SAFETY DATA SHEET
according to the OSHA Hazard Communication Standard

AIM® EC HERBICIDE

Version	Revision Date:	SDS Number:	Date of last issue: 11/12/2025
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This Safety Data Sheet adheres to the standards and regulatory requirements of USA and may not meet the regulatory requirements in other countries.

SECTION 1. IDENTIFICATION

Product identifier
Product name AIM® EC HERBICIDE

Other means of identification
Product code 50001765

Recommended use of the chemical and restrictions on use
Recommended use Herbicide

Restrictions on use Use as recommended by the label.

Manufacturer or supplier's details

Manufacturer
FMC Corporation
2929 WALNUT ST
PHILADELPHIA PA 19104
USA
+1 (215) 299-6000 (Corporate)
SDS-Info@fmc.com, +1-(800)-346-0833 (FMC Cust. Service)

Supplier Address
FMC Corporation
2929 Walnut Street
Philadelphia PA 19104
USA

Emergency telephone

For leak, fire, spill or accident emergencies, call:
1 800 / 424-9300 (CHEMTREC - U.S.A.)
1 703 / 741-5970 (CHEMTREC - International)
1 703 / 527-3887 (CHEMTREC - Alternate)

Medical emergency:
U.S.A. & Canada: +1 800 / 331-3148
All other countries: +1 651 / 632-6793 (Collect)

SECTION 2. HAZARDS IDENTIFICATION

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

Hazards for the product as supplied

Flammable liquids : Category 4

Skin irritation	:	Category 2
Eye irritation	:	Category 2A
Carcinogenicity	:	Category 2
Reproductive toxicity	:	Category 2
Specific target organ toxicity - single exposure	:	Category 3 (Respiratory system, Central nervous system)
Aspiration hazard	:	Category 1

Other hazards

None known.

GHS label elements

Hazard pictograms :

Signal Word : DANGER

Hazard Statements :

H227 Combustible liquid.
H304 May be fatal if swallowed and enters airways.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.
H336 May cause drowsiness or dizziness.
H351 Suspected of causing cancer.
H361 Suspected of damaging fertility or the unborn child.

Precautionary Statements :

Prevention:

P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P210 Keep away from heat/ sparks/ open flames/ hot surfaces. No smoking.
P261 Avoid breathing mist or vapors.
P264 Wash skin thoroughly after handling.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response:

P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.
P302 + P352 IF ON SKIN: Wash with plenty of water and soap.
P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor if you feel unwell.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308 + P313 IF exposed or concerned: Get medical advice/ attention.
P331 Do NOT induce vomiting.
P332 + P313 If skin irritation occurs: Get medical advice/ attention.
P337 + P313 If eye irritation persists: Get medical advice/ attention.
P362 Take off contaminated clothing and wash before reuse.
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.
P405 Store locked up.

Disposal:

P501 Dispose of contents/ 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
Solvent naphtha (petroleum), heavy arom.; Kerosine — unspecified	64742-94-5*	>= 70 - < 90	-
2-methylnaphthalene	91-57-6*	>= 20 - < 30	-
carfentrazone-ethyl (ISO)	128639-02-1*	>= 20 - < 30	-
1-methylnaphthalene	90-12-0*	>= 5 - < 10	-
butan-1-ol	71-36-3*	>= 1 - < 5	-
naphthalene	91-20-3*	>= 0.1 - < 1	-
4-hydroxy-4-methylpentan-2-one	123-42-2*	>= 0.1 - < 1	-

* Indicates that the identifier is a CAS No.
Actual concentration is withheld as a trade secret

SECTION 4. FIRST AID MEASURES

In case of skin contact	:	Wash off with soap and water. If symptoms persist, call a physician. Wash contaminated clothing before re-use.
Most important symptoms and effects, both acute and delayed	:	May be fatal if swallowed and enters airways. Causes skin irritation. Causes serious eye irritation. May cause respiratory irritation. May cause drowsiness or dizziness. Suspected of causing cancer. Suspected of damaging fertility or the unborn child. Swallowing or inhaling may result in sudden shortness of breath, coughing, nausea and or abdominal pain. Skin contact may result in itching and redness. Eye contact may result in itching, watery eyes, light sensitivity, pain, and/or blurred vision.
Protection of first-aiders	:	Avoid inhalation, ingestion and contact with skin and eyes.
Notes to physician	:	Treat symptomatically.

SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media	:	Dry chemical, CO2, water spray or regular foam.
Unsuitable extinguishing media	:	Do not spread spilled material with high-pressure water streams.
Specific hazards during fire fighting	:	Do not allow run-off from fire fighting to enter drains or water courses.
Hazardous combustion products	:	Fire may produce irritating, corrosive and/or toxic gases. Carbon oxides Nitrogen oxides (NOx) Chlorine compounds Fluorine compounds Hydrogen cyanide Hydrogen chloride Carbon oxides Fire may produce irritating, corrosive and/or toxic gases. Nitrogen oxides (NOx) Fluorine compounds Hydrogen cyanide Hydrogen chloride Chlorinated compounds
Specific extinguishing methods	:	Remove undamaged containers from fire area if it is safe to do so. Use a water spray to cool fully closed containers.

Further information	:	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
Special protective equipment for fire-fighters	:	Firefighters should wear protective clothing and self-contained breathing apparatus.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	:	Evacuate personnel to safe areas. Use personal protective equipment. If it can be safely done, stop the leak. Do not touch or walk through the spilled material.
Environmental precautions	:	Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. If the product contaminates rivers and lakes or drains inform respective authorities.
Methods and materials for containment and cleaning up	:	Never return spills in original containers for re-use. Collect as much of the spill as possible with a suitable absorbent material. Pick up and transfer to properly labeled containers. Keep in suitable, closed containers for disposal.

