

SAFETY DATA SHEET



AERIS® SEED-APPLIED INSECTICIDE/NEMATICIDE

Version 2.0 / USA
102000036992

1/13
Revision Date: 08/26/2024
Print Date: 08/29/2024

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

Product identifier

Trade name AERIS® SEED-APPLIED INSECTICIDE/NEMATICIDE
Product code (UVP) 86793342
SDS Number 102000036992
EPA Registration No. 264-1057

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

Use Seed treatment
Restrictions on use See product label for restrictions.

Information on supplier

Supplier Bayer CropScience LP
800 North Lindbergh Blvd.
St. Louis, MO 63167
USA
Responsible Department Email: SDSINFO.BCS-NA@bayer.com

Emergency telephone no.

Emergency Telephone Number (24hr/ 7 days) 1-800-334-7577
Product Information Telephone Number 1-866-99BAYER (1-866-992-2937)

SECTION 2: HAZARDS IDENTIFICATION

Classification in accordance with regulation HCS 29CFR §1910.1200

Skin sensitisation: Category 1
Eye irritation: Category 2B
Acute toxicity(Oral): Category 4
Acute toxicity(Inhalation): Category 4

Labelling in accordance with regulation HCS 29CFR §1910.1200



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Signal word: Warning

Hazard statements

May cause an allergic skin reaction.
Causes eye irritation.
Harmful if swallowed.
Harmful if inhaled.

Precautionary statements

Avoid breathing mist/ vapours.
Contaminated work clothing should not be allowed out of the workplace.
Wear protective gloves.
Wash thoroughly after handling.
Do not eat, drink or smoke when using this product.
Use only outdoors or in a well-ventilated area.
IF ON SKIN: Wash with plenty of water.
Take off immediately all contaminated clothing and wash it before reuse.
If skin irritation or rash occurs: Get medical advice/ attention.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical advice/ attention.
IF SWALLOWED: Call a POISON CENTER/doctor/physician if you feel unwell.
Rinse mouth.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
Call a POISON CENTER/doctor/physician if you feel unwell.
Dispose of contents/container in accordance with local regulation.

Hazards Not Otherwise Classified (HNOC)

This product contains a cholinesterase inhibitor.
No physical hazards not otherwise classified.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Component Name	CAS-No.	Concentration % by weight
Imidacloprid	138261-41-3	24.0
Thiodicarb	59669-26-0	24.0

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.

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Eye contact	Hold eye open and rinse slowly and gently with water for 15-20 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, hypotension, 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	<p>The product inhibits cholinesterase resulting in stimulation of the central nervous system, the parasympathetic nervous system, and the somatic motor nerves.</p> <p>The following antidote is generally accepted: atropine.</p> <p>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.</p>

SECTION 5: FIREFIGHTING MEASURES

Extinguishing media

Suitable	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Unsuitable	High volume water jet

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 firefighters 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.

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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 fire fighting to enter drains or water courses.

Specific hazards from the substance or mixture which can increase the fire

Flash point 95 °C / 203 °F
Auto-ignition temperature No data available
Lower explosion limit No data available
Upper explosion limit No data available
Explosivity Not applicable

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 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.

Additional advice Use personal protective equipment. If the product is accidentally spilled, 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 Use only in area provided with appropriate 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. Remove soiled clothing immediately and clean thoroughly before using again. Wash thoroughly and put on clean

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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. Protect from freezing. Keep away from direct sunlight.

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
Imidacloprid	138261-41-3	0.7 mg/m ³ (TWA)		OES BCS*
Thiodicarb (Inhalable fraction and vapor.)	59669-26-0	0.1 mg/m ³ (TWA)	01 2020	ACGIH
Thiodicarb	59669-26-0	0.8 mg/m ³ (TWA)		OES BCS*

*OES BCS: Internal Bayer AG, Crop Science Division "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.

Hand protection

Chemical-resistant gloves (barrier laminate, butyl rubber, nitrile rubber or Viton)

Eye protection

Tightly fitting safety goggles

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.

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SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Form	suspension
Colour	white to beige
Odour	characteristic
Odour Threshold	No data available
pH	4.0 - 6.0 (100 %) (23 °C)
Melting point/range	No data available
Boiling Point	No data available
Flash point	95 °C / 203 °F
Flammability	No data available
Auto-ignition temperature	No data available
Thermal decomposition	Not applicable
Minimum ignition energy	Not applicable
Self-accelarating decomposition temperature (SADT)	No data available
Upper explosion limit	No data available
Lower explosion limit	No data available
Vapour pressure	No data available
Evaporation rate	No data available
Relative vapour density	No data available
Relative density	No data available
Density	1.20 g/cm ³ (20 °C)
Water solubility	dispersible
Partition coefficient: n-octanol/water	Imidacloprid: log Pow: 0.57 Thiodicarb: log Pow: 1.62 (25 °C)
Viscosity, dynamic	350 - 550 mPa.s (20 °C) Velocity gradient 20 /s 125 - 275 mPa.s (20 °C) Velocity gradient 100 /s
Viscosity, kinematic	No data available
Oxidizing properties	No data available

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Explosivity	Not applicable
Other information	Further safety related physical-chemical data are not known.

