SAFETY DATA SHEET
according to the OSHA Hazard Communication Standard

Indoxacarb / Permethrin Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 04/14/2025
10.0	06/17/2025	27903-00027	Date of first issue: 11/04/2014

SECTION 1. IDENTIFICATION

Product name : Indoxacarb / Permethrin Formulation

Manufacturer or supplier's details

Company name of supplier : Merck & Co., Inc
Address : 126 E. Lincoln Avenue
Rahway, New Jersey U.S.A. 07065
Telephone : 908-740-4000
Emergency telephone : 1-908-423-6000
E-mail address : EHSDATASTEWARD@merck.com

Recommended use of the chemical and restrictions on use

Recommended use : Veterinary product
Restrictions on use : Not applicable

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 4

Acute toxicity (Inhalation) : Category 4

Skin sensitization : Category 1

Specific target organ toxicity - single exposure : Category 3

Specific target organ toxicity - repeated exposure : Category 1 (Blood, Nervous system, Heart)

Other hazards

Cutaneous sensations may occur, such as burning or stinging on the face and mucosae. However, these sensations cause no lesions and are of a transitory nature (max. 24 hours).
Vapors may form explosive mixture with air.

GHS label elements

Hazard pictograms :

Signal Word : Danger

Hazard Statements : H226 Flammable liquid and vapor.
H302 + H332 Harmful if swallowed or if inhaled.
H317 May cause an allergic skin reaction.
H336 May cause drowsiness or dizziness.

H372 Causes damage to organs (Blood, Nervous system, Heart) through prolonged or repeated exposure.

Precautionary Statements : **Prevention:**

P210 Keep away from heat, sparks, open flame and hot surfaces. No smoking.
P233 Keep container tightly closed.
P241 Use explosion-proof electrical, ventilating and lighting equipment.
P242 Use non-sparking tools.
P243 Take action to prevent static discharges.
P260 Do not breathe mist or vapors.
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.
P272 Contaminated work clothing must not be allowed out of the workplace.
P280 Wear protective gloves, protective clothing, eye protection and face protection.

Response:

P301 + P312 + P330 IF SWALLOWED: Call a doctor if you feel unwell. Rinse mouth.
P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a doctor if you feel unwell.
P314 Get medical attention if you feel unwell.
P333 + P313 If skin irritation or rash occurs: Get medical attention.

Storage:

P403 + P235 Store in a well-ventilated place. Keep cool.
P405 Store locked up.

Disposal:

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

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Components

Chemical name	CAS No./Unique ID	Concentration (% w/w)	Trade secret
Permethrin (ISO)	52645-53-1*	>= 30 - <= 60	TSC
1-Methoxy-2-propanol	107-98-2*	>= 30 - <= 60	TSC
Indoxacarb (ISO)	173584-44-6*	>= 10 - <= 30	TSC

* Indicates that the identifier is a CAS No.
TSC- the actual concentration or concentration range is withheld as a trade secret

SECTION 4. FIRST AID MEASURES

General advice	:	In the case of accident or if you feel unwell, seek medical advice immediately. When symptoms persist or in all cases of doubt seek medical advice.
If inhaled	:	If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention if symptoms occur.
In case of skin contact	:	In case of contact, immediately flush skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention. Wash clothing before reuse. Thoroughly clean shoes before reuse.
In case of eye contact	:	Flush eyes with water as a precaution. Get medical attention if irritation develops and persists.
If swallowed	:	If swallowed, DO NOT induce vomiting. Get medical attention. Rinse mouth thoroughly with water. Never give anything by mouth to an unconscious person.
Most important symptoms and effects, both acute and delayed	:	This product contains a pyrethroid. Pyrethroid poisoning should not be confused with carbamate or organophosphate poisoning. Harmful if swallowed or if inhaled. May cause an allergic skin reaction. May cause drowsiness or dizziness. Causes damage to organs through prolonged or repeated exposure.
Protection of first-aiders	:	First Aid responders should pay attention to self-protection, and use the recommended personal protective equipment when the potential for exposure exists (see section 8).
Notes to physician	:	Treat symptomatically and supportively.

SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media	:	Water spray Alcohol-resistant foam Carbon dioxide (CO2) Dry chemical
Unsuitable extinguishing media	:	High volume water jet
Specific hazards during fire fighting	:	Do not use a solid water stream as it may scatter and spread fire. Flash back possible over considerable distance. Vapors may form explosive mixtures with air. Exposure to combustion products may be a hazard to health.

Hazardous combustion products	:	Carbon oxides Chlorine compounds
Specific extinguishing methods	:	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Use water spray to cool unopened containers. Remove undamaged containers from fire area if it is safe to do so. Evacuate area.
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	:	Remove all sources of ignition. Use personal protective equipment. Follow safe handling advice (see section 7) and personal protective equipment recommendations (see section 8).
Environmental precautions	:	Avoid release to the environment. 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.
Methods and materials for containment and cleaning up	:	Non-sparking tools should be used. Soak up with inert absorbent material. Suppress (knock down) gases/vapors/mists with a water spray jet. For large spills, provide diking or other appropriate containment to keep material from spreading. If diked material can be pumped, store recovered material in appropriate container. 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 the cleanup of releases. You will need to determine which regulations are applicable. Sections 13 and 15 of this SDS provide information regarding certain local or national requirements.

SECTION 7. HANDLING AND STORAGE

Technical measures	:	See Engineering measures under EXPOSURE CONTROLS/PERSONAL PROTECTION section.
Local/Total ventilation	:	If sufficient ventilation is unavailable, use with local exhaust

ventilation.
Use explosion-proof electrical, ventilating and lighting equipment.

Advice on safe handling : Do not get on skin or clothing.
Do not breathe mist or vapors.
Do not swallow.
Avoid contact with eyes.
Wash skin thoroughly after handling.
Handle in accordance with good industrial hygiene and safety practice, based on the results of the workplace exposure assessment
Non-sparking tools should be used.
Keep container tightly closed.
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Take precautionary measures against static discharges.
Do not eat, drink or smoke when using this product.
Take care to prevent spills, waste and minimize release to the environment.

Conditions for safe storage : Keep in properly labeled containers.
Store locked up.
Keep tightly closed.
Keep in a cool, well-ventilated place.
Store in accordance with the particular national regulations.
Keep away from heat and sources of ignition.

Materials to avoid : Do not store with the following product types:
Strong oxidizing agents
Self-reactive substances and mixtures
Organic peroxides
Flammable solids
Pyrophoric liquids
Pyrophoric solids
Self-heating substances and mixtures
Substances and mixtures which in contact with water emit flammable gases
Explosives
Gases
Very acutely toxic substances and mixtures

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Permethrin (ISO)	52645-53-1	TWA	80 µg/m3 (OEB 3)	Internal
		Wipe limit	800 µg/100 cm²	Internal
1-Methoxy-2-propanol	107-98-2	TWA	50 ppm	ACGIH
		STEL	100 ppm	ACGIH
		ST	150 ppm 540 mg/m³	NIOSH REL
		TWA	100 ppm	NIOSH REL

			360 mg/m³	
Indoxacarb (ISO)	173584-44-6	TWA	50 µg/m3 (OEB 3)	Internal
	Further information: DSEN			
		Wipe limit	100 µg/100 cm2	Internal

Engineering measures : Minimize workplace exposure concentrations.
If sufficient ventilation is unavailable, use with local exhaust ventilation.
Use explosion-proof electrical, ventilating and lighting equipment.

Personal protective equipment

Respiratory protection : General and local exhaust ventilation is recommended to maintain vapor exposures below recommended limits. Where concentrations are above recommended limits or are unknown, appropriate respiratory protection should be worn. Follow OSHA respirator regulations (29 CFR 1910.134) and use NIOSH/MSHA approved respirators. Protection provided by air purifying respirators against exposure to any hazardous chemical is limited. Use a positive pressure air supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown, or any other circumstance where air purifying respirators may not provide adequate protection.

Hand protection

Material : Chemical-resistant gloves

Remarks : Choose gloves to protect hands against chemicals depending on the concentration specific to place of work. Breakthrough time is not determined for the product. Change gloves often! For special applications, we recommend clarifying the resistance to chemicals of the aforementioned protective gloves with the glove manufacturer. Take note that the product is flammable, which may impact the selection of hand protection. Wash hands before breaks and at the end of workday.