SECTION 7. HANDLING AND STORAGE

Advice on protection against fire and explosion	:	Do not spray on a naked flame or any incandescent material. Keep away from open flames, hot surfaces and sources of ignition.
Advice on safe handling	:	Keep away from fire, sparks and heated surfaces. Avoid formation of aerosol. Do not breathe vapors/dust. Avoid exposure - obtain special instructions before use. Avoid contact with skin and eyes. For personal protection see section 8. Smoking, eating and drinking should be prohibited in the application area. Provide sufficient air exchange and/or exhaust in work rooms. Dispose of rinse water in accordance with local and national regulations.
Conditions for safe storage	:	No smoking.

Keep in a well-ventilated place.
Containers which are opened must be carefully resealed and kept upright to prevent leakage.
Observe label precautions.
Electrical installations / working materials must comply with the technological safety standards.

Further information on storage stability : No decomposition if stored and applied as directed.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Solvent naphtha (petroleum), heavy arom.; Kerosine — unspecified	64742-94-5	TWA	200 mg/m3 (total hydrocarbon vapor)	ACGIH
carfentrazone-ethyl (ISO)	128639-02-1	TWA (Inhalable particulate matter)	1 mg/m3	ACGIH
butan-1-ol	71-36-3	TWA	20 ppm	ACGIH
		C	50 ppm 150 mg/m3	NIOSH REL
		TWA	100 ppm 300 mg/m3	OSHA Z-1
		C	50 ppm 150 mg/m3	OSHA P0
naphthalene	91-20-3	TWA	10 ppm	ACGIH
		TWA	10 ppm 50 mg/m3	NIOSH REL
		ST	15 ppm 75 mg/m3	NIOSH REL
		TWA	10 ppm 50 mg/m3	OSHA Z-1
		STEL	15 ppm 75 mg/m3	OSHA P0
		TWA	10 ppm 50 mg/m3	OSHA P0
4-hydroxy-4-methylpentan-2-one	123-42-2	TWA	50 ppm	ACGIH
		TWA	50 ppm 240 mg/m3	NIOSH REL
		TWA	50 ppm 240 mg/m3	OSHA Z-1
		TWA	50 ppm 240 mg/m3	OSHA P0

Personal protective equipment

Respiratory protection	:	In the case of dust or aerosol formation use respirator with an approved filter.
Hand protection Material	:	Protective gloves
Remarks	:	The suitability for a specific workplace should be discussed with the producers of the protective gloves.
Eye protection	:	Eye wash bottle with pure water Tightly fitting safety goggles
Skin and body protection	:	Impervious clothing Choose body protection according to the amount and concentration of the dangerous substance at the work place.
Protective measures	:	Plan first aid action before beginning work with this product.
Hygiene measures	:	Avoid contact with skin, eyes and clothing. Do not inhale aerosol. When using do not eat or drink. When using do not smoke. Wash hands before breaks and at the end of workday.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	:	liquid
Color	:	brown, orange
Odor	:	Aromatic
Odor Threshold	:	No data available
pH	:	5.3 Concentration: 10 g/l
Melting point/ range	:	No data available
Boiling point/boiling range	:	No data available
Flash point	:	168.1 °F / 75.6 °C Method: closed cup
Evaporation rate	:	No data available

Self-ignition	:	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	:	No data available
Density	:	9 lb/gal 0.1078 g/cm3
Solubility(ies)		
Water solubility	:	No data available
Partition coefficient: n-octanol/water	:	No data available
Autoignition temperature	:	No data available
Decomposition temperature	:	No data available
Viscosity		
Viscosity, dynamic	:	No data available
Viscosity, kinematic	:	No data available
Explosive properties	:	Not explosive
Oxidizing properties	:	Non-oxidizing
Molecular weight	:	Not applicable

SECTION 10. STABILITY AND REACTIVITY

Reactivity	:	No decomposition if stored and applied as directed.
Chemical stability	:	No decomposition if stored and applied as directed.
Possibility of hazardous reactions	:	Vapors may form explosive mixture with air. No decomposition if stored and applied as directed.
Conditions to avoid	:	Avoid formation of aerosol. Avoid extreme temperatures. Heat, flames and sparks.

Incompatible materials	:	Avoid strong acids, bases, and oxidizers.
Hazardous decomposition products	:	No hazardous decomposition products are known.

SECTION 11. TOXICOLOGICAL INFORMATION

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

Product:

Acute oral toxicity	:	LD50 (Rat): 4,077 mg/kg
Acute inhalation toxicity	:	LC50 (Rat): > 6.31 mg/l Exposure time: 4 h Test atmosphere: dust/mist
Acute dermal toxicity	:	LD50 (Rat): > 4,000 mg/kg

Components:

Solvent naphtha (petroleum), heavy arom.; Kerosine — unspecified:

Acute oral toxicity	:	LD50 (Rat, male and female): > 5,000 mg/kg Method: OECD Test Guideline 401 Remarks: Based on data from similar materials
Acute inhalation toxicity	:	LC50 (Rat): > 4.688 mg/l Exposure time: 4 h Test atmosphere: vapor Assessment: The substance or mixture has no acute inhalation toxicity
Acute dermal toxicity	:	LD50 (Rabbit): > 2,000 mg/kg Method: OECD Test Guideline 402 Assessment: The substance or mixture has no acute dermal toxicity