SECTION 10: STABILITY AND REACTIVITY

Reactivity	Stable under normal conditions.
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	Extremes of temperature and direct sunlight.
Incompatible materials	No incompatible materials known.
Hazardous decomposition products	No decomposition products expected under normal conditions of use.

SECTION 11: TOXICOLOGICAL INFORMATION

Exposure routes	Inhalation, Ingestion, Eye contact, Skin contact
Immediate Effects	
Eye	May cause temporary eye irritation.
Skin	May be harmful in contact with skin. May cause sensitisation by skin contact.
Ingestion	Harmful if swallowed.
Inhalation	Harmful if inhaled.
Information on toxicological effects	
Acute oral toxicity	LD50 (female Rat) 1,750 mg/kg
Acute inhalation toxicity	LC50 (Rat) 1.51 mg/l Exposure time: 4 h Determined in the form of liquid aerosol. LC50 (Rat) > 2.53 mg/l Exposure time: 1 h Determined in the form of liquid aerosol.
Acute dermal toxicity	LD50 (Rabbit) > 2,000 mg/kg
Skin corrosion/irritation	slight irritation (Rabbit)
Serious eye damage/eye	Mild eye irritation. (Rabbit)

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irritation

Respiratory or skin sensitisation Skin: Sensitising (Guinea pig)

Assessment STOT Specific target organ toxicity – single exposure

Imidacloprid: Based on available data, the classification criteria are not met.

Thiodicarb: Based on available data, the classification criteria are not met.

Assessment STOT Specific target organ toxicity – repeated exposure

Imidacloprid did not cause specific target organ toxicity in experimental animal studies.

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

Assessment mutagenicity

Imidacloprid was not mutagenic or genotoxic based on the overall weight of evidence in a battery of in vitro and in vivo tests.

Thiodicarb was not mutagenic or genotoxic based on the overall weight of evidence in a battery of in vitro and in vivo tests.

Assessment carcinogenicity

Imidacloprid was not carcinogenic in lifetime feeding studies in rats and mice.

Thiodicarb caused at high dose levels an increased incidence of tumours in the following organ(s): Liver, Testes. The mechanism that triggers tumours in rodents and the type of tumours observed are not relevant to humans.

ACGIH

Thiodicarb 59669-26-0 Group A3

NTP

None.

IARC

None.

Assessment toxicity to reproduction

Imidacloprid caused reproduction toxicity in a two-generation study in rats only at dose levels also toxic to the parent animals. The reproduction toxicity seen with Imidacloprid is related to parental toxicity.

Thiodicarb caused reproduction toxicity in a two-generation study in rats only at dose levels also toxic to the parent animals. The reproduction toxicity seen with Thiodicarb is related to parental toxicity.

Assessment developmental toxicity

Imidacloprid caused developmental toxicity only at dose levels toxic to the dams. The developmental effects seen with Imidacloprid are related to maternal toxicity.

Thiodicarb caused developmental toxicity only at dose levels toxic to the dams. Thiodicarb caused a reduced pup survival. The developmental effects seen with Thiodicarb are related to maternal toxicity.

Aspiration hazard

Based on available data, the classification criteria are not met.

Further information

Acute toxicity studies have been bridged from a similar formulation(s).

The non-acute information pertains to the active ingredient(s).

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No further toxicological information is available.

