

Hazard(s) not otherwise classified (HNOC) Very toxic to aquatic life. Very toxic to aquatic life with long lasting effects.

Supplemental information None.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
Permethrin		52645-53-1	25.1
1,3-Diethyl benzene		141-93-5	0.18
1,2,3-Trimethyl benzene		526-73-8	0.53
2-Methylnaphthalene		91-57-6	0.18
1,4-Diethylbenzene		105-05-5	0.53
1,2, 4-Trimethylbenzene		95-63-6	0.18
Naphthalene		91-20-3	0.89
Other components below reportable levels			72.39

*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. First-aid measures

Inhalation	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Oxygen or artificial respiration if needed. Do not use mouth-to-mouth method if victim inhaled the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Call a POISON CENTER or doctor/physician.
Skin contact	Take off immediately all contaminated clothing. Wash off with soap and plenty of water. Call a POISON CENTER or doctor/physician if you feel unwell. If skin irritation or rash occurs: Get medical advice/attention. For minor skin contact, avoid spreading material on unaffected skin.
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.
Ingestion	Call a POISON CENTER or doctor/physician if you feel unwell. Rinse mouth.
Most important symptoms/effects, acute and delayed	May cause allergic skin reaction. Prolonged exposure may cause chronic effects.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. In case of shortness of breath, give oxygen. Keep victim warm. Keep victim under observation. Symptoms may be delayed.
General information	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. IF exposed or concerned: Get medical advice/attention. Keep victim warm. Wash contaminated clothing before reuse.

5. Fire-fighting measures

Suitable extinguishing media	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO ₂).
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	By heating and fire, harmful vapors/gases may be formed. Vapors may form explosive mixtures with air. Vapors may travel considerable distance to a source of ignition and flash back.
Special protective equipment and precautions for firefighters	Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA. Structural firefighters protective clothing will only provide limited protection.
Fire fighting equipment/instructions	In case of fire and/or explosion do not breathe fumes. Use standard firefighting procedures and consider the hazards of other involved materials. Move containers from fire area if you can do so without risk. Water runoff can cause environmental damage.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials. Move container from fire area if it can be done without risk. In the event of fire and/or explosion do not breathe fumes.
General fire hazards	Flammable liquid and vapor.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Immediately evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Keep out of low areas. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Wear appropriate personal protective equipment. Fully encapsulating, vapor protective clothing should be worn for spills and leaks with no fire. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Avoid inhalation of vapors or mists. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS/SDS.

Methods and materials for containment and cleaning up

Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Take precautionary measures against static discharge. Use only non-sparking tools. Keep combustibles (wood, paper, oil, etc.) away from spilled material. This material is classified as a water pollutant under the Clean Water Act and should be prevented from contaminating soil or from entering sewage and drainage systems which lead to waterways. Stop the flow of material, if this is without risk, to prevent entry into waterways, sewer, basements or confined areas. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Clean surface thoroughly to remove residual contamination.

Never return spills in original containers for re-use. For waste disposal, see section 13 of the SDS.

Environmental precautions

Avoid release to the environment. Contact local authorities in case of spillage to drain/aquatic environment. Prevent further leakage or spillage if safe to do so. Do not contaminate water. Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Use non-sparking tools and explosion-proof equipment. Do not breathe mist or vapor. Avoid contact with skin. Avoid prolonged exposure. Use only outdoors or in a well-ventilated area. Wear appropriate personal protective equipment recommended in section 8. Observe good industrial hygiene practices. When using, do not eat, drink or smoke. Wash hands thoroughly after handling. Avoid release to the environment. Do not empty into drains.

Conditions for safe storage, including any incompatibilities

Store locked up. Keep away from heat, sparks and open flame. Prevent electrostatic charge build-up by using common bonding and grounding techniques. Keep container tightly closed. Store in a cool, dry place out of direct sunlight. Store in a well-ventilated place. Refrigeration recommended. Keep in an area equipped with sprinklers.

