

SAFETY DATA SHEET



Vydate® L

Version	Revision Date:	SDS Number:	Date of last issue: 01/11/2022
1.1	01/13/2023	800080000911	Date of first issue: 01/11/2022

Corteva Agriscience™ encourages you and expects you to read and understand the entire SDS as there is important information throughout the document. This SDS provides users with information relating to the protection of human health and safety at the workplace, protection of the environment and supports emergency response. Product users and applicators should primarily refer to the product label attached to or accompanying the product container. This Safety Data Sheet adheres to the standards and regulatory requirements of the United States and may not meet the regulatory requirements in other countries.

SECTION 1. IDENTIFICATION

Product name : Vydate® L

Manufacturer or supplier's details

COMPANY IDENTIFICATION

Manufacturer/importer : CORTEVA AGRISCIENCE LLC
9330 ZIONSVILLE RD
INDIANAPOLIS, IN, 46268-1053
UNITED STATES

Customer Information Number : 1-800-258-3033
E-mail address : customerinformation@corteva.com

Emergency telephone : INFOTRAC (CONTRACT 84224).
+1 800-992-5994 or +1 317-337-6009

Recommended use of the chemical and restrictions on use

Recommended use : Insecticide
Nematicide

Restrictions on use : Do not use product for anything outside of the above specified uses.

SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200)

Flammable liquids : Category 3

Acute toxicity (Oral) : Category 2

Acute toxicity (Inhalation) : Category 2

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Specific target organ toxicity : Category 1 (Eyes, Central nervous system)
 - single exposure

Specific target organ toxicity : Category 3 (Central nervous system)
 - single exposure

GHS label elements

Hazard pictograms :



Signal Word : Danger

Hazard Statements : H226 Flammable liquid and vapor.
 H300 + H330 Fatal if swallowed or if inhaled.
 H336 May cause drowsiness or dizziness.
 H370 Causes damage to organs (Eyes, Central nervous system).

Precautionary Statements : **Prevention:**
 P210 Keep away from heat/ sparks/ open flames/ hot surfaces.
 No smoking.
 P233 Keep container tightly closed.
 P240 Ground/bond container and receiving equipment.
 P241 Use explosion-proof electrical/ ventilating/ lighting/ equipment.
 P242 Use only non-sparking tools.
 P243 Take precautionary measures against static discharge.
 P260 Do not breathe dust/ fume/ gas/ mist/ vapors/ spray.
 P264 Wash skin thoroughly after handling.
 P270 Do not eat, drink or smoke when using this product.
 P271 Use only outdoors or in a well-ventilated area.
 P280 Wear protective gloves/ eye protection/ face protection.
 P284 Wear respiratory protection.

Response:

P301 + P310 + P330 IF SWALLOWED: Immediately call a POISON CENTER/ doctor. Rinse mouth.
 P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower.
 P304 + P340 + P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/ doctor.
 P307 + P311 IF exposed: Call a POISON CENTER or doctor/ physician.
 P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.

Storage:

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
 P403 + P235 Store in a well-ventilated place. Keep cool.

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P405 Store locked up.

Disposal:

P501 Dispose of contents/ container to an approved waste disposal plant.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Components

Chemical name	CAS-No.	Concentration (% w/w)
oxamyl (ISO)	23135-22-0	24
methanol	67-56-1	>= 40 - < 50
Balance	Not Assigned	> 20

Actual concentration is withheld as a trade secret

SECTION 4. FIRST AID MEASURES

- If inhaled : Move person to fresh air. If not breathing, give artificial respiration; if by mouth to mouth use rescuer protection (pocket mask, etc). If breathing is difficult, oxygen should be administered by qualified personnel. Call a physician or transport to a medical facility.
- In case of skin contact : Wash off with plenty of water.
- In case of eye contact : Flush eyes thoroughly with water for several minutes. Remove contact lenses after the initial 1-2 minutes and continue flushing for several additional minutes. If effects occur, consult a physician, preferably an ophthalmologist.
- If swallowed : If swallowed, seek medical attention. Do not induce vomiting unless directed to do so by medical personnel. Seek medical attention immediately. Never give anything by mouth to an unconscious person.
- Most important symptoms and effects, both acute and delayed : None known.
- Protection of first-aiders : First Aid responders should pay attention to self-protection and use the recommended protective clothing (chemical resistant gloves, splash protection). If potential for exposure exists refer to Section 8 for specific personal protective equipment.
- Notes to physician : Maintain adequate ventilation and oxygenation of the patient. No specific antidote. Treatment of exposure should be directed at the control of

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symptoms and the clinical condition of the patient.