Eye protection : Wear the following personal protective equipment:
Safety glasses

Skin and body protection : Select appropriate protective clothing based on chemical resistance data and an assessment of the local exposure potential.
Wear the following personal protective equipment:
If assessment demonstrates that there is a risk of explosive atmospheres or flash fires, use flame retardant antistatic protective clothing.
Skin contact must be avoided by using impervious protective clothing (gloves, aprons, boots, etc).

Hygiene measures : If exposure to chemical is likely during typical use, provide eye flushing systems and safety showers close to the working place.
When using do not eat, drink or smoke.
Contaminated work clothing should not be allowed out of the

workplace.
Wash contaminated clothing before re-use.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	liquid
Color	:	Clear white to yellow.
Odor	:	ether-like
Odor Threshold	:	No data available
pH	:	No data available
Melting point/freezing point	:	No data available
Initial boiling point and boiling range	:	No data available
Flash point	:	92.3 °F / 33.5 °C
Evaporation rate	:	No data available
Flammability (solid, gas)	:	Not applicable
Flammability (liquids)	:	No data available
Upper explosion limit / Upper flammability limit	:	No data available
Lower explosion limit / Lower flammability limit	:	No data available
Vapor pressure	:	No data available
Relative vapor density	:	No data available
Relative density	:	1.096
Density	:	No data available
Solubility(ies)		
Water solubility	:	No data available
Partition coefficient: n-octanol/water	:	Not applicable
Autoignition temperature	:	No data available
Decomposition temperature	:	No data available
Viscosity		
Viscosity, kinematic	:	No data available

Explosive properties	:	Not explosive
Oxidizing properties	:	The substance or mixture is not classified as oxidizing.
Molecular weight	:	No data available
Particle characteristics		
Particle size	:	Not applicable

SECTION 10. STABILITY AND REACTIVITY

Reactivity	:	Not classified as a reactivity hazard.
Chemical stability	:	Stable under normal conditions.
Possibility of hazardous reactions	:	Flammable liquid and vapor. Vapors may form explosive mixture with air. Can react with strong oxidizing agents.
Conditions to avoid	:	Heat, flames and sparks.
Incompatible materials	:	Oxidizing agents
Hazardous decomposition products	:	No hazardous decomposition products are known.

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Inhalation
Skin contact
Ingestion
Eye contact

Acute toxicity

Harmful if swallowed or if inhaled.

Product:

Acute oral toxicity	:	Acute toxicity estimate: 572.63 mg/kg Method: Calculation method
Acute inhalation toxicity	:	Acute toxicity estimate: 11 mg/l Exposure time: 4 h Test atmosphere: vapor Method: Calculation method

Components:

Permethrin (ISO):

Acute oral toxicity	:	LD50 (Rat): 480 - 554 mg/kg
Acute inhalation toxicity	:	LC50 (Rat): 2.3 mg/l Exposure time: 4 h

		Test atmosphere: dust/mist
Acute dermal toxicity	:	LD50 (Rabbit): > 2,000 mg/kg

1-Methoxy-2-propanol:

Acute oral toxicity	:	LD50 (Rat): 4,016 mg/kg
Acute inhalation toxicity	:	LC50 (Mouse): < 22.2 mg/l Exposure time: 6 h Test atmosphere: vapor
Acute dermal toxicity	:	LD50 (Rat): > 2,000 mg/kg Assessment: The substance or mixture has no acute dermal toxicity

Indoxacarb (ISO):

Acute oral toxicity	:	LD50 (Rat, female): 179 mg/kg Symptoms: Loss of reflexes, Breathing difficulties, Tremors LD50 (Rat, male): 843 mg/kg
Acute inhalation toxicity	:	LC50 (Rat, female): 4.2 mg/l Exposure time: 4 h Test atmosphere: dust/mist
Acute dermal toxicity	:	LD50 (Rat, male and female): > 5,000 mg/kg

Skin corrosion/irritation

Not classified based on available information.