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
Naphthalene (CAS 91-20-3)	PEL	50 mg/m ³ 10 ppm
Permethrin (CAS 52645-53-1)	PEL	5 mg/m ³

US. ACGIH Threshold Limit Values

Components	Type	Value
1,2, 4-Trimethylbenzene (CAS 95-63-6)	TWA	25 ppm
1,2,3-Trimethyl benzene (CAS 526-73-8)	TWA	25 ppm
2-Methylnaphthalene (CAS 91-57-6)	TWA	0.5 ppm
Naphthalene (CAS 91-20-3)	TWA	10 ppm
Permethrin (CAS 52645-53-1)	TWA	5 mg/m ³

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
1,2, 4-Trimethylbenzene (CAS 95-63-6)	TWA	125 mg/m ³ 25 ppm

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
1,2,3-Trimethyl benzene (CAS 526-73-8)	TWA	125 mg/m ³
Naphthalene (CAS 91-20-3)		25 ppm
	STEL	75 mg/m ³
	TWA	15 ppm
Permethrin (CAS 52645-53-1)		50 mg/m ³
	TWA	10 ppm
		5 mg/m ³

US. Workplace Environmental Exposure Level (WEEL) Guides

Components	Type	Value
1,3-Diethyl benzene (CAS 141-93-5)	TWA	5 ppm
1,4-Diethylbenzene (CAS 105-05-5)	TWA	5 ppm

Biological limit values No biological exposure limits noted for the ingredient(s).

Exposure guidelines**US - California OELs: Skin designation**

Naphthalene (CAS 91-20-3) Can be absorbed through the skin.

US ACGIH Threshold Limit Values: Skin designation

2-Methylnaphthalene (CAS 91-57-6) Can be absorbed through the skin.

Naphthalene (CAS 91-20-3) Can be absorbed through the skin.

Appropriate engineering controls Explosion-proof general and local exhaust ventilation. Provide eyewash station.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles). Wear a full-face respirator, if needed.

Skin protection

Hand protection Wear chemical resistant gloves (preferably nitrile)

Other Wear appropriate chemical resistant clothing (see label).

Respiratory protection When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

Thermal hazards

Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations

When using, do not eat, drink or smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Contaminated work clothing should not be allowed out of the workplace.

9. Physical and chemical properties

Appearance	Clear straw-colored liquid
Physical state	Liquid.
Form	Liquid.
Color	Not available.
Odor	Aromatic solvent
Odor threshold	None established
pH	Not available.
Melting point/freezing point	< 32 °F (< 0 °C)
Initial boiling point and boiling range	> 176 °F (> 80 °C)
Flash point	121 °F (49 °C) (Setaflash CC)
Evaporation rate	0.1 as compared to Butyl acetate
Flammability (solid, gas)	Not available.

Upper/lower flammability or explosive limits

Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.

Vapor pressure	2.00E+00 mm Hg @ 77 °F
Vapor density	Heavier than air
Relative density	0.946 g/cm ³ g/mL @ 20 °C
Solubility(ies)	
Solubility (water)	Emulsifiable in water
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.

Other information

Bulk density	7.89 lb/gal
Explosive properties	
Partition coefficient (oil/water)	Not determined for formulation
pH in aqueous solution	5.4 (5% in water)
Specific gravity	0.946 g/mL @ 20 °C

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	Hazardous polymerization does not occur.
Conditions to avoid	Heat, flames and sparks. Avoid temperatures exceeding the flash point.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	No hazardous decomposition products are known.

11. Toxicological information**Information on likely routes of exposure**

Inhalation	Toxic by inhalation.
Skin contact	May cause an allergic skin reaction.
Eye contact	Due to lack of data the classification is not possible.
Ingestion	Not available.

Symptoms related to the physical, chemical and toxicological characteristics Not available.

Information on toxicological effects

Acute toxicity Toxic by inhalation. May cause allergic skin reaction.

Components	Species	Test Results
Permethrin (CAS 52645-53-1)		
Acute		
Dermal		
LD50	Rabbit	> 2000 mg/kg
Inhalation		
LC50	Rat	2.3 mg/l, 4 Hours air

Components	Species	Test Results
Oral LD50	Rat	806 mg/kg

* Estimates for product may be based on additional component data not shown.

Skin corrosion/irritation Due to lack of data the classification is not possible.

Serious eye damage/eye irritation Due to lack of data the classification is not possible.

Respiratory or skin sensitization

Respiratory sensitization Due to lack of data the classification is not possible.

Skin sensitization May cause an allergic skin reaction.

Germ cell mutagenicity Suspected of causing genetic defects.

Carcinogenicity May cause cancer.

IARC Monographs. Overall Evaluation of Carcinogenicity

Naphthalene (CAS 91-20-3) 2B Possibly carcinogenic to humans.