SECTION 5. FIRE-FIGHTING MEASURES

- Suitable extinguishing media : Water spray
Alcohol-resistant foam
Carbon dioxide (CO₂)
Dry chemical
- Unsuitable extinguishing media : Do not use direct water stream.
High volume water jet
- Specific hazards during fire fighting : Exposure to combustion products may be a hazard to health.
Vapors may form explosive mixtures with air.
Do not allow run-off from fire fighting to enter drains or water courses.
Flash back possible over considerable distance.
- Hazardous combustion products : During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating.
- Combustion products may include and are not limited to:
Carbon oxides
Nitrogen oxides (NO_x)
- Specific extinguishing methods : Remove undamaged containers from fire area if it is safe to do so.
Evacuate area.
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Use water spray to cool unopened containers.
- Further information : Use water spray to cool fire exposed containers and fire affected zone until fire is out and danger of reignition has passed.
Do not use a solid water stream as it may scatter and spread fire.
- Special protective equipment for fire-fighters : In the event of fire, wear self-contained breathing apparatus.
Use personal protective equipment.

SECTION 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures : Ensure adequate ventilation.
Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.
Remove all sources of ignition.
Use personal protective equipment.
Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.
- Environmental precautions : If the product contaminates rivers and lakes or drains inform

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respective authorities.
 Discharge into the environment must be avoided.
 Prevent further leakage or spillage if safe to do so.
 Prevent spreading over a wide area (e.g., by containment or oil barriers).
 Retain and dispose of contaminated wash water.
 Local authorities should be advised if significant spillages cannot be contained.
 Prevent from entering into soil, ditches, sewers, underwater.
 See Section 12, Ecological Information.

Methods and materials for containment and cleaning up : Clean up remaining materials from spill with suitable absorbent.
 Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in.
 For large spills, provide dyking or other appropriate containment to keep material from spreading. If dyked material can be pumped,
 Recovered material should be stored in a vented container. The vent must prevent the ingress of water as further reaction with spilled materials can take place which could lead to over-pressurization of the container.
 Wipe up with absorbent material (e.g. cloth, fleece).
 Neutralize with chalk, alkali solution or ammonia.
 Non-sparking tools should be used.
 Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).
 Suppress (knock down) gases/vapors/mists with a water spray jet.
 See Section 13, Disposal Considerations, for additional information.

SECTION 7. HANDLING AND STORAGE

Local/Total ventilation : Use with local exhaust ventilation.
 Use only in an area equipped with explosion proof exhaust ventilation.

Advice on safe handling : Avoid formation of aerosol.
 Non-sparking tools should be used.
 Provide sufficient air exchange and/or exhaust in work rooms.
 Open drum carefully as content may be under pressure.
 Do not breathe vapors/dust.
 Do not smoke.
 Handle in accordance with good industrial hygiene and safety practice.
 Avoid exposure - obtain special instructions before use.
 Smoking, eating and drinking should be prohibited in the application area.
 Do not breathe vapors or spray mist.
 Do not swallow.

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Avoid contact with eyes.
Avoid prolonged or repeated contact with skin.
Keep container tightly closed.
Keep away from heat and sources of ignition.
Take precautionary measures against static discharges.
Take care to prevent spills, waste and minimize release to the environment.
Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.

Conditions for safe storage : Store in a closed container.
No smoking.
Containers which are opened must be carefully resealed and kept upright to prevent leakage.
Keep in properly labeled containers.
Keep tightly closed.
Store in accordance with the particular national regulations.