2-methylnaphthalene:

Acute oral toxicity	:	LD50 (Rat): 1,630 mg/kg

carfentrazone-ethyl (ISO):

Acute oral toxicity	:	LD50 (Rat, female): 5,143 mg/kg Method: US EPA Test Guideline OPP 81-1 Symptoms: Tremors GLP: yes LD50 (Rat, female): > 5,000 mg/kg Method: OECD Test Guideline 425 GLP: yes

Assessment: The substance or mixture has no acute oral toxicity
Remarks: no mortality

Acute inhalation toxicity : LC50 (Rat, male and female): > 5.09 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: EPA OPP 81 - 3
Symptoms: Tremors, chromodacryorrhea, nasal discharge
GLP: yes
Assessment: The substance or mixture has no acute inhalation toxicity
Remarks: no mortality

Acute dermal toxicity : LD50 (Rat, male and female): > 4,000 mg/kg
Method: US EPA Test Guideline OPP 81-2
GLP: yes
Assessment: The component/mixture is minimally toxic after single contact with skin.
Remarks: no mortality

1-methylnaphthalene:

Acute oral toxicity : LD50 (Rat): 1,840 mg/kg

butan-1-ol:

Acute oral toxicity : LD50 (Rat): 2.292 mg/kg

Acute toxicity estimate: 1,000 mg/kg
Method: Expert judgment

Acute inhalation toxicity : LC0 (Rat): > 17.76 mg/l
Exposure time: 4 h
Test atmosphere: vapor
Remarks: no mortality

Acute dermal toxicity : LD50 (Rabbit): 3,430 mg/kg

naphthalene:

Acute oral toxicity : LD50 (Mouse, female): 710 mg/kg
Method: OECD Test Guideline 401

Acute inhalation toxicity : LC0 (Rat, male and female): > 0.4 mg/l
Exposure time: 4 h
Test atmosphere: vapor
Method: OECD Test Guideline 403
Assessment: The substance or mixture has no acute inhalation toxicity

Acute dermal toxicity : LD50 (Rat, male and female): > 16,000 mg/kg
Method: OECD Test Guideline 402

4-hydroxy-4-methylpentan-2-one:

Acute oral toxicity	:	LD50 Oral (Rat, male and female): 3,002 mg/kg Method: OECD Test Guideline 401 Symptoms: Lethargy, ataxia, Coma
Acute inhalation toxicity	:	LC0 (Rat, male and female): >= 7.6 mg/l Exposure time: 4 h Test atmosphere: vapor Method: OECD Test Guideline 403 Remarks: no mortality
Acute dermal toxicity	:	LD0 (Rat, male and female): > 1,875 mg/kg Method: OECD Test Guideline 402

Skin corrosion/irritation

Causes skin irritation.

Product:

Species	:	Rabbit
Assessment	:	Not classified as irritant
Result	:	slight irritation

Components:

Solvent naphtha (petroleum), heavy arom.; Kerosine — unspecified:

Species	:	Rabbit
Assessment	:	Repeated exposure may cause skin dryness or cracking.
Result	:	No skin irritation
Remarks	:	Minimal effects that do not meet the threshold for classification. Based on data from similar materials

2-methylnaphthalene:

Result	:	Skin irritation

carfentrazone-ethyl (ISO):

Species	:	Rabbit
Method	:	US EPA Test Guideline OPP 81-5
Result	:	No skin irritation
GLP	:	yes
Remarks	:	slight irritation Minimal effects that do not meet the threshold for classification.

1-methylnaphthalene:

Species	:	Rabbit
Method	:	OECD Test Guideline 404
Result	:	Mild skin irritation

butan-1-ol:

Species : Rabbit
Result : Skin irritation

naphthalene:

Species : Rabbit
Result : No skin irritation

4-hydroxy-4-methylpentan-2-one:

Species : Rabbit
Method : OECD Test Guideline 404
Result : slight irritation

Serious eye damage/eye irritation

Causes serious eye irritation.

Product:

Species : Rabbit
Result : slight irritation
Assessment : Not classified as irritant

Components:

Solvent naphtha (petroleum), heavy arom.; Kerosine — unspecified:

Species : Rabbit
Assessment : No eye irritation
Remarks : Minimal effects that do not meet the threshold for classification.
Based on data from similar materials

carfentrazone-ethyl (ISO):

Species : Rabbit
Result : No eye irritation
Method : EPA OPP 81-4
GLP : yes
Remarks : slight irritation
Minimal effects that do not meet the threshold for classification.

1-methylnaphthalene:

Species : Rabbit
Result : No eye irritation

butan-1-ol:

Species : Rabbit
Result : Irreversible effects on the eye

naphthalene:

Species : Rabbit

Result : No eye irritation

4-hydroxy-4-methylpentan-2-one:

Species : Rabbit
Result : Irritation to eyes, reversing within 21 days
Method : OECD Test Guideline 405

Respiratory or skin sensitization

Skin sensitization

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

Respiratory sensitization

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

Product:

Assessment : Not a skin sensitizer.
Result : Does not cause skin sensitization.