Permethrin (CAS 52645-53-1) 3 Not classifiable as to carcinogenicity to humans.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

US. National Toxicology Program (NTP) Report on Carcinogens

Naphthalene (CAS 91-20-3) Reasonably Anticipated to be a Human Carcinogen.

Reproductive toxicity Due to lack of data the classification is not possible.

Specific target organ toxicity - single exposure Due to lack of data the classification is not possible.

Specific target organ toxicity - repeated exposure Due to lack of data the classification is not possible.

Aspiration hazard Due to lack of data the classification is not possible.

Chronic effects Prolonged inhalation may be harmful. Causes damage to organs through prolonged or repeated exposure.

12. Ecological information

Ecotoxicity Very toxic to aquatic life with long lasting effects. Accumulation in aquatic organisms is expected.

Components	Species	Test Results
Naphthalene (CAS 91-20-3)		
Aquatic		
Crustacea	EC50	Water flea (Daphnia magna) 1.09 - 3.4 mg/l, 48 hours
Fish	LC50	Pink salmon (Oncorhynchus gorbuscha) 1.11 - 1.68 mg/l, 96 hours
Permethrin (CAS 52645-53-1)		
Aquatic		
Crustacea	EC50	Water flea (Daphnia magna) 0.0006 - 0.0025 mg/l, 48 hours
Fish	LC50	Apache trout (Oncorhynchus gilae apache) 0.0013 - 0.0022 mg/l, 96 hours

* Estimates for product may be based on additional component data not shown.

Persistence and degradability No data is available on the degradability of this product.

Bioaccumulative potential No data available for this product.

Partition coefficient n-octanol / water (log Kow)

Naphthalene 3.3

Mobility in soil Not available.

Other adverse effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this product.

13. Disposal considerations

Disposal instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposal site according to all applicable regulations. This material and its container must be disposed of as hazardous waste. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with all applicable local/regional/national/international regulations.
Hazardous waste code	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Waste from residues / unused products	Dispose of in accordance with all applicable regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal according to all applicable regulations. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport information

DOT

UN number	UN1993
UN proper shipping name	Flammable liquids, n.o.s. (petroleum distillates)
Transport hazard class(es)	
Class	3
Subsidiary risk	-
Label(s)	3
Packing group	III
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling. Read safety instructions, SDS and emergency procedures before handling.
Special provisions	B1, B52, IB3, T4, TP1, TP29
Packaging exceptions	150
Packaging non bulk	203
Packaging bulk	242

IATA

UN number	UN1993
UN proper shipping name	Flammable liquids, n.o.s. (petroleum distillates, permethrin)
Transport hazard class(es)	
Class	3
Subsidiary risk	-
Label(s)	3
Packing group	III
Environmental hazards	Yes, when shipped over large bodies of water
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling. Read safety instructions, SDS and emergency procedures before handling.

IMDG

UN number	UN1993
UN proper shipping name	Flammable liquids, n.o.s. (petroleum distillates, permethrin), MARINE POLLUTANT
Transport hazard class(es)	
Class	3
Subsidiary risk	-
Label(s)	3
Packing group	III
Environmental hazards	
Marine pollutant	Yes
EmS	Not available.
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling. Read safety instructions, SDS and emergency procedures before handling.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not available.

DOT



IATA; IMDG



Marine pollutant



General information

IMDG Regulated Severe Marine Pollutant.

15. Regulatory information

US federal regulations

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200. This product is registered under EPA/FIFRA Regulations as a RESTRICTED USE PESTICIDE. It is a violation of Federal Law to use this product in any manner inconsistent with its labeling. Read and follow all label directions. This product is excluded from listing requirements under EPA/TSCA.

This chemical is a pesticide product registered by the United States 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 (SDS), and for workplace labels of non-pesticide chemicals. The hazard information required on the pesticide label is reproduced below. The pesticide label also includes other important information, including directions for use.

HAZARD TO HUMANS AND DOMESTIC ANIMALS.

WARNING

Harmful if swallowed or absorbed through skin May cause eye irritation. Avoid contact with eyes, skin, and clothing. Avoid inhalation of vapors and spray mists.

ENVIRONMENTAL HAZARDS

This pesticide is extremely toxic to fish and aquatic invertebrates. Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwater. Do not apply when weather conditions favor drift from treated areas. Drift and runoff from treated areas may be hazardous to aquatic organisms in neighboring areas.