Materials to avoid : Do not store near acids.
Strong oxidizing agents
Organic peroxides
Flammable solids
Pyrophoric liquids
Self-heating substances and mixtures
Substances and mixtures which in contact with water emit flammable gases
Explosives
Gases

Packaging material : Unsuitable material: None known.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
methanol	67-56-1	TWA	200 ppm	ACGIH
		STEL	250 ppm	ACGIH
		TWA	200 ppm 260 mg/m ³	OSHA Z-1
		TWA	200 ppm 260 mg/m ³	OSHA P0
		STEL	250 ppm 325 mg/m ³	OSHA P0
oxamyl (ISO)	23135-22-0	TWA	0.05 mg/m ³	Corteva OEL
		STEL	0.15 mg/m ³	Corteva OEL

Biological occupational exposure limits

Components	CAS-No.	Control parameters	Biological specimen	Sampling time	Permissible concentration	Basis
methanol	67-56-1	Methanol	Urine	End of	15 mg/l	ACGIH

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				shift (As soon as possible after exposure ceases)		BEI
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Engineering measures : Use only with adequate ventilation.
 Refer to the product label for additional Engineering Controls.

Information presented in Section 8 conforms to the requirements of the Occupational Safety and Health Administration (OSHA) Hazard Communication Standard of 2012. See Section 15 for applicable information conforming to the requirements of the Federal Insecticide Fungicide and Rodenticide Act (FIFRA), as required by the US Environmental Protection Agency (EPA), or by state Regulatory

Personal protective equipment

Respiratory protection : Mixers, loaders, applicators and other handlers must wear: A respirator with an organic vapor-removing cartridge with a prefilter approved for pesticides (NIOSH approval number prefix TC-23C), or a canister approved for pesticides (NIOSH approval number prefix TC-14G), or a NIOSH approved respirator with an organic vapor (OV) cartridge or canister with any R, P, or HE prefilter.

Hand protection

Remarks : See skin and body protection

Eye protection : See skin and body protection

Skin and body protection : PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is:
 Coveralls
 Chemical resistant gloves made of any waterproof material
 Shoes plus socks
 Chemical-resistant apron when cleaning equipment, mixing or loading
 Chemical resistant headgear for overhead exposure
 Protective eyewear
 Chemical resistant footwear plus socks
 Viton®
 Polyvinyl chloride
 Neoprene
 butyl-rubber
 Barrier laminate
 Chemical-resistant gloves
 Coveralls worn over long-sleeved shirt and long pants
 Mixers, loaders, applicators and other handlers must wear:

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- Protective measures : Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product. Do not reuse them.
Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.
- Hygiene measures : Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet.
Remove clothing/PPE immediately if material gets inside. Wash thoroughly and put on clean clothing.
Remove personal protective equipment immediately after handling this product.
Wash the outside of gloves before removing.
As soon as possible, wash thoroughly and change into clean clothing.
-

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

- Appearance : liquid
- Color : green, or, blue
- Odor : slight, sulfurous
- Odor Threshold : not determined
- pH : 3.6 (77 °F / 25 °C)
Concentration: 10 g/L
- Melting point/range : Not applicable
- Freezing point : No data available
- Boiling point/boiling range : No data available
- Flash point : 73 °F / 23 °C
Method: closed cup
- Evaporation rate : No data available
- Flammability (solid, gas) : not auto-flammable
- Upper explosion limit / Upper flammability limit : No data available
- Lower explosion limit / Lower : No data available
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flammability limit

Vapor pressure : No data available

Relative vapor density : No data available

Relative density : No data available

Density : 0.97 - 0.98 g/cm³

Solubility(ies)
Water solubility : soluble

Autoignition temperature : > 212 °F / > 100 °C

Viscosity
Viscosity, dynamic : 2 - 2.2 mPa.s (77 °F / 25 °C)

Explosive properties : Not explosive

Oxidizing properties : The substance or mixture is not classified as oxidizing.

SECTION 10. STABILITY AND REACTIVITY

Reactivity : Not classified as a reactivity hazard.

Chemical stability : No decomposition if stored and applied as directed.
Stable under normal conditions.

Possibility of hazardous reactions : Stable under recommended storage conditions.
No hazards to be specially mentioned.
Vapors may form explosive mixture with air.
May form explosive dust-air mixture.

Conditions to avoid : Heat, flames and sparks.

