SAFETY DATA SHEET

GARDENTECH® SEVIN®-5 READY-TO-USE 5% DUST

January 2015

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

Product identifier

Trade name	GARDENTECH® SEVIN®-5 READY-TO-USE 5% DUST
EPA Reg. No.	432-1209-71004

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

Use	Insecticide
Restrictions on use	See product label for restrictions.

Information on manufacturer

TechPac, LLC.
1000 Parkwood Circle
Suite 700
Atlanta, GA 30339

Emergency telephone no.

Emergency Telephone Number (24hr/ 7 days)	1-800-420-9347
Product Information Telephone Number	1-866-945-5033
SDS Information or Request	1-866-945-5033

SECTION 2: HAZARDS IDENTIFICATION

Classification in accordance with regulation HCS 29CFR §1910.1200
Carcinogenicity : Category 2

Signal word: Warning

Hazard statements
Suspected of causing cancer.

Precautionary statements
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Wear protective gloves/ protective clothing/ eye protection/ face protection.
IF exposed or concerned: Get medical advice/ attention.
Store locked up.

Dispose of contents/container in accordance with local regulation.

Other hazards
This product contains an cholinesterase inhibitor.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Component Name	CAS-No.	Concentration % by weight
Carbaryl	63-25-2	5.00
Crystalline quartz (respirable)	14808-60-7	9.20
Calcium carbonate	471-34-1	45.00
Magnesium carbonate	546-93-0	1.60

SECTION 4: FIRST AID MEASURES

Description of first aid measures

General advice When possible, have the product container or label with you when calling a poison control center or doctor or going for treatment.

Inhalation Move to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a physician or poison control center immediately.

Skin contact Take off contaminated clothing and shoes immediately. Wash off immediately with plenty of water for at least 15 minutes. Call a physician or poison control center immediately.

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. Call a physician or poison control center immediately.

Ingestion Call a physician or poison control center immediately. Rinse out mouth and give water in small sips to drink. DO NOT induce vomiting unless directed to do so by a physician or poison control center. Never give anything by mouth to an unconscious person. Do not leave victim unattended.

Most important symptoms and effects, both acute and delayed

Symptoms Temporary blurred vision due to contraction of the pupils (miosis) following contact with the eyes., Bradycardia, Low blood pressure, Salivation, Bronchial hypersecretion, Vomiting, Diarrhoea, Sweating, Muscular fasciculation, Spasm, Breathing difficulties, Respiratory paralysis, Somnolence, Coma, Respiratory failure, Hypothermia, Convulsions, Nausea

Indication of any immediate medical attention and special treatment needed

Risks This product is a cholinesterase inhibitor carbamate.

Treatment	The product inhibits cholinesterase resulting in stimulation of the central nervous system, the parasympathetic nervous system, and the somatic motor nerves. The following antidote is generally accepted: atropine. 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 hours. At first sign of pulmonary edema, the patient should be placed in an oxygen tent and treated symptomatically. Contraindications: derivatives of morphine.

SECTION 5: FIREFIGHTING MEASURES

Extinguishing media	
Suitable	Water spray, Foam, Dry chemical, Carbon dioxide (CO2)
Unsuitable	None known.
Special hazards arising from the substance or mixture	Dangerous gases are evolved in the event of a fire.
Advice for firefighters	
Special protective equipment for fire-fighters	Firefighters should wear NIOSH approved self-contained breathing apparatus and full protective clothing.
Further information	Cool closed containers exposed to fire with water spray. Fight fire from upwind position. Keep out of smoke. Do not allow run-off from fire fighting to enter drains or water courses. Whenever possible, contain fire-fighting water by diking area with sand or earth.
Flash point	not applicable
Autoignition temperature	no data available
Lower explosion limit	not applicable
Upper explosion limit	not applicable
Explosivity	no data available
Dust explosion class	no data available

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Precautions	Keep unauthorized people away. Isolate hazard area. Avoid contact with spilled product or contaminated surfaces.

