweight (Equivalent or similar to OECD 402, 24 h, Rabbit, Male / female, Read-across, Dermal, 14 day(s))
LC50 Inhalation - Rat	> 5 mg/l (Equivalent or similar to OECD 403, 4 h, Rat, Male / female, Read-across, Inhalation (aerosol), 14 day(s))

Clay (1327-36-2)	
LD50 oral rat	> 2000 mg/kg bodyweight Animal: rat, Animal sex: female, Guideline: OECD Guideline 423 (Acute Oral toxicity - Acute Toxic Class Method), Guideline: EU Method B.1 tris (Acute Oral Toxicity - Acute Toxic Class Method)
LD50 dermal rabbit	> 5000 mg/kg bodyweight Animal: rabbit, Guideline: OECD Guideline 402 (Acute Dermal Toxicity)

Skin corrosion/irritation : Not classified
Serious eye damage/irritation : Not classified
Respiratory or skin sensitisation : Not classified
Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified
Reproductive toxicity : Not classified
STOT-single exposure : Not classified

Acid Blue Dye (6408-78-2)	
STOT-single exposure	May cause respiratory irritation.

STOT-repeated exposure : Not classified
Aspiration hazard : Not classified

Agfuran 10 G (Carbofuran 100 g/kg) (1563-66-2)	
Viscosity, kinematic	Not applicable

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : Very toxic to aquatic life. Toxic to aquatic life with long lasting effects.
Hazardous to the aquatic environment, short–term (acute) : Very toxic to aquatic life.
Hazardous to the aquatic environment, long–term (chronic) : Toxic to aquatic life with long lasting effects.

Carbofuran 97% TC (1563-66-2)	
LC50 - Fish [1]	0.33 mg/l Rainbow trout
LC50 - Fish [2]	0.18 mg/l Bluegill sunfish
LC50 - Other aquatic organisms [1]	0.0386 mg/l Daphnia
ErC50 algae	19 mg/l Pseudokirchneriella subcapitata
Partition coefficient n-octanol/water (Log Kow)	1.8
Partition coefficient n-octanol/water (Log Pow)	2.32 (Literature study)
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	1.98 (log Koc, Estimated value)
Additional ecotoxicological information	Birds: Acute oral LD50 for Japanese quail 4.9, bobwhite quail 8.0, mallard ducks 0.71 mg/kg. Dietary LC50 (5d) for mallard ducks 79, bobwhite quail 855 mg/kg diet. Bees (LD50, µg/bee) 0.036 (contact); 0.05 (oral). Worms LC50 (14d) for Eisenia fetida 224 mg/kg soil.

Acid Blue Dye (6408-78-2)	
LC50 - Fish [1]	12 mg/l Source: The ECOTOXicology database
Partition coefficient n-octanol/water (Log Pow)	2.22

Sodium lignosulfonate (8061-51-6)	
LC50 - Fish [1]	7300 mg/l Source: ECOTOX
Partition coefficient n-octanol/water (Log Pow)	-3.45 Source: National Institute of Technology and Evaluation

Mineral oil (8042-47-5)	
LC50 - Fish [1]	> 100 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Oncorhynchus mykiss, Static system, Fresh water, Experimental value, Nominal concentration)
BCF - Other aquatic organisms [1]	1216 l/kg (Estimated value, Fresh weight)
Partition coefficient n-octanol/water (Log Pow)	5.18 (Experimental value)
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	2.64 (log Koc, Calculated value)

sodium-2-naphthalenesulfonate (532-02-5)	
LC50 - Fish [1]	105000 mg/l (96 h, Static system, Fresh water, Calculated value)
EC50 - Crustacea [1]	49421.05 mg/l (48 h, Daphnia magna, Static system, Fresh water, Calculated value)
EC50 72h - Algae [1]	4767.52 mg/l (Pseudokirchneriella subcapitata, Static system, Fresh water, Calculated value)
BCF - Fish [1]	3.162 l/kg (Calculated value)
Partition coefficient n-octanol/water (Log Pow)	0.01 (Calculated)
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	2.02 (log Koc, Calculated value)

Clay (1327-36-2)	
EC50 - Crustacea [1]	> 10000 mg/l Test organisms (species): Daphnia magna
EC50 72h - Algae [1]	2500 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus)
EC50 72h - Algae [2]	410 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus)
NOEC (chronic)	1000 mg/l Test organisms (species): Daphnia magna Duration: '21 d'

12.2. Persistence and degradability

Agfuran 10 G (Carbofuran 100 g/kg) (1563-66-2)	
Persistence and degradability	No additional information available

Carbofuran 97% TC (1563-66-2)	
Persistence and degradability	Not readily biodegradable in water.

kaolin (1332-58-7)	
Persistence and degradability	Biodegradability: not applicable.
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
BOD (% of ThOD)	Not applicable

Mineral oil (8042-47-5)	
Persistence and degradability	Not readily biodegradable in water.

sodium-2-naphthalenesulfonate (532-02-5)	
Persistence and degradability	Not readily biodegradable in water.

Silica sand (14808-60-7)	
Persistence and degradability	Biodegradability: not applicable.
Chemical oxygen demand (COD)	Not applicable (inorganic)
ThOD	Not applicable (inorganic)

12.3. Bioaccumulative potential

Agfuran 10 G (Carbofuran 100 g/kg) (1563-66-2)	
Bioaccumulative potential	No additional information available

Carbofuran 97% TC (1563-66-2)	
Partition coefficient n-octanol/water (Log Pow)	2.32 (Literature study)
Partition coefficient n-octanol/water (Log Kow)	1.8
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	1.98 (log Koc, Estimated value)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

Acid Blue Dye (6408-78-2)	
Partition coefficient n-octanol/water (Log Pow)	2.22 Source: Ecological Structure Activity Relationships

Sodium lignosulfonate (8061-51-6)	
Partition coefficient n-octanol/water (Log Pow)	-3.45 Source: National Institute of Technology and Evaluation

kaolin (1332-58-7)	
Bioaccumulative potential	No bioaccumulation data available.