Incompatible materials : Strong acids
Strong bases
Strong oxidizing agents

Hazardous decomposition products : Decomposition products depend upon temperature, air supply and the presence of other materials.
Decomposition products can include and are not limited to:
Carbon oxides
Nitrogen oxides (NO_x)

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

Product:

Acute oral toxicity : LD50 (Rat, female): 9 mg/kg

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Method: OECD Test Guideline 401

LD50 (Rat, male): 10 mg/kg
Method: OECD Test Guideline 401

Acute inhalation toxicity : LC50 (Rat): 0.3 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 403

Acute dermal toxicity : LD50 (Rabbit): > 5,000 mg/kg
Method: OECD Test Guideline 402

Components:**oxamyl (ISO):**

Acute oral toxicity : LD50 (Rat, male): 3.1 mg/kg
Symptoms: central nervous system effects

LD50 (Rat, female): 2.5 mg/kg
Symptoms: central nervous system effects

Acute inhalation toxicity : LC50 (Rat): 0.056 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 403

Acute dermal toxicity : LD50 (Rabbit, female): > 2,000 mg/kg
Assessment: The substance or mixture has no acute dermal toxicity

LD50 (Rabbit): 740 mg/kg

methanol:

Acute oral toxicity : Remarks: Swallowing a small amount may cause serious injury; swallowing larger amounts may be fatal.

LD50 (Rat): > 5,000 mg/kg
Assessment: The component/mixture is toxic after single ingestion.
Remarks: Methanol is highly toxic to humans and may cause central nervous system effects, visual disturbances up to blindness, metabolic acidosis, and degenerative damage to other organs including liver, kidney, and heart.
Effects may be delayed.

Lethal Dose (Humans): 340 mg/kg
Method: Estimated.

Lethal Dose (Humans): 29 - 237 ml
Method: Estimated.

Acute inhalation toxicity : Remarks: Easily attainable vapor concentrations may cause serious adverse effects, even death.

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At lower concentrations:
 May cause respiratory irritation and central nervous system depression.
 Symptoms may include headache, dizziness and drowsiness, progressing to incoordination and unconsciousness.
 Inhalation of methanol may cause effects ranging from headache, narcosis and visual impairment to metabolic acidosis, blindness, and even death.
 Effects may be delayed.

LC50 (Rat): 3 mg/l
 Exposure time: 4 h
 Test atmosphere: vapor

Acute dermal toxicity : LD50 (Rabbit): 15,800 mg/kg
 Assessment: The component/mixture is toxic after single contact with skin.
 Remarks: Effects of methanol are the same as observed via oral and inhalation exposure and include central nervous system (CNS) depression, visual impairment up to blindness, metabolic acidosis, with effects on organ systems such as liver, kidneys and heart, even death.

Skin corrosion/irritation**Product:**

Species : Rabbit
 Method : OECD Test Guideline 404
 Result : No skin irritation

Components:**oxamyl (ISO):**

Species : Rabbit
 Exposure time : 72 h
 Method : OECD Test Guideline 404
 Result : No skin irritation

methanol:

Result : No skin irritation

Serious eye damage/eye irritation**Product:**

Species : Rabbit
 Result : No eye irritation
 Method : OECD Test Guideline 405

Components:**oxamyl (ISO):**

Species : Rabbit

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Result : No eye irritation
Exposure time : 72 h
Method : OECD Test Guideline 405

methanol:

Result : No eye irritation

Respiratory or skin sensitization

Product:

Species : Guinea pig
Assessment : Does not cause skin sensitization.
Method : OECD Test Guideline 406

Components:

oxamyl (ISO):

Test Type : Buehler Test
Species : Guinea pig
Method : US EPA Test Guideline OPP 81-6
Result : Does not cause skin sensitization.

Germ cell mutagenicity

Components:

oxamyl (ISO):

Germ cell mutagenicity - Assessment : In vitro genetic toxicity studies were negative., In vivo tests did not show mutagenic effects

methanol:

Germ cell mutagenicity - Assessment : In vitro genetic toxicity studies were negative., Animal genetic toxicity studies were negative in some cases and positive in other cases.

Carcinogenicity

Components:

oxamyl (ISO):

Carcinogenicity - Assessment : Did not cause cancer in laboratory animals.

methanol:

Carcinogenicity - Assessment : Did not cause cancer in laboratory animals.