Methods and materials for containment and cleaning up

Methods for cleaning up	Avoid dust formation. Sweep up or vacuum up spillage and collect in suitable container for disposal. Clean contaminated floors and objects thoroughly, observing environmental regulations.
Additional advice	Use personal protective equipment. Do not allow to enter soil, waterways or waste water canal.
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

Precautions for safe handling

Advice on safe handling	Maintain exposure levels below the exposure limit through the use of general and local exhaust ventilation. Handle and open container in a manner as to prevent spillage.
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.

Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers	Store in a cool, dry place and in such a manner as to prevent cross contamination with other crop protection products, fertilizers, food, and feed. Store in original container and out of the reach of children, preferably in a locked storage area.
Advice on common storage	Keep away from food, drink and animal feedingstuffs.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Components	CAS-No.	Control parameters	Update	Basis
Carbaryl	63-25-2	0.5 mg/m3	02 2012	ACGIH

(Inhalable fraction and vapor.)		(TWA)		
Carbaryl	63-25-2	5 mg/m3 (REL)	2010	NIOSH
Carbaryl	63-25-2	5 mg/m3 (PEL)	02 2006	OSHA Z1
Carbaryl	63-25-2	5 mg/m3 (TWA)	1989	OSHA Z1A
Carbaryl	63-25-2	5 mg/m3 (TWA)	06 2008	TN OEL
Carbaryl	63-25-2	5ug/m3 (ST ESL)	07 2011	TX ESL
Carbaryl	63-25-2	0.5ug/m3 (AN ESL)	07 2011	TX ESL
Carbaryl	63-25-2	5 mg/m3 (TWA PEL)	08 2010	US CA OEL
Carbaryl	63-25-2	0.5 mg/m3 (TWA)		OES BCS*
Crystalline quartz (respirable)	14808-60-7	0.1 mg/m3 (TWA)	1998	JO TLV
Crystalline quartz (respirable) (Respirable fraction.)	14808-60-7	0.025 mg/m3 (TWA)	02 2012	ACGIH
Crystalline quartz (respirable) (Respirable dust.)	14808-60-7	0.05 mg/m3 (REL)	2010	NIOSH
Crystalline quartz (respirable) (Respirable dust.)	14808-60-7	0.1 mg/m3 (TWA)	1989	OSHA Z1A
Crystalline quartz (respirable) (Respirable dust.)	14808-60-7	0.1 mg/m3 (TWA)	06 2008	TN OEL
Crystalline quartz (respirable) (Particulate.)	14808-60-7	14ug/m3 (ST ESL)	02 2013	TX ESL
Crystalline quartz (respirable) (Particulate.)	14808-60-7	0.27ug/m3 (AN ESL)	02 2013	TX ESL
Crystalline quartz (respirable) (Total dust.)	14808-60-7	0.3 mg/m3 (TWA PEL)	08 2010	US CA OEL
Crystalline quartz (respirable) (Respirable dust.)	14808-60-7	0.1 mg/m3 (TWA PEL)	08 2010	US CA OEL
Crystalline quartz (respirable) (Respirable.)	14808-60-7	2.4millions of particles per cubic foot of air (TWA)	2000	Z3