Mineral oil (8042-47-5)	
BCF - Other aquatic organisms [1]	1216 l/kg (Estimated value, Fresh weight)
Partition coefficient n-octanol/water (Log Pow)	5.18 (Experimental value)
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	2.64 (log Koc, Calculated value)
Bioaccumulative potential	Potential for bioaccumulation (500 ≤ BCF ≤ 5000).

sodium-2-naphthalenesulfonate (532-02-5)	
BCF - Fish [1]	3.162 l/kg (Calculated value)
Partition coefficient n-octanol/water (Log Pow)	0.01 (Calculated)
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	2.02 (log Koc, Calculated value)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

Silica sand (14808-60-7)	
Bioaccumulative potential	No bioaccumulation data available.

12.4. Mobility in soil

Agfuran 10 G (Carbofuran 100 g/kg) (1563-66-2)	
Mobility in soil	No additional information available

Carbofuran 97% TC (1563-66-2)	
Surface tension	No data available in the literature
Partition coefficient n-octanol/water (Log Pow)	2.32 (Literature study)
Partition coefficient n-octanol/water (Log Kow)	1.8
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	1.98 (log Koc, Estimated value)
Ecology - soil	Highly mobile in soil.

Acid Blue Dye (6408-78-2)	
Partition coefficient n-octanol/water (Log Pow)	2.22 Source: Ecological Structure Activity Relationships

Sodium lignosulfonate (8061-51-6)	
Partition coefficient n-octanol/water (Log Pow)	-3.45 Source: National Institute of Technology and Evaluation

Mineral oil (8042-47-5)	
Surface tension	No data available in the literature
Partition coefficient n-octanol/water (Log Pow)	5.18 (Experimental value)
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	2.64 (log Koc, Calculated value)
Ecology - soil	Low potential for adsorption in soil.

sodium-2-naphthalenesulfonate (532-02-5)	
Partition coefficient n-octanol/water (Log Pow)	0.01 (Calculated)
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	2.02 (log Koc, Calculated value)
Ecology - soil	Low potential for adsorption in soil.

Silica sand (14808-60-7)	
Surface tension	No data available in the literature
Ecology - soil	Low potential for mobility in soil.

12.5. Other adverse effects

Ozone : Not classified
Other adverse effects : No additional information available

SECTION 13: Disposal considerations

13.1. Disposal methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.

SECTION 14: Transport information

In accordance with SANS / IMDG / IATA

SANS	IMDG	IATA
14.1. UN number		
2757	2757	2757
14.2. Proper Shipping Name		
CARBAMATE PESTICIDE, SOLID, TOXIC (contains carbofuran 100 g/kg)	CARBAMATE PESTICIDE, SOLID, TOXIC (contains carbofuran 100 g/kg)	Carbamate pesticide, solid, toxic (contains carbofuran 100 g/kg)
14.3. Transport hazard class(es)		
6.1	6.1	6.1
		
14.4. Packing group		
II	II	II
14.5. Environmental hazards		
Dangerous for the environment : Yes	Dangerous for the environment : Yes Marine pollutant : Yes	Dangerous for the environment : Yes
No supplementary information available		

14.6. Special precautions for user

SANS

Special provisions (SANS) : 61, 274
Limited quantities (SANS) : 500 g
Limited quantities (SANS) : 500 g
Packagings, large packagings and IBCs Packing instructions (SANS) : P002, IBC08
Packagings, large packagings and IBCs Special packing instructions (SANS) : B2, B4
Portable tank and bulk containers instructions (SANS) : T3
Portable tank and bulk container special provisions (SANS) : TP33

IMDG

Special provisions (IMDG) : 61, 274
Limited quantities (IMDG) : 500 g
Excepted quantities (IMDG) : E4
Packing instructions (IMDG) : P002
IBC packing instructions (IMDG) : IBC08
IBC special provisions (IMDG) : B21, B4
Tank instructions (IMDG) : T3
Tank special provisions (IMDG) : TP33
EmS-No. (Fire) : F-A - FIRE SCHEDULE Alfa - GENERAL FIRE SCHEDULE
EmS-No. (Spillage) : S-A - SPILLAGE SCHEDULE Alfa - TOXIC SUBSTANCES
Stowage category (IMDG) : A

Properties and observations (IMDG) : Solid pesticides present a very wide range of toxic hazard. Toxic if swallowed, by skin contact or by inhalation.

IATA

PCA Excepted quantities (IATA) : E4
PCA Limited quantities (IATA) : Y644
PCA limited quantity max net quantity (IATA) : 1kg
PCA packing instructions (IATA) : 669
PCA max net quantity (IATA) : 25kg
CAO packing instructions (IATA) : 676
CAO max net quantity (IATA) : 100kg
Special provisions (IATA) : A3, A5
ERG code (IATA) : 6L

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15: Regulatory information

15.1. Safety, health, and environmental national regulations specific for the product

No additional information available

SECTION 16: Other information

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Revision date : 03/09/2024

Full text of H-statements	
H300	Fatal if swallowed.
H303	May be harmful if swallowed
H304	May be fatal if swallowed and enters airways.
H312	Harmful in contact with skin.
H313	May be harmful in contact with skin
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H330	Fatal if inhaled.
H331	Toxic if inhaled.
H335	May cause respiratory irritation.
H400	Very toxic to aquatic life.
H402	Harmful to aquatic life
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.
H413	May cause long lasting harmful effects to aquatic life.

Safety Data Sheet (SDS), South Africa

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.