IARC No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA No component of this product present at levels greater than or equal to 0.1% is

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on OSHA's list of regulated carcinogens.

NTP No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

Reproductive toxicity**Components:****oxamyl (ISO):**

Reproductive toxicity - Assessment : In animal studies, did not interfere with reproduction. Did not cause birth defects or any other fetal effects in laboratory animals.

methanol:

Reproductive toxicity - Assessment : In animal studies, did not interfere with reproduction. Methanol has caused birth defects in mice at doses nontoxic to the mother as well as slight behavioral effects in offspring of rats.

STOT-single exposure**Product:**

Assessment : Evaluation of available data suggests that this material is not an STOT-SE toxicant.

Components:**oxamyl (ISO):**

Target Organs : Central nervous system
Assessment : May cause drowsiness or dizziness.

methanol:

Target Organs : Eyes, Central nervous system
Assessment : Causes damage to organs.

STOT-repeated exposure**Components:****oxamyl (ISO):**

Assessment : Evaluation of available data suggests that this material is not an STOT-RE toxicant.

Repeated dose toxicity**Components:****oxamyl (ISO):**

Remarks : Based on available data, repeated exposures are not expected to cause significant adverse effects except at very high

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aerosol concentrations. Repeated excessive aerosol exposures may cause respiratory tract irritation and even death. cholinesterase inhibition

methanol:

Remarks : Methanol is highly toxic to humans and may cause central nervous system effects, visual disturbances up to blindness, metabolic acidosis, and degenerative damage to other organs including liver, kidney, and heart.

Aspiration toxicity**Product:**

Based on physical properties, not likely to be an aspiration hazard.

Components:**oxamyl (ISO):**

Based on physical properties, not likely to be an aspiration hazard.

methanol:

May be harmful if swallowed and enters airways.

SECTION 12. ECOLOGICAL INFORMATION**Ecotoxicity****Product:**

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 27 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203
GLP: yes

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia): 3 mg/l
Exposure time: 48 h
Test Type: Static renewal test
Method: OECD Test Guideline 202
GLP: yes

Toxicity to algae/aquatic plants : ErC50 (Selenastrum capricornutum (green algae)): 34 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201
GLP: yes

Components:**oxamyl (ISO):**

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 3.13 mg/l
Exposure time: 96 h
Test Type: static test

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Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 0.319 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202

Toxicity to algae/aquatic plants : NOEC (Pseudokirchneriella subcapitata (green algae)): 1.01 mg/l
Exposure time: 120 h
Test Type: static test
Method: OECD Test Guideline 201
GLP: yes

ErC50 (Pseudokirchneriella subcapitata (green algae)): 2.61 mg/l
Exposure time: 72 h
Test Type: static test
Method: OECD Test Guideline 201

EC50 (Lemna gibba (duckweed)): 30.0 mg/l
End point: Frond
Exposure time: 336 h
Test Type: static test
Method: US EPA Test Guideline OPP 122-2 & 123-2
GLP: yes

EC50 (Lemna gibba (duckweed)): 32.3 mg/l
End point: Biomass
Exposure time: 336 h
Test Type: static test
Method: US EPA Test Guideline OPP 122-2 & 123-2
GLP: yes

M-Factor (Acute aquatic toxicity) : 10

Toxicity to fish (Chronic toxicity) : NOEC (Oncorhynchus mykiss (rainbow trout)): 0.77 mg/l
Exposure time: 61 d
Test Type: Early Life-Stage
Method: US EPA Test Guideline OPP 72-4

NOEC (Cyprinodon variegatus (sheepshead minnow)): 0.356 mg/l
Exposure time: 29 d
Method: OECD Test Guideline 210

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): 0.0268 mg/l
Exposure time: 21 d
Test Type: flow-through test
Method: OECD Test Guideline 202

NOEC (Americamysis bahia (mysid shrimp)): 0.0189 mg/l
Exposure time: 28 d

M-Factor (Chronic aquatic toxicity) : 1

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toxicity)

Toxicity to soil dwelling organisms : LC50 (Eisenia fetida (earthworms)): 112 parts per million
Exposure time: 14 d