Components:

Permethrin (ISO):

Species	:	Rabbit
Result	:	No skin irritation

1-Methoxy-2-propanol:

Species	:	Rabbit
Result	:	No skin irritation

Indoxacarb (ISO):

Result	:	No skin irritation

Serious eye damage/eye irritation

Not classified based on available information.

Components:

Permethrin (ISO):

Species	:	Rabbit

Result : No eye irritation

1-Methoxy-2-propanol:

Species : Rabbit
Result : No eye irritation

Indoxacarb (ISO):

Result : No eye irritation

Respiratory or skin sensitization

Skin sensitization

May cause an allergic skin reaction.

Respiratory sensitization

Not classified based on available information.

Components:

Permethrin (ISO):

Test Type : Buehler Test
Routes of exposure : Skin contact
Species : Guinea pig
Result : positive

Assessment : Probability or evidence of skin sensitization in humans

1-Methoxy-2-propanol:

Test Type : Maximization Test
Routes of exposure : Skin contact
Species : Guinea pig
Result : negative

Indoxacarb (ISO):

Test Type : Maximization Test
Species : Guinea pig
Result : positive

Germ cell mutagenicity

Not classified based on available information.

Components:

Permethrin (ISO):

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)
Result: negative

Test Type: In vitro mammalian cell gene mutation test
Result: negative

Test Type: Chromosome aberration test in vitro

		Result: negative Test Type: DNA damage and repair, unscheduled DNA synthesis in mammalian cells (in vitro) Result: negative Test Type: Chromosome aberration test in vitro Result: positive
Genotoxicity in vivo	:	Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay) Species: Mouse Result: negative Test Type: Mutagenicity (in vivo mammalian bone-marrow cytogenetic test, chromosomal analysis) Species: Mouse Result: negative Test Type: Rodent dominant lethal test (germ cell) (in vivo) Species: Mouse Result: negative Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay) Species: Rat Application Route: Intraperitoneal injection Result: negative Test Type: Mutagenicity (in vivo mammalian bone-marrow cytogenetic test, chromosomal analysis) Species: Mouse Application Route: Ingestion Result: positive
Germ cell mutagenicity - Assessment	:	Weight of evidence does not support classification as a germ cell mutagen.

1-Methoxy-2-propanol:

Genotoxicity in vitro	:	Test Type: Bacterial reverse mutation assay (AMES) Result: negative Test Type: Chromosome aberration test in vitro Result: negative Test Type: In vitro mammalian cell gene mutation test Result: negative Test Type: In vitro sister chromatid exchange assay in mammalian cells Result: equivocal Test Type: DNA damage and repair, unscheduled DNA syn-

thesis in mammalian cells (in vitro)
Method: OECD Test Guideline 482
Result: negative

Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)
Species: Mouse
Application Route: Intraperitoneal injection
Result: negative

Indoxacarb (ISO):

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)
Result: negative

Test Type: Chromosomal aberration
Test system: mammalian cells
Result: negative

Test Type: In vitro mammalian cell gene mutation test
Test system: Chinese hamster ovary cells
Result: negative

Genotoxicity in vivo : Test Type: Micronucleus test
Species: Mouse
Cell type: Bone marrow
Result: negative

Carcinogenicity

Not classified based on available information.

Components:

Permethrin (ISO):

Species : Rat
Result : negative

Species : Mouse
Result : negative

1-Methoxy-2-propanol:

Species : Rat
Application Route : inhalation (vapor)
Exposure time : 2 Years
Method : OECD Test Guideline 453
Result : negative

Indoxacarb (ISO):

Species : Rat, male and female
Application Route : oral (feed)
Exposure time : 2 Years
Frequency of Treatment : daily

Result	:	negative

Species	:	Mouse, male and female
Application Route	:	oral (feed)
Exposure time	:	18 Months
Frequency of Treatment	:	daily
Result	:	negative

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 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

Not classified based on available information.