Crystalline quartz (respirable) (Respirable.)	14808-60-7	0.1 mg/m3 (TWA)	2000	Z3
Crystalline quartz (respirable) (Total dust.)	14808-60-7	0.3 mg/m3 (TWA)	2000	Z3
Kaolin (Respirable fraction.)	1332-58-7	2 mg/m3 (TWA)	02 2012	ACGIH
Kaolin (Total)	1332-58-7	10 mg/m3 (REL)	2010	NIOSH
Kaolin (Respirable.)	1332-58-7	5 mg/m3 (REL)	2010	NIOSH
Kaolin (Total dust.)	1332-58-7	15 mg/m3 (PEL)	02 2006	OSHA Z1
Kaolin (Respirable fraction.)	1332-58-7	5 mg/m3 (PEL)	02 2006	OSHA Z1
Kaolin (Respirable fraction.)	1332-58-7	5 mg/m3 (TWA)	1989	OSHA Z1A
Kaolin (Total dust.)	1332-58-7	10 mg/m3 (TWA)	1989	OSHA Z1A
Kaolin (Total dust.)	1332-58-7	10 mg/m3 (TWA)	06 2008	TN OEL
Kaolin (Respirable fraction.)	1332-58-7	5 mg/m3 (TWA)	06 2008	TN OEL
Kaolin (Particulate.)	1332-58-7	2ug/m3 (AN ESL)	02 2013	TX ESL
Kaolin (Particulate.)	1332-58-7	20ug/m3 (ST ESL)	02 2013	TX ESL
Kaolin (Respirable dust.)	1332-58-7	2 mg/m3 (TWA PEL)	08 2010	US CA OEL
Calcium carbonate (Respirable.)	471-34-1	5 mg/m3 (REL)	2010	NIOSH
Calcium carbonate (Total)	471-34-1	10 mg/m3 (REL)	2010	NIOSH
Calcium carbonate	471-34-1	50ug/m3 (ST ESL)	07 2011	TX ESL
Calcium carbonate	471-34-1	5ug/m3 (AN ESL)	07 2011	TX ESL
Magnesium carbonate (Respirable.)	546-93-0	5 mg/m3 (REL)	2010	NIOSH
Magnesium carbonate (Total)	546-93-0	10 mg/m3 (REL)	2010	NIOSH
Magnesium carbonate (Total dust.)	546-93-0	15 mg/m3 (PEL)	02 2006	OSHA Z1
Magnesium carbonate (Respirable fraction.)	546-93-0	5 mg/m3 (PEL)	02 2006	OSHA Z1
Magnesium carbonate	546-93-0	15 mg/m3	1989	OSHA Z1A

(Total dust.)		(TWA)		
Magnesium carbonate (Respirable fraction.)	546-93-0	5 mg/m3 (TWA)	1989	OSHA Z1A
Magnesium carbonate (Respirable fraction.)	546-93-0	5 mg/m3 (TWA)	06 2008	TN OEL
Magnesium carbonate (Total dust.)	546-93-0	15 mg/m3 (TWA)	06 2008	TN OEL
Magnesium carbonate	546-93-0	5ug/m3 (AN ESL)	03 2012	TX ESL
Magnesium carbonate	546-93-0	50ug/m3 (ST ESL)	03 2012	TX ESL

*OES BCS: Internal Bayer CropScience "Occupational Exposure Standard"

Exposure controls

Personal protective equipment
In normal use and handling conditions please refer to the label and/or leaflet. In all other cases the following recommendations would apply.

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. Under conditions immediately dangerous to life or health, or emergency conditions with unknown concentrations, use a full-face positive pressure air-supplied respirator equipped with an emergency escape air supply unit or use a self-contained breathing apparatus unit.
Hand protection	Chemical resistant nitrile rubber gloves
Eye protection	Safety glasses with side-shields
Skin and body protection	Wear long-sleeved shirt and long pants and shoes plus socks.
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.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	light tan to brown
Physical State	powder
Odor	slight
Odour Threshold	no data available

pH	9.0 - 9.5 at 10 % (25 °C) aqueous suspension
Vapor Pressure	no data available
Vapor Density (Air = 1)	no data available
Bulk density	47 - 57 lb/ft³
Evapouration rate	not applicable
Boiling Point	not applicable
Melting / Freezing Point	not applicable
Water solubility	insoluble
Minimum Ignition Energy	no data available
Decomposition temperature	no data available
Partition coefficient: n-octanol/water	no data available
Viscosity	not applicable
Flash point	not applicable
Autoignition temperature	no data available
Lower explosion limit	not applicable
Upper explosion limit	not applicable
Explosivity	no data available
Dust explosion class	no data available

SECTION 10: STABILITY AND REACTIVITY

Reactivity	
Thermal decomposition	no data available
Chemical stability	Stable under recommended storage conditions.
Possibility of hazardous reactions	No hazardous reactions when stored and handled according to prescribed instructions.