Components:

Solvent naphtha (petroleum), heavy arom.; Kerosine — unspecified:

Test Type : Maximization Test
Species : Guinea pig
Result : Not a skin sensitizer.
Remarks : Based on data from similar materials

carfentrazone-ethyl (ISO):

Routes of exposure : Skin contact
Species : Guinea pig
Method : US EPA Test Guideline OPP 81-6
Result : Does not cause skin sensitization.
GLP : yes

Test Type : Local lymph node assay (LLNA)
Species : Mouse
Method : OECD Test Guideline 429
Result : Does not cause skin sensitization.
GLP : yes

butan-1-ol:

Result : Not a skin sensitizer.

naphthalene:

Test Type : Maximization Test
Species : Guinea pig
Method : OECD Test Guideline 406
Result : Does not cause skin sensitization.

4-hydroxy-4-methylpentan-2-one:

Test Type	:	Maximization Test
Species	:	Guinea pig
Method	:	OECD Test Guideline 406
Result	:	Does not cause skin sensitization.

Germ cell mutagenicity

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

Components:

Solvent naphtha (petroleum), heavy arom.; Kerosine — unspecified:

Genotoxicity in vitro	:	Test Type: reverse mutation assay Method: OECD Test Guideline 471 Result: negative Remarks: Based on data from similar materials
Genotoxicity in vivo	:	Test Type: Bone marrow chromosome aberration. Species: Rat Application Route: inhalation (vapor) Result: negative

2-methylnaphthalene:

Genotoxicity in vitro	:	Test Type: sister chromatid exchange assay Test system: Human lymphocytes Result: negative Test Type: Ames test Result: negative
Germ cell mutagenicity - Assessment	:	In vitro tests did not show mutagenic effects

carfentrazone-ethyl (ISO):

Genotoxicity in vitro	:	Test Type: reverse mutation assay Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 471 Result: negative GLP: yes Test Type: Chromosome aberration test in vitro Test system: Chinese hamster ovary cells Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 476 Result: negative GLP: yes Test Type: Ames test Metabolic activation: with and without metabolic activation Method: U.S. EPA 84-2 Result: negative GLP: yes

Test Type: Ames test
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative
GLP: yes

Test Type: Chromosome aberration test in vitro
Test system: Chinese hamster ovary cells
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 473
Result: negative
GLP: yes

Genotoxicity in vivo : Test Type: Micronucleus test
Species: Mouse (male and female)
Result: negative
GLP: yes

Test Type: unscheduled DNA synthesis assay
Species: Rat (male)
Result: negative
GLP: yes

Germ cell mutagenicity - Assessment : No genotoxic potential.

1-methylnaphthalene:

Genotoxicity in vitro : Test Type: sister chromatid exchange assay
Test system: Human lymphocytes
Result: negative

Test Type: Ames test
Result: negative

Germ cell mutagenicity - Assessment : In vitro tests did not show mutagenic effects

butan-1-ol:

Genotoxicity in vitro : Test Type: gene mutation test
Method: OECD Test Guideline 476
Result: negative

Genotoxicity in vivo : Test Type: Micronucleus test
Species: Mouse
Application Route: Oral
Method: OECD Test Guideline 474
Result: negative

naphthalene:

Genotoxicity in vitro : Test Type: reverse mutation assay
Result: negative

Genotoxicity in vivo	:	Test Type: Micronucleus test Species: Mouse Application Route: Intraperitoneal injection Result: negative

4-hydroxy-4-methylpentan-2-one:

Genotoxicity in vitro	:	Test Type: reverse mutation assay Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 471 Result: negative Test Type: Chromosome aberration test in vitro Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 473 Result: negative Test Type: In vitro mammalian cell gene mutation test Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 476 Result: negative
Germ cell mutagenicity - Assessment	:	Weight of evidence does not support classification as a germ cell mutagen.

Carcinogenicity

Suspected of causing cancer.

Product:

Carcinogenicity - Assessment	:	Limited evidence of carcinogenicity in animal studies

Components:

Solvent naphtha (petroleum), heavy arom.; Kerosine — unspecified:

Species	:	Rat, male and female
Application Route	:	inhalation (vapor)
Exposure time	:	12 month(s)
NOAEC	:	1.8 mg/l
Result	:	negative
Remarks	:	Based on data from similar materials
Carcinogenicity - Assessment	:	Not classifiable as a human carcinogen.

2-methylnaphthalene:

Species	:	Mouse, male
Application Route	:	Oral
Exposure time	:	81 w
Dose	:	750, 1500 ppm
LOAEL	:	750 ppm

Result	:	equivocal
Symptoms	:	Tumor
Target Organs	:	Lungs
Remarks	:	Based on data from similar materials
Carcinogenicity - Assessment	:	Weight of evidence does not support classification as a carcinogen

carfentrazone-ethyl (ISO):

Species	:	Rat, female
Application Route	:	Ingestion
Exposure time	:	2 Years
NOAEL	:	3 mg/kg bw/day
LOAEL	:	12 mg/kg bw/day
Method	:	U.S. EPA 83-5
Result	:	no increase in tumors observed
Target Organs	:	Liver
GLP	:	yes
Species	:	Mouse, female
Application Route	:	Ingestion
Exposure time	:	80 weeks
NOAEL	:	10 mg/kg bw/day
LOAEL	:	110 mg/kg bw/day
Method	:	U.S. EPA 83-5
Result	:	no increase in tumors observed
Target Organs	:	Liver
GLP	:	yes
Carcinogenicity - Assessment	:	Animal testing did not show any carcinogenic effects.