Components:

Permethrin (ISO):

Effects on fertility	:	Test Type: Two-generation reproduction toxicity study Species: Rat Application Route: Ingestion Result: negative
Effects on fetal development	:	Test Type: Combined repeated dose toxicity study with the reproduction/developmental toxicity screening test Species: Rat Application Route: Ingestion Result: negative

1-Methoxy-2-propanol:

Effects on fertility	:	Test Type: Two-generation reproduction toxicity study Species: Rat Application Route: inhalation (vapor) Method: OECD Test Guideline 416 Result: negative
Effects on fetal development	:	Test Type: Embryo-fetal development Species: Rat Application Route: inhalation (vapor) Result: negative

Indoxacarb (ISO):

Effects on fertility	:	Test Type: Two-generation study Species: Rat Application Route: Oral General Toxicity F1: NOAEL: 1.3 mg/kg body weight Result: negative

		Test Type: Two-generation study Species: Rat Application Route: Oral General Toxicity Parent: NOAEL: 1.3 mg/kg body weight General Toxicity F1: NOAEL: > 6.7 mg/kg body weight Result: Embryotoxic effects and adverse effects on the offspring were detected.
Effects on fetal development	:	Test Type: Development Species: Rat Developmental Toxicity: NOAEL: 2 mg/kg body weight Result: No teratogenic effects. Test Type: Development Species: Rabbit Application Route: Oral Developmental Toxicity: NOAEL: 500 mg/kg body weight Result: No adverse effects. Test Type: Development Species: Rat Application Route: Oral Developmental Toxicity: NOAEL: 10 mg/kg body weight Test Type: Development Species: Rat Application Route: Oral Developmental Toxicity: LOAEL: 100 mg/kg body weight

STOT-single exposure

May cause drowsiness or dizziness.

Components:

1-Methoxy-2-propanol:

Assessment	:	May cause drowsiness or dizziness.

STOT-repeated exposure

Causes damage to organs (Blood, Nervous system, Heart) through prolonged or repeated exposure.

Components:

Indoxacarb (ISO):

Target Organs	:	Blood, Nervous system, Heart
Assessment	:	Causes damage to organs through prolonged or repeated exposure.

Repeated dose toxicity

Components:

Permethrin (ISO):

Species	:	Rat
NOAEL	:	0.2201 mg/l
Application Route	:	Inhalation
Exposure time	:	90 Days

Species	:	Rat
NOAEL	:	175 mg/kg
Application Route	:	Ingestion
Exposure time	:	90 Days

1-Methoxy-2-propanol:

Species	:	Rat
NOAEL	:	919 mg/kg
Application Route	:	Ingestion
Exposure time	:	35 Days

Species	:	Rat
NOAEL	:	1.1 mg/l
Application Route	:	inhalation (vapor)
Exposure time	:	2 y
Method	:	OECD Test Guideline 453

Species	:	Rabbit
NOAEL	:	1,838 mg/kg
Application Route	:	Skin contact
Exposure time	:	90 Days

Indoxacarb (ISO):

Species	:	Rat, male and female
NOAEL	:	1.7 mg/kg
LOAEL	:	4.1 mg/kg
Application Route	:	Oral
Exposure time	:	90 d
Target Organs	:	Blood, Central nervous system

Species	:	Rat, male and female
NOAEL	:	50 mg/kg
LOAEL	:	500 mg/kg
Application Route	:	Dermal
Exposure time	:	28 d
Target Organs	:	Blood

Species	:	Rat
NOAEL	:	4.6 mg/m3
LOAEL	:	23 mg/m3
Application Route	:	Inhalation
Exposure time	:	4 Weeks
Target Organs	:	Blood, Lungs

Species	:	Rat, male and female
NOAEL	:	1 mg/kg
LOAEL	:	2 mg/kg
Application Route	:	Oral
Exposure time	:	1 y
Target Organs	:	Blood

Species	:	Dog
NOAEL	:	1 mg/kg
LOAEL	:	2 mg/kg
Application Route	:	Oral
Exposure time	:	1 y
Target Organs	:	Blood

Species	:	Mouse
NOAEL	:	3 mg/kg
LOAEL	:	14 mg/kg
Application Route	:	oral (feed)
Exposure time	:	18 Months
Target Organs	:	Nervous system, Heart

Aspiration toxicity
Not classified based on available information.