Conditions to avoid	Elevated temperatures Heat, flames and sparks.
Incompatible materials	Strong acids, Bases
Hazardous decomposition products	Thermal decomposition can lead to release of: Nitrogen oxides (NOx) Carbon oxides Methyl isocyanate (trace; no adverse effects expected)

SECTION 11: TOXICOLOGICAL INFORMATION

Exposure routes	Ingestion, Inhalation, Eye contact, Skin Absorption
Immediate Effects	
Eye	Causes eye irritation.
Skin	Harmful if absorbed through skin. May produce symptoms similar to those from ingestion.
Ingestion	Harmful if swallowed. This product causes reversible cholinesterase inhibition without long term effects. Repeated overexposure may cause more severe cholinesterase inhibition with more pronounced symptoms. May lead to rapid onset of nausea, vomiting, diarrhea, abdominal pain, involuntary shaking, excess salivation, pinpoint pupils, blurred vision, profuse sweating, temporary paralysis, respiratory depression, and convulsions.
Inhalation	Harmful if inhaled.May produce symptoms similar to those from ingestion.

Information on toxicological effects

Acute oral toxicity	LD50 (male rat) 3,310 mg/kg LD50 (female rat) 2,330 mg/kg LD50 (male/female combined rat) 3,240 mg/kg
Acute inhalation toxicity	LC50 (rat) > 4.9 mg/l Exposure time: 4 h Determined in the form of dust. LC50 (rat) > 19.6 mg/l Exposure time: 1 h Determined in the form of dust. Extrapolated from the 4 hr LC50.
Acute dermal toxicity	LD50 (rabbit) > 2,000 mg/kg
Skin irritation	No skin irritation (rabbit)
Eye irritation	Mild eye irritation. (rabbit)
Sensitisation	Non-sensitizing. (guinea pig)

Assessment repeated dose toxicity

Carbaryl caused reversible cholinesterase inhibition without long term effects in animal studies.

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, kidneys, cardio-vascular system. The mechanism that triggers tumours in rodents is not relevant for the low exposures encountered under normal use conditions.

ACGIH

Carbaryl	63-25-2	Group A4
Crystalline quartz (respirable)	14808-60-7	Group A2

NTP

Crystalline quartz (respirable)	14808-60-7	2000

IARC

Carbaryl	63-25-2	Overall evaluation: 3
Crystalline quartz (respirable)	14808-60-7	Overall evaluation: 1

OSHA

None.

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

Acute toxicity studies have been bridged from a similar formulation(s).
The non-acute information pertains to the active ingredient(s).

SECTION 12: ECOLOGICAL INFORMATION

Toxicity to fish	LC50 (Oncorhynchus mykiss (rainbow trout)) 3.3 mg/l Exposure time: 96 h The value mentioned relates to the active ingredient carbaryl.
Toxicity to aquatic invertebrates	EC50 (Daphnia magna (Water flea)) 0.0164 mg/l Exposure time: 48 h The value mentioned relates to the active ingredient carbaryl.

Toxicity to aquatic plants	EC50 (Pseudokirchneriella subcapitata) 1.75 mg/l Growth rate; Exposure time: 72 h The value mentioned relates to the active ingredient carbaryl.
Biodegradability	Carbaryl: ; rapidly biodegradable
Koc	Carbaryl: Koc: 624
Bioaccumulation	Carbaryl: Bioconcentration factor (BCF) 44; Does not bioaccumulate.
Mobility in soil	Carbaryl: Slightly mobile in soils
Environmental precautions	Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate surface or ground water by cleaning equipment or disposal of wastes, including equipment wash water. Drift and runoff from treated areas may be hazardous to aquatic organisms in adjacent sites. Apply this product as specified on the label. Do not apply this product or allow it to drift to blooming crops or weeds if bees are visiting the treatment area.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste treatment methods