1-methylnaphthalene:

Species	:	Mouse, male
Application Route	:	Oral
Exposure time	:	81 w
Dose	:	750, 1500 ppm
LOAEL	:	750 ppm
Result	:	equivocal
Symptoms	:	Tumor
Target Organs	:	Lungs
Carcinogenicity - Assessment	:	Weight of evidence does not support classification as a carcinogen

naphthalene:

Species	:	Rat
Application Route	:	Inhalation
Exposure time	:	2 Years
Result	:	positive
Carcinogenicity - Assess-	:	Limited evidence of carcinogenicity in animal studies

ment

IARC **Group 2B: Possibly carcinogenic to humans**
naphthalene 91-20-3

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 **Reasonably anticipated to be a human carcinogen**
naphthalene 91-20-3

Reproductive toxicity
Suspected of damaging fertility or the unborn child.

Components:

carfentrazone-ethyl (ISO):

Effects on fertility : Test Type: Multi-generation study
Species: Rat, male and female
Application Route: Ingestion
Fertility: NOEL: 4,000 ppm
Result: negative

Effects on fetal development : Test Type: Embryo-fetal development
Species: Rat, female
Application Route: Oral
General Toxicity Maternal: NOEL: 100 mg/kg bw/day
Embryo-fetal toxicity.: NOEL: 600 mg/kg bw/day
Result: negative

Test Type: Embryo-fetal development
Species: Rabbit, female
Application Route: Oral
General Toxicity Maternal: NOEL: 150 mg/kg bw/day
Embryo-fetal toxicity.: NOEL: > 300 mg/kg bw/day
Result: negative

Reproductive toxicity - Assessment : Animal testing showed no reproductive toxicity.

naphthalene:

Effects on fertility : Test Type: reproductive and developmental toxicity study
Species: Rat
Application Route: Inhalation
Result: negative

Effects on fetal development : Test Type: Embryo-fetal development
Species: Rat
Application Route: Oral
Method: OECD Test Guideline 414
Result: Embryotoxic effects and adverse effects on the offspring were detected only at high maternally toxic doses

4-hydroxy-4-methylpentan-2-one:

Effects on fertility : Test Type: one-generation reproductive toxicity
Species: Rat, male and female
Application Route: Oral
Dose: 30, 100, 300, 1000mg/kg/bw
Duration of Single Treatment: 45 d
General Toxicity Parent: LOAEL: 300 mg/kg bw/day
General Toxicity F1: NOAEL: 300 mg/kg bw/day
Method: OECD Test Guideline 422

Effects on fetal development : Species: Rat
Application Route: Oral
Dose: 100, 300, 1000mg/kg/day
Duration of Single Treatment: 21 d
General Toxicity Maternal: NOAEL: > 1,000 mg/kg bw/day
Embryo-fetal toxicity.: NOAEL: > 1,000 mg/kg bw/day
Method: OECD Test Guideline 414

Species: Rabbit
Application Route: Oral
Dose: 0, 100, 300, 800mg/kg/bw/day
Duration of Single Treatment: 29 d
General Toxicity Maternal: LOAEL: 800 mg/kg bw/day
Embryo-fetal toxicity.: LOAEL: 300 mg/kg bw/day
Method: OECD Test Guideline 414

Reproductive toxicity - Assessment : Some evidence of adverse effects on sexual function and fertility, and/or on development, based on animal experiments.

STOT-single exposure

May cause respiratory irritation.
May cause drowsiness or dizziness.

Components:

2-methylnaphthalene:

Assessment : May cause respiratory irritation., May cause drowsiness or dizziness.

carfentrazone-ethyl (ISO):

Remarks : No significant adverse effects were reported

1-methylnaphthalene:

Assessment : May cause respiratory irritation., May cause drowsiness or dizziness.

butan-1-ol:

Assessment : May cause respiratory irritation., May cause drowsiness or dizziness.

4-hydroxy-4-methylpentan-2-one:

Target Organs	:	Respiratory Tract
Assessment	:	May cause respiratory irritation.

STOT-repeated exposure

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

Components:

carfentrazone-ethyl (ISO):

Assessment	:	The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Repeated dose toxicity

Components:

Solvent naphtha (petroleum), heavy arom.; Kerosine — unspecified:

Species	:	Rat, male and female
NOAEC	:	0.9 - 1.8 mg/l
Application Route	:	inhalation (vapor)
Exposure time	:	12 Months

2-methylnaphthalene:

Species	:	Mouse, female
LOAEL	:	50.3 mg/kg
Application Route	:	Oral
Exposure time	:	81 w
Dose	:	0, 50.3, 107.6 mg/kg-d
Symptoms	:	pulmonary effects, immune system effects

Species	:	Mouse
Application Route	:	Dermal
Exposure time	:	30 w
Number of exposures	:	2/w
Dose	:	119 mg/kg-application
Symptoms	:	pulmonary effects
Remarks	:	Based on data from similar materials

carfentrazone-ethyl (ISO):

Species	:	Mouse, male
NOAEL	:	143 mg/kg
LOAEL	:	571 mg/kg
Application Route	:	Oral
Exposure time	:	90 days
Method	:	EPA 82-1
GLP	:	yes
Target Organs	:	Blood, Liver

Species	:	Dog, male and female
NOEL	:	150 mg/kg

LOAEL	:	500 mg/kg
Application Route	:	Oral
Exposure time	:	90 days
Target Organs	:	Blood

Species	:	Dog, male and female
NOEL	:	50 mg/kg
NOAEL	:	150 mg/kg
LOAEL	:	500 mg/kg
Application Route	:	Oral
Exposure time	:	12 months
GLP	:	yes
Target Organs	:	Blood

Species	:	Rat, male
NOAEL	:	58 mg/kg
Exposure time	:	90 d
Method	:	EPA 82-1
GLP	:	yes

1-methylnaphthalene:

Species	:	Mouse, female
LOAEL	:	50.3 mg/kg
Application Route	:	Oral
Exposure time	:	81 w
Dose	:	0, 50.3, 107.6 mg/kg-d
Symptoms	:	pulmonary effects, immune system effects
Remarks	:	Based on data from similar materials

Species	:	Mouse
Application Route	:	Dermal
Exposure time	:	30 w
Number of exposures	:	2/w
Dose	:	119 mg/kg-application
Symptoms	:	pulmonary effects
Remarks	:	Based on data from similar materials

butan-1-ol:

Species	:	Rat
NOAEL	:	1,500 mg/m³
Application Route	:	Inhalation

4-hydroxy-4-methylpentan-2-one:

Species	:	Rat, male and female
NOAEL	:	600 mg/kg bw/day
Application Route	:	Oral
Exposure time	:	13 weeks
Dose	:	0, 25, 150, 600mg/kg bw/day
Method	:	OECD Test Guideline 408

Species	:	Rat, male and female
LOAEL	:	300 mg/kg bw/day

Application Route	:	Oral
Exposure time	:	45 d
Dose	:	30, 100, 300, 1000mg/kgbw
Method	:	OECD Test Guideline 422

Species	:	Rat, male and female
NOAEL	:	1000 ppm
Application Route	:	inhalation (vapor)
Exposure time	:	6 weeks
Dose	:	50, 225, 1000 ppm
Method	:	OECD Test Guideline 412

Aspiration toxicity

May be fatal if swallowed and enters airways.

Product:

The substance or mixture is known to cause human aspiration toxicity hazards or has to be regarded as if it causes a human aspiration toxicity hazard.

Components:

Solvent naphtha (petroleum), heavy arom.; Kerosine — unspecified:

May be fatal if swallowed and enters airways.

carfentrazone-ethyl (ISO):

The substance does not have properties associated with aspiration hazard potential.

1-methylnaphthalene:

The substance or mixture is known to cause human aspiration toxicity hazards or has to be regarded as if it causes a human aspiration toxicity hazard.

Experience with human exposure

Components:

Solvent naphtha (petroleum), heavy arom.; Kerosine — unspecified:

Skin contact	:	Symptoms: Repeated exposure may cause skin dryness or cracking.

2-methylnaphthalene:

Skin contact	:	Target Organs: Skin Symptoms: Irritation

1-methylnaphthalene:

Skin contact	:	Target Organs: Skin Symptoms: Irritation

Neurological effects

Components:

carfentrazone-ethyl (ISO):
No neurotoxicity observed in animal studies.

Further information

Product:

Remarks : Solvents may degrease the skin.

Components:

Solvent naphtha (petroleum), heavy arom.; Kerosine — unspecified:

Remarks : Vapour concentrations above recommended exposure levels are irritating to the eyes and the respiratory tract, may cause headaches and dizziness, are anaesthetic and may have other central nervous system effects. Prolonged and/or repeated skin contact with low viscosity materials may defat the skin resulting in possible irritation and dermatitis. Small amounts of liquid aspirated into the lungs during ingestion or from vomiting may cause chemical pneumonitis or pulmonary edema.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

Solvent naphtha (petroleum), heavy arom.; Kerosine — unspecified:

Toxicity to fish : LL50 (Oncorhynchus mykiss (rainbow trout)): 2 - 5 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : EL50 (Daphnia magna (Water flea)): 1.4 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202

Toxicity to algae/aquatic plants : EL50 (Pseudokirchneriella subcapitata (green algae)): 1 - 3 mg/l
Exposure time: 24 h
Method: OECD Test Guideline 201

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : EL50 (Daphnia magna (Water flea)): 0.89 mg/l
Exposure time: 21 d
Method: OECD Test Guideline 211

Toxicity to microorganisms : LL50 (Tetrahymena pyriformis): 677.9 mg/l
Exposure time: 72 h
Test Type: Growth inhibition

2-methylnaphthalene:

Toxicity to fish	:	LC50 (Fish): 2 mg/l Exposure time: 96 h Test Type: static test
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia): 1.49 mg/l End point: Immobilization Test Type: static test

carfentrazone-ethyl (ISO):

Toxicity to fish	:	LC50 (Oncorhynchus mykiss (rainbow trout)): 2.55 mg/l Exposure time: 96 h Test Type: semi-static test Method: OECD Test Guideline 203 LC50 (Menidia beryllina (Silverside)): 1.14 mg/l Exposure time: 96 h Test Type: flow-through test LC50 (Oncorhynchus mykiss (rainbow trout)): 1.6 mg/l Exposure time: 96 h Test Type: flow-through test Method: EPA OPP 72-1 LC50 (Lepomis macrochirus (Bluegill sunfish)): 2 mg/l Exposure time: 96 h Test Type: flow-through test
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): > 9.8 mg/l End point: Immobilization Exposure time: 48 h Method: OECD Test Guideline 202 Remarks: No toxicity at the limit of solubility.
Toxicity to algae/aquatic plants	:	EC50 (Selenastrum capricornutum (green algae)): 0.0133 mg/l Exposure time: 72 h Method: OECD Test Guideline 201 GLP: yes NOEC (Selenastrum capricornutum (green algae)): 0.00933 mg/l End point: Growth rate Exposure time: 72 h Method: OECD Test Guideline 201 GLP: yes EbC50 (Selenastrum capricornutum (green algae)): 16 µg/l Exposure time: 120 h EC50 (Navicula pelliculosa (Diatom)): 12 µg/l Exposure time: 72 h Test Type: static test