Experience with human exposure

Components:

Indoxacarb (ISO):

General Information	:	No human information is available.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

Permethrin (ISO):

Toxicity to fish	:	LC50 (Lepomis macrochirus (Bluegill sunfish)): 0.00079 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): 0.0001 mg/l Exposure time: 48 h
Toxicity to algae/aquatic plants	:	ErC50 (Pseudokirchneriella subcapitata (green algae)): > 1.13 mg/l Exposure time: 72 h EC10 (Pseudokirchneriella subcapitata (green algae)): 0.0023 mg/l Exposure time: 72 h
Toxicity to fish (Chronic tox-	:	NOEC (Danio rerio (zebra fish)): 0.00041 mg/l

icity)		Exposure time: 35 d Method: OECD Test Guideline 210
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC (Daphnia magna (Water flea)): 0.0047 µg/l Exposure time: 21 d Method: OECD Test Guideline 211
Toxicity to microorganisms	:	EC50: > 1,000 mg/l Exposure time: 3 h

1-Methoxy-2-propanol:

Toxicity to fish	:	LC50 (Leuciscus idus (Golden orfe)): 6,812 mg/l Exposure time: 96 h Method: DIN 38412
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): 23,300 mg/l Exposure time: 48 h
Toxicity to algae/aquatic plants	:	ErC50 (Skeletonema costatum (marine diatom)): 6,745 mg/l Exposure time: 72 h Method: ISO 10253
Toxicity to microorganisms	:	IC50: > 1,000 mg/l Exposure time: 3 h Method: OECD Test Guideline 209

Indoxacarb (ISO):

Toxicity to fish	:	LC50 (Oncorhynchus mykiss (rainbow trout)): 0.65 mg/l Exposure time: 96 h Method: OECD Test Guideline 203 LC50 (Lepomis macrochirus (Bluegill sunfish)): 0.9 mg/l Exposure time: 96 h Method: OECD Test Guideline 203
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): 0.6 mg/l Exposure time: 48 h Method: OECD Test Guideline 202
Toxicity to algae/aquatic plants	:	EC50 (Pseudokirchneriella subcapitata (green algae)): > 0.6 mg/l Exposure time: 72 h NOEC (Pseudokirchneriella subcapitata (green algae)): 0.46 mg/l Exposure time: 72 h
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC (Daphnia magna (Water flea)): 0.09 mg/l Exposure time: 21 d

Persistence and degradability

Components:

Permethrin (ISO):

Biodegradability	:	Result: Not readily biodegradable. Method: OECD Test Guideline 301F

1-Methoxy-2-propanol:

Biodegradability	:	Result: Readily biodegradable. Biodegradation: 96 % Exposure time: 28 d Method: OECD Test Guideline 301E

Bioaccumulative potential

Components:

Permethrin (ISO):

Bioaccumulation	:	Species: Lepomis macrochirus (Bluegill sunfish) Bioconcentration factor (BCF): 570
Partition coefficient: n-octanol/water	:	log Pow: 4.67

1-Methoxy-2-propanol:

Partition coefficient: n-octanol/water	:	log Pow: < 1

Indoxacarb (ISO):

Partition coefficient: n-octanol/water	:	log Pow: 4.65

Mobility in soil

Components:

Indoxacarb (ISO):

Distribution among environmental compartments	:	log Koc: 3.9

Other adverse effects

No data available

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues	:	Dispose of in accordance with local regulations. Do not dispose of waste into sewer.
Contaminated packaging	:	Empty containers should be taken to an approved waste handling site for recycling or disposal. Empty containers retain residue and can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, or other

sources of ignition. They may explode and cause injury and/or death.
If not otherwise specified: Dispose of as unused product.

SECTION 14. TRANSPORT INFORMATION

International Regulations

UNRTDG

UN number	:	UN 3092
Proper shipping name	:	1-METHOXY-2-PROPANOL SOLUTION
Class	:	3
Packing group	:	III
Labels	:	3
Environmentally hazardous	:	no

IATA-DGR

UN/ID No.	:	UN 3092
Proper shipping name	:	1-Methoxy-2-propanol solution
Class	:	3
Packing group	:	III
Labels	:	Flammable Liquids
Packing instruction (cargo aircraft)	:	366
Packing instruction (passenger aircraft)	:	355

IMDG-Code

UN number	:	UN 3092
Proper shipping name	:	1-METHOXY-2-PROPANOL SOLUTION (Permethrin (ISO), Indoxacarb (ISO))
Class	:	3
Packing group	:	III
Labels	:	3
EmS Code	:	F-E, S-D
Marine pollutant	:	yes

Transport in bulk according to IMO instruments

Not applicable for product as supplied.