This product is highly toxic to bees exposed to direct treatment or residues on blooming crops or weeds. Do not apply this product or allow it to drift to blooming crops or weeds if bees are visiting the treatment area.

PHYSICAL AND CHEMICAL HAZARDS

Do not use or store the product near heat or open flame.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Naphthalene (CAS 91-20-3) Listed.
Permethrin (CAS 52645-53-1) Listed.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories
Immediate Hazard - Yes
Delayed Hazard - Yes
Fire Hazard - Yes
Pressure Hazard - No
Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical No

SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.
Permethrin	52645-53-1	25.1
Naphthalene	91-20-3	0.89

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

2-Methylnaphthalene (CAS 91-57-6)
Naphthalene (CAS 91-20-3)

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA) Not regulated.

US state regulations

US. California Controlled Substances. CA Department of Justice (California Health and Safety Code Section 11100)

Not listed.

US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))

1,2, 4-Trimethylbenzene (CAS 95-63-6)
1,2,3-Trimethyl benzene (CAS 526-73-8)
2-Methylnaphthalene (CAS 91-57-6)
Naphthalene (CAS 91-20-3)

US. Massachusetts RTK - Substance List

1,2, 4-Trimethylbenzene (CAS 95-63-6)
1,2,3-Trimethyl benzene (CAS 526-73-8)
1,3-Diethyl benzene (CAS 141-93-5)
1,4-Diethylbenzene (CAS 105-05-5)
Naphthalene (CAS 91-20-3)
Permethrin (CAS 52645-53-1)

US. New Jersey Worker and Community Right-to-Know Act

1,2, 4-Trimethylbenzene (CAS 95-63-6)
1,2,3-Trimethyl benzene (CAS 526-73-8)
1,3-Diethyl benzene (CAS 141-93-5)
1,4-Diethylbenzene (CAS 105-05-5)
2-Methylnaphthalene (CAS 91-57-6)
Naphthalene (CAS 91-20-3)
Permethrin (CAS 52645-53-1)

US. Pennsylvania Worker and Community Right-to-Know Law

1,2, 4-Trimethylbenzene (CAS 95-63-6)
1,2,3-Trimethyl benzene (CAS 526-73-8)
1,3-Diethyl benzene (CAS 141-93-5)
1,4-Diethylbenzene (CAS 105-05-5)
2-Methylnaphthalene (CAS 91-57-6)
Naphthalene (CAS 91-20-3)
Permethrin (CAS 52645-53-1)

US. Rhode Island RTK

1,2, 4-Trimethylbenzene (CAS 95-63-6)
Naphthalene (CAS 91-20-3)
Permethrin (CAS 52645-53-1)

US. California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

US - California Proposition 65 - CRT: Listed date/Carcinogenic substance

Naphthalene (CAS 91-20-3)

Listed: April 19, 2002

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	No
Canada	Domestic Substances List (DSL)	No
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	No
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	No
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	No
New Zealand	New Zealand Inventory	No
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	No

Country(s) or region	Inventory name	On inventory (yes/no)*
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	No

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)
 A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date	01-20-2016
Revision date	07-28-2021
References	ACGIH EPA: AQUIRE database NLM: Hazardous Substances Data Base US. IARC Monographs on Occupational Exposures to Chemical Agents ACGIH®: American Conference of Governmental Industrial Hygienists CERCLA: Comprehensive Environmental Response, Compensation, and Liability Act EPA: Environmental Protection Agency FIFRA: Federal Insecticide, Fungicide, and Rodenticide Act IARC: International Agency for Research on Cancer NTP: National Toxicology Program OSHA: Occupational Safety and Health Agency SARA: Superfund Amendments and Reauthorization Act TSCA: Toxic Substances Control Act DOT: Department of Transportation IMDG: International Maritime Dangerous Goods IATA: International Air Transport Association
Version #	1.0
Further information	Not available.
HMIS® ratings	Health: 2* Flammability: 3 Physical hazard: 0
NFPA ratings	Health: 2 Flammability: 3 Instability: 0
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Revision information	Product and Company Identification: Product Codes Hazards Identification: US Hazard Categories Composition / Information on Ingredients: Ingredients Physical & Chemical Properties: Multiple Properties Toxicological Information: Toxicological Data Transport Information: Proper Shipping Name/Packing Group GHS: Classification