Toxicity to terrestrial organisms : LD50 (Colinus virginianus (Bobwhite quail)): 9.5 mg/kg
Method: US EPA Test Guideline OPPTS 850.2100

LC50 (Anas platyrhynchos (Mallard duck)): 766 mg/kg
Exposure time: 8 d
Method: US EPA Test Guideline OPP 71-2

LD50 (Apis mellifera (bees)): 0.38 µg/l
Exposure time: 48 h
Method: OEPP/EPPO Test Guideline 170

LD50 (Apis mellifera (bees)): 0.47 µg/l
Exposure time: 48 h
Method: OEPP/EPPO Test Guideline 170

methanol:

Toxicity to fish : Remarks: Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested).

LC50 (Oncorhynchus mykiss (rainbow trout)): 19,000 mg/l
Exposure time: 96 h
Method: Method Not Specified.

Toxicity to daphnia and other aquatic invertebrates : LC50 (Daphnia magna (Water flea)): > 10,000 mg/l
Exposure time: 48 h
Method: Method Not Specified.

Toxicity to algae/aquatic plants : ErC50 (Algae (Scenedesmus subspicatus)): 120 mg/l
End point: Growth rate
Exposure time: 72 h
Method: OECD Test Guideline 201 or Equivalent

Toxicity to microorganisms : IC50 (activated sludge): > 1,000 mg/l
Exposure time: 3 h

Persistence and degradability

Components:

oxamyl (ISO):

Biodegradability : Result: Not readily biodegradable.

methanol:

Biodegradability : Remarks: Material is readily biodegradable. Passes OECD test(s) for ready biodegradability.

Result: Readily biodegradable.

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Biodegradation: 95 %
Exposure time: 20 d
Method: OECD Test Guideline 301D or Equivalent
Remarks: 10-day Window: Pass

Biochemical Oxygen Demand (BOD) : 72 %
Incubation time: 5 d

79 %
Incubation time: 20 d

Chemical Oxygen Demand (COD) : 1.49 kg/kg
Method: Dichromate

ThOD : 1.50 kg/kg

Photodegradation : Test Type: Half-life (indirect photolysis)
Sensitizer: OH radicals
Concentration: 1,500,000 1/cm³
Rate constant: 6.16E-13 cm³/s
Method: Estimated.

Bioaccumulative potential

Components:

oxamyl (ISO):

Bioaccumulation : Remarks: Does not bioaccumulate.

Partition coefficient: n-octanol/water : log Pow: -0.44
pH: 5

methanol:

Bioaccumulation : Species: Leuciscus idus (Golden orfe)
Bioconcentration factor (BCF): < 10
Method: Measured

Partition coefficient: n-octanol/water : log Pow: -0.77
Method: Measured
Remarks: Bioconcentration potential is low (BCF < 100 or Log Pow < 3).

Balance:

Partition coefficient: n-octanol/water : Remarks: No relevant data found.

Mobility in soil

Components:

methanol:

Distribution among environmental compartments : Koc: 0.44
Method: Estimated.

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Remarks: Potential for mobility in soil is very high (Koc between 0 and 50).

Balance:

Distribution among environmental compartments : Remarks: No relevant data found.

Other adverse effects**Components:****methanol:**

Results of PBT and vPvB assessment : This substance is not considered to be persistent, bioaccumulating and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulating (vPvB).

Ozone-Depletion Potential : Remarks: This substance is not on the Montreal Protocol list of substances that deplete the ozone layer.

Balance:

Results of PBT and vPvB assessment : This substance has not been assessed for persistence, bioaccumulation and toxicity (PBT).

Ozone-Depletion Potential : Remarks: This substance is not on the Montreal Protocol list of substances that deplete the ozone layer.

SECTION 13. DISPOSAL CONSIDERATIONS
Disposal methods

Waste from residues : If wastes and/or containers cannot be disposed of according to the product label directions, disposal of this material must be in accordance with your local or area regulatory authorities. This information presented below only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations.
If the material as supplied becomes a waste, follow all applicable regional, national and local laws.