Domestic regulation

49 CFR

UN/ID/NA number	:	UN 3092
Proper shipping name	:	1-Methoxy-2-propanol SOLUTION
Class	:	3
Packing group	:	III
Labels	:	FLAMMABLE LIQUID
ERG Code	:	129
Marine pollutant	:	yes(Permethrin (ISO), Indoxacarb (ISO))

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

CERCLA Reportable Quantity

This material does not contain any components with a CERCLA RQ.

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 302 Extremely Hazardous Substances Threshold Planning Quantity

This material does not contain any components with a section 302 EHS TPQ.

SARA 311/312 Hazards : Flammable (gases, aerosols, liquids, or solids)
Acute toxicity (any route of exposure)
Respiratory or skin sensitization
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:

Permethrin (ISO)	52645-53-1	>= 30 - < 50 %

US State Regulations

Pennsylvania Right To Know

Permethrin (ISO)	52645-53-1
1-Methoxy-2-propanol	107-98-2
Indoxacarb (ISO)	173584-44-6

California List of Hazardous Substances

1-Methoxy-2-propanol	107-98-2

California Permissible Exposure Limits for Chemical Contaminants

1-Methoxy-2-propanol	107-98-2

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

AICS : not determined

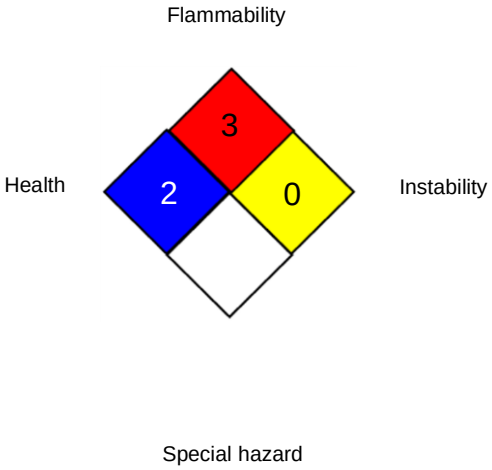
DSL : not determined

IECSC : not determined

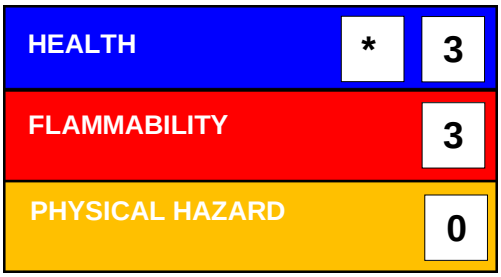
SECTION 16. OTHER INFORMATION

Further information

NFPA 704:



HMIS® IV:



HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. The "*" represents a chronic hazard, while the "/" represents the absence of a chronic hazard.

Full text of other abbreviations

ACGIH	:	USA. ACGIH Threshold Limit Values (TLV)
NIOSH REL	:	USA. NIOSH Recommended Exposure Limits
ACGIH / TWA	:	8-hour, time-weighted average
ACGIH / STEL	:	Short-term exposure limit
NIOSH REL / TWA	:	Time-weighted average concentration for up to a 10-hour workday during a 40-hour workweek
NIOSH REL / ST	:	STEL - 15-minute TWA exposure that should not be exceeded at any time during a workday

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 sub-

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

Sources of key data used to compile the Material Safety Data Sheet	:	Internal technical data, data from raw material SDSs, OECD eChem Portal search results and European Chemicals Agency, http://echa.europa.eu/
Revision Date	:	06/17/2025

Items where changes have been made to the previous version are highlighted in the body of this document by two vertical lines.

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 is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and shall not be considered a warranty or quality specification of any type. The information provided relates only to the specific material identified at the top of this SDS and may not be valid when the SDS material is used in combination with any other materials or in any process, unless specified in the text. Material users should review the information and recommendations in the specific context of their intended manner of handling, use, processing and storage, including an assessment of the appropriateness of the SDS material in the user's end product, if applicable.

US / Z8