SECTION 12: ECOLOGICAL INFORMATION

Toxicity to fish	LC50 (Oncorhynchus mykiss (rainbow trout)) 211 mg/l Exposure time: 96 h The value mentioned relates to the active ingredient imidacloprid.
	LC50 (Oncorhynchus mykiss (rainbow trout)) > 3.3 mg/l Exposure time: 96 h The value mentioned relates to the active ingredient thiodicarb.
	LC50 (Cyprinodon variegatus (sheepshead minnow)) 0.53 mg/l Exposure time: 96 h The value mentioned relates to the active ingredient thiodicarb.
Toxicity to aquatic invertebrates	EC50 (Daphnia magna (Water flea)) 85 mg/l Exposure time: 48 h The value mentioned relates to the active ingredient imidacloprid.
	LC50 (Chironomus riparius (non-biting midge)) 0.0552 mg/l Exposure time: 24 h The value mentioned relates to the active ingredient imidacloprid.
	EC50 (Daphnia magna (Water flea)) 0.027 mg/l Exposure time: 48 h The value mentioned relates to the active ingredient thiodicarb.
	EC50 (Mysidopsis bahia (mysid shrimp)) 0.028 mg/l Exposure time: 96 h The value mentioned relates to the active ingredient thiodicarb.
Toxicity to aquatic plants	EC50 (Desmodesmus subspicatus (green algae)) > 10 mg/l Growth rate; Exposure time: 72 h The value mentioned relates to the active ingredient imidacloprid.
	IC50 (Raphidocelis subcapitata (freshwater green alga)) > 18 mg/l Exposure time: 72 h The value mentioned relates to the active ingredient thiodicarb.
Biodegradability	Imidacloprid: Not rapidly biodegradable Thiodicarb: Not rapidly biodegradable
Koc	Imidacloprid: Koc: 225 Thiodicarb: Koc: 418
Bioaccumulation	Imidacloprid: Does not bioaccumulate. Thiodicarb: Bioconcentration factor (BCF) 6.3 Does not bioaccumulate.

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Mobility in soil	Imidacloprid: Moderately mobile in soils Thiodicarb: Moderately mobile in soils
Results of PBT and vPvB assessment	
PBT and vPvB assessment	Imidacloprid: This substance is not considered to be persistent, bioaccumulative and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulative (vPvB). Thiodicarb: This substance is not considered to be persistent, bioaccumulative and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulative (vPvB).
Additional ecological information	No other effects to be mentioned.
Environmental precautions	Do not allow to get into surface water, drains and ground water. Do not contaminate surface or ground water by cleaning equipment or disposal of wastes, including equipment wash water.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste treatment methods

Product	Dispose in accordance with all local, state/provincial and federal regulations.
Contaminated packaging	Consult state and local regulations regarding the proper disposal of container. 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	3082
Class	9
Packaging group	III
Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCES, LIQUID, N.O.S. (THIODICARB)
RQ	Reportable Quantity is reached with 416 lb of product.

IMDG

UN number	3082
Class	9
Packaging group	III
Marine pollutant	YES

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Proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,
N.O.S.
(THIODICARB, IMIDACLOPRID SOLUTION)

IATA

UN number **3082**
Class 9
Packaging group III
Environm. Hazardous Mark YES
Proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,
N.O.S.
(THIODICARB, IMIDACLOPRID SOLUTION)

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

EPA Registration No. 264-1057

US Federal Regulations

TSCA list

Water 7732-18-5
1,2-Propanediol 57-55-6
Alkylarylpolyglycol ether 104376-75-2

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

No export notification needs to be made.

SARA Title III - Section 302 - Notification and Information

Not applicable.

SARA Title III - Section 313 - Toxic Chemical Release Reporting

Yes

US States Regulatory Reporting

CA Prop65

WARNING: This product contains a chemical known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

Thiodicarb 59669-26-0 Cancerogenic

This product does not contain any substances known to the State of California to cause reproductive harm.

US State Right-To-Know Ingredients

Thiodicarb 59669-26-0 CT, IL, NJ
1,2-Propanediol 57-55-6 MN, RI

Environmental CERCLA

Yes

Thiodicarb 59669-26-0

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Listed

Clean Water Section 307(a)(1)

None.

Safe Drinking Water Act Maximum Contaminant Levels

None.

EPA/FIFRA Information:

This chemical is a pesticide product regulated 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:	RESTRICTED USE PESTICIDE Harmful if swallowed, inhaled or absorbed through the skin. Causes moderate eye irritation. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

SECTION 16: OTHER INFORMATION

Abbreviations and acronyms

49CFR	Code of Federal Regulations, Title 49
ACGIH	US. ACGIH Threshold Limit Values
ATE	Acute toxicity estimate
CAS-Nr.	Chemical Abstracts Service number
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
EINECS	European inventory of existing commercial substances
ELINCS	European list of notified chemical substances
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
N.O.S.	Not otherwise specified
NTP	US. National Toxicology Program (NTP) Report on Carcinogens
OECD	Organization for Economic Co-operation and Development
TDG	Transportation of Dangerous Goods
TWA	Time weighted average
UN	United Nations
WHO	World health organisation

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NFPA 704 (National Fire Protection Association):

Health - 3 Flammability - 1 Instability - 0 Others - none

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

Health - 2 Flammability - 1 Physical Hazard - 0 PPE -

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

Reason for Revision: The following sections have been revised: Section 2: Hazards Identification. Section 8: Exposure Controls / Personal Protection. Section 11: Toxicological Information. Section 15: Regulatory information. Section 16: Other Information. Reviewed and updated for general editorial purposes.

Revision Date: 08/26/2024

Changes since the last version are highlighted in the margin. This version replaces all previous versions.

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