Product	It is best to use all of the product in accordance with label directions. If it is necessary to dispose of unused product, please follow container label instructions and applicable local guidelines. Never place unused product down any indoor or outdoor drain.
Contaminated packaging	Completely empty container into application equipment, then dispose of empty container in a sanitary landfill, by incineration or by other procedures approved by state/provincial and local authorities. If burned, stay out of smoke. Follow advice on product label and/or leaflet.
RCRA Information	Characterization and proper disposal of this material as a special or hazardous waste is dependent upon Federal, State and local laws and are the user's responsibility. RCRA classification may apply.

SECTION 14: TRANSPORT INFORMATION

49CFR

UN number	**3077**
Class	9
Packaging group	III
Marine pollutant	Marine pollutant
Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCES, SOLID, N.O.S.

	(CARBARYL)
RQ	Reportable Quantity is reached with 2,000 lb of product.

IMDG

UN number	**3077**
Class	9
Packaging group	III
Marine pollutant	YES
Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (CARBARYL MIXTURE)

IATA

UN number	**3077**
Class	9
Packaging group	III
Environm. Hazardous Mark	YES
Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (CARBARYL MIXTURE)

This transportation information is not intended to convey all specific regulatory information relating to this product. It does not address regulatory variations due to package size or special transportation requirements.

SECTION 15: REGULATORY INFORMATION

US Federal Regulations

TSCA list

Carbaryl	63-25-2
Crystalline quartz (respirable)	14808-60-7
Calcium carbonate	471-34-1
Magnesium carbonate	546-93-0

US. Toxic Substances Control Act (TSCA) Section 12(b) Export Notification (40 CFR 707, Subpt D)

None.

SARA Title III - Section 302 - Notification and Information

None.

SARA Title III - Section 313 - Toxic Chemical Release Reporting

Carbaryl	63-25-2	1.0%

US States Regulatory Reporting

CA Prop65

This product contains a chemical known to the State of California to cause cancer.

Carbaryl	63-25-2
Crystalline quartz (respirable)	14808-60-7

This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

Carbaryl	63-25-2	Developmental toxin.

Carbaryl	63-25-2	Male reproductive toxin.

US State Right-To-Know Ingredients

Carbaryl	63-25-2	CA, CT, IL, MN, NJ, RI
Crystalline quartz (respirable)	14808-60-7	MN
Magnesium carbonate	546-93-0	MN, RI

Canadian Regulations
Canadian Domestic Substance List

Crystalline quartz (respirable)	14808-60-7
Calcium carbonate	471-34-1
Magnesium carbonate	546-93-0

Environmental
CERCLA

Carbaryl	63-25-2	100 lbs

Clean Water Section 307 Priority Pollutants
None.
Safe Drinking Water Act Maximum Contaminant Levels
None.

International Regulations
European Inventory of Existing Commercial Substances (EINECS)

Crystalline quartz (respirable)	14808-60-7
Calcium carbonate	471-34-1
Magnesium carbonate	546-93-0

EPA/FIFRA Information:
This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide 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:

Signal word: Caution!

Hazard statements:
Harmful if swallowed.
Harmful if absorbed through skin.
Harmful if inhaled.
Avoid contact with skin, eyes and clothing.
Avoid breathing dust.

SECTION 16: OTHER INFORMATION

GARDENTECH® SEVIN®-5 READY-TO-USE 5% DUST

January 2015

NFPA 704 (National Fire Protection Association):

Health - 1	Flammability - 1	Instability - 1	Others - none

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

Health - 1	Flammability - 1	Physical Hazard - 1	PPE -

0 = minimal hazard, 1 = slight hazard, 2 = moderate hazard, 3 = severe hazard, 4 = extreme hazard

Reason for Revision: Revised according to the current OSHA Hazard Communication Standard (29CFR1910.1200)

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.