SECTION 14. TRANSPORT INFORMATION
International Regulations**UNRTDG**

UN number : UN 2991
Proper shipping name : CARBAMATE PESTICIDE, LIQUID, TOXIC, FLAMMABLE

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(Methanol, Oxamyl)
Class : 6.1
Subsidiary risk : 3
Packing group : II
Labels : 6.1 (3)

IATA-DGR

UN/ID No. : UN 2991
Proper shipping name : Carbamate pesticide, liquid, toxic, flammable
(Methanol, Oxamyl)
Class : 6.1
Subsidiary risk : 3
Packing group : II
Labels : Toxic, Flammable Liquids
Packing instruction (cargo aircraft) : 662
Packing instruction (passenger aircraft) : 654

IMDG-Code

UN number : UN 2991
Proper shipping name : CARBAMATE PESTICIDE, LIQUID, TOXIC, FLAMMABLE
(Methanol, Oxamyl)
Class : 6.1
Subsidiary risk : 3
Packing group : II
Labels : 6.1 (3)
EmS Code : F-E, S-D
Marine pollutant : yes
Remarks : Stowage category B

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

Not applicable for product as supplied.

Domestic regulation

49 CFR

UN/ID/NA number : UN 2991
Proper shipping name : Carbamate pesticides, liquid, toxic, flammable
(Methanol, Oxamyl)
Class : 6.1
Subsidiary risk : 3
Packing group : II
Labels : TOXIC, FLAMMABLE LIQUID
ERG Code : 131
Marine pollutant : no
Reportable Quantity : Oxamyl only regulated in pack sizes > 189 kg
Methanol only regulated in pack sizes > 5,432 kg

Further information

Marine Pollutants assigned UN number 3077 and 3082 in single or combination packaging containing a net quantity per single or inner packaging of 5L or less for liquids or having a net mass per single or inner packaging of 5 KG or less for solids may be transported as non-dangerous goods as provided in section 2.10.2.7 of IMDG code, IATA Special provision A197, and ADR/RID special provision 375.

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Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

SECTION 15. REGULATORY INFORMATION

SARA 311/312 Hazards : Flammable (gases, aerosols, liquids, or solids)
Acute toxicity (any route of exposure)
Specific target organ toxicity (single or repeated exposure)

SARA 313 : The following components are subject to reporting levels established by SARA Title III, Section 313:

methanol	67-56-1	>= 30 - < 50 %
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US State Regulations**Pennsylvania Right To Know**

methanol	67-56-1
oxamyl (ISO)	23135-22-0

California Prop. 65

WARNING: This product can expose you to chemicals including methanol, which is/are known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

The ingredients of this product are reported in the following inventories:

TSCA : Product contains substance(s) not listed on TSCA inventory.

TSCA list

No substances are subject to a Significant New Use Rule.

No substances are subject to TSCA 12(b) export notification requirements.

Federal Insecticide, Fungicide and Rodenticide Act

EPA Registration Number : 352-372

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 as required on the pesticide label:

DANGER POISON

Fatal if swallowed.
May be fatal if inhaled.
Causes moderate eye irritation

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SECTION 16. OTHER INFORMATION

Information Source and References

This SDS is prepared by Product Regulatory Services and Hazard Communications Groups from information supplied by internal references within our company.

Full text of other abbreviations

ACGIH	:	USA. ACGIH Threshold Limit Values (TLV)
ACGIH BEI	:	ACGIH - Biological Exposure Indices (BEI)
Corteva OEL	:	Corteva Occupational Exposure Limit
OSHA P0	:	USA. Table Z-1-A Limits for Air Contaminants (1989 vacated values)
OSHA Z-1	:	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
ACGIH / TWA	:	8-hour, time-weighted average
ACGIH / STEL	:	Short-term exposure limit
Corteva OEL / STEL	:	Short Term Exposure Limit (STEL):
Corteva OEL / TWA	:	Time Weighted Average (TWA)
OSHA P0 / TWA	:	8-hour time weighted average
OSHA P0 / STEL	:	Short-term exposure limit
OSHA Z-1 / TWA	:	8-hour time weighted average

AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Con-

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trol Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

Take notice of the directions of use on the label.

Revision Date : 01/13/2023

Product code: GF-4079

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

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