EC50 (Skeletonema costatum (Diatom)): 15 µg/l
Exposure time: 72 h
GLP: yes

Toxicity to fish (Chronic toxicity) : NOEC (Oncorhynchus mykiss (rainbow trout)): 22 µg/l
Exposure time: 89 d
Test Type: Early Life-Stage
Method: OECD Test Guideline 210
GLP: yes

NOEC (Oncorhynchus mykiss (rainbow trout)): 0.118 mg/l
Exposure time: 102 d
Test Type: flow-through test
Method: US EPA Test Guideline OPP 72-4

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): 0.309 mg/l
End point: Growth
Exposure time: 21 d
Method: OECD Test Guideline 202

NOEC (Daphnia magna (Water flea)): 0.316 mg/l
End point: Growth
Exposure time: 21 d
Method: OECD Test Guideline 202

NOEC (Daphnia): 35 mg/l
End point: reproduction
Exposure time: 21 d
Method: US EPA Test Guideline OPPTS 850.1300
Remarks: Information given is based on data obtained from similar product.

Toxicity to microorganisms : NOEC (activated sludge): 1,000 mg/l
Test Type: Respiration inhibition
Method: OECD Test Guideline 209

Toxicity to soil dwelling organisms : NOEC (Eisenia fetida (earthworms)): 820 mg/kg

Method: OECD Test Guideline 216
Remarks: No significant adverse effect on Nitrogen mineralization.

Method: OECD Test Guideline 217
Remarks: No significant adverse effect on Carbon mineralization.

Toxicity to terrestrial organisms : LD50 (Anas platyrhynchos (Mallard duck)): > 5,620 ppm
End point: Acute oral toxicity
Remarks: Dietary

LC50 (Colinus virginianus (Bobwhite quail)): > 5,620 ppm
End point: Acute oral toxicity

Remarks: Dietary

LD50 (Colinus virginianus (Bobwhite quail)): > 2,000 mg/kg
End point: Acute oral toxicity
Method: EPA OPP 71-1

LD50 (Colinus virginianus (Bobwhite quail)): > 2,250 mg/kg
End point: Acute oral toxicity
Method: EPA OPP 71-1

NOEL (Colinus virginianus (Bobwhite quail)): 1000 ppm
End point: Reproduction Test

LD50 (Apis mellifera (bees)): > 200 µg/bee
End point: Acute oral toxicity

LD50 (Apis mellifera (bees)): > 200 µg/bee
End point: Acute contact toxicity

Ecotoxicology Assessment

Toxicity Data on Soil : Harmful to the soil environment.

1-methylnaphthalene:

Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): 9 mg/l
Exposure time: 48 h
Test Type: static test

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 1.42 mg/l
End point: Immobilization
Exposure time: 48 h

Toxicity to algae/aquatic plants : EC50 (Pseudokirchneriella subcapitata (green algae)): 12 mg/l
Exposure time: 14 d
Test Type: static test

butan-1-ol:

Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): 1,376 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 1,328 mg/l
Exposure time: 48 h

Toxicity to algae/aquatic plants : NOEC (Pseudokirchneriella subcapitata (green algae)): 225 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 201

EC50 (Pseudokirchneriella subcapitata (green algae)): 225 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 201

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC (Daphnia magna (Water flea)): 4.1 mg/l Exposure time: 21 d
Toxicity to microorganisms	:	EC50 (Anabaena flos-aquae (cyanobacterium)): 225 mg/l Exposure time: 4 d EC50 (Natural microorganism): 4,390 mg/l Exposure time: 17 h

naphthalene:

Toxicity to fish	:	LC50 (Oncorhynchus mykiss (rainbow trout)): 1.6 mg/l Exposure time: 96 h Method: OECD Test Guideline 203
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): 2.16 mg/l Exposure time: 48 h Method: OECD Test Guideline 202
Toxicity to algae/aquatic plants	:	EC50 (Skeletonema costatum (marine diatom)): 0.4 - 0.5 mg/l Exposure time: 72 h
Toxicity to fish (Chronic toxicity)	:	NOEC (Oncorhynchus kisutch (coho salmon)): 0.37 mg/l Exposure time: 40 d
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC (Daphnia pulex (Water flea)): 0.59 mg/l Exposure time: 125 d
Toxicity to microorganisms	:	IC50 (Bacteria): 29 mg/l Exposure time: 24 h

4-hydroxy-4-methylpentan-2-one:

Toxicity to fish	:	LC50 (Oryzias latipes (Orange-red killifish)): > 100 mg/l Exposure time: 96 h Method: OECD Test Guideline 203
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): > 1,000 mg/l Exposure time: 48 h Method: OECD Test Guideline 202
Toxicity to algae/aquatic plants	:	EC50 (Pseudokirchneriella subcapitata (algae)): > 1,000 mg/l Exposure time: 72 h Method: OECD Test Guideline 201 NOEC (Pseudokirchneriella subcapitata (algae)): >= 1,000 mg/l Exposure time: 72 h Method: OECD Test Guideline 201
Toxicity to daphnia and other	:	LOEC (Daphnia magna (Water flea)): > 100 mg/l

aquatic invertebrates (Chronic toxicity)		Exposure time: 21 d Method: OECD Test Guideline 211
Toxicity to microorganisms	:	EC50 (activated sludge): > 1,000 mg/l Exposure time: 3 h Method: OECD Test Guideline 209

Persistence and degradability

Components:

Solvent naphtha (petroleum), heavy arom.; Kerosine — unspecified:

Biodegradability	:	Result: Readily biodegradable. Biodegradation: 58.6 % Exposure time: 28 d Method: OECD Test Guideline 301F Remarks: Based on data from similar materials

carfentrazone-ethyl (ISO):

Biodegradability	:	Result: Not readily biodegradable. Biodegradation: 3.9 % Exposure time: 28 d Method: OECD Test Guideline 301B
Stability in water	:	Degradation half life: 3.6 h pH: 9 Degradation half life: 8.6 d pH: 7
Photodegradation	:	

1-methylnaphthalene:

Biodegradability	:	Result: Not readily biodegradable.

butan-1-ol:

Biodegradability	:	Result: Readily biodegradable. Remarks: Expected to be biodegradable

naphthalene:

Biodegradability	:	Result: Inherently biodegradable. Biodegradation: 67 % Exposure time: 12 d

4-hydroxy-4-methylpentan-2-one:

Biodegradability	:	Inoculum: activated sludge Result: Readily biodegradable. Method: OECD Test Guideline 301A

Bioaccumulative potential

Product:

Bioaccumulation : Remarks: No data available

Remarks: No data available

Components:

Solvent naphtha (petroleum), heavy arom.; Kerosine — unspecified:

Bioaccumulation : Remarks: The product/substance has a potential to bioaccumulate.

Partition coefficient: n-octanol/water : log Pow: 3.72
Method: QSAR

2-methylnaphthalene:

Partition coefficient: n-octanol/water : log Pow: 3.86

carfentrazone-ethyl (ISO):

Bioaccumulation : Species: Oncorhynchus mykiss (rainbow trout)
Bioconcentration factor (BCF): 176
Exposure time: 28 d
Method: OECD Test Guideline 305E
Remarks: Bioaccumulation is unlikely.

Partition coefficient: n-octanol/water : log Pow: 3.7 (68 °F / 20 °C)

1-methylnaphthalene:

Partition coefficient: n-octanol/water : log Pow: 3.87

butan-1-ol:

Partition coefficient: n-octanol/water : Pow: 1 (77 °F / 25 °C)

naphthalene:

Bioaccumulation : Species: Cyprinus carpio (Carp)
Bioconcentration factor (BCF): 168

Partition coefficient: n-octanol/water : log Pow: 3.7

4-hydroxy-4-methylpentan-2-one:

Partition coefficient: n-octanol/water : log Pow: -0.09
Method: QSAR

Mobility in soil

Components:

Solvent naphtha (petroleum), heavy arom.; Kerosine — unspecified:

Distribution among environmental compartments : Remarks: Expected to partition to sediment and wastewater solids. Moderately volatile.

carfentrazone-ethyl (ISO):

Distribution among environmental compartments : Koc: 866, log Koc: 2.93
Remarks: Mobile in soils

Other adverse effects

Product:

Ozone-Depletion Potential : Regulation: 40 CFR Protection of Environment; Part 82 Protection of Stratospheric Ozone - CAA Section 602 Class I Substances
Remarks: This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

Additional ecological information : An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
Very toxic to aquatic life with long lasting effects.

Endocrine disrupting properties

No data available

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues : The product should not be allowed to enter drains, water courses or the soil.
Do not contaminate ponds, waterways or ditches with chemical or used container.
Send to a licensed waste management company.

SECTION 14. TRANSPORT INFORMATION

International Regulations

UNRTDG

UN number	:	UN 3082
Proper shipping name	:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Carfentrazone-ethyl)
Class	:	9
Packing group	:	III
Labels	:	9
Environmentally hazardous	:	yes

IATA-DGR

UN/ID No.	:	UN 3082
Proper shipping name	:	Environmentally hazardous substance, liquid, n.o.s.Environmentally hazardous substance, liquid, n.o.s. (Carfentrazone-ethyl)
Class	:	9
Packing group	:	III
Labels	:	Miscellaneous
Packing instruction (cargo aircraft)	:	964
Packing instruction (passenger aircraft)	:	964
Environmentally hazardous	:	yes

IMDG-Code

UN number	:	UN 3082
Proper shipping name	:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Carfentrazone-ethyl)
Class	:	9
Packing group	:	III
Labels	:	9
EmS Code	:	F-A, S-F
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 3082
Proper shipping name	:	Environmentally hazardous substance, liquid, n.o.s. (Carfentrazone-ethyl)
Class	:	9
Packing group	:	III
Labels	:	CLASS 9
ERG Code	:	171
Marine pollutant	:	yes

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

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
butan-1-ol	71-36-3	100	100 (F003)

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 : No SARA Hazards

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

butan-1-ol	71-36-3	>= 1 - < 5 %
naphthalene	91-20-3	>= 0.1 - < 1 %

Clean Air Act

This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).
This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).
This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).
The following chemical(s) are listed under the U.S. Clean Air Act Section 111 SOCMI Intermediate or Final VOC's (40 CFR 60.489):

2-methylnaphthalene	91-57-6	>= 20 - < 30 %
1-methylnaphthalene	90-12-0	>= 5 - < 10 %
butan-1-ol	71-36-3	>= 1 - < 5 %

Clean Water Act

The following Hazardous Substances are listed under the U.S. CleanWater Act, Section 311, Table 116.4A:

naphthalene	91-20-3	>= 0.1 - < 1 %

The following Hazardous Chemicals are listed under the U.S. CleanWater Act, Section 311, Table 117.3:

naphthalene	91-20-3	>= 0.1 - < 1 %

This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307
This product does not contain any priority pollutants related to the U.S. Clean Water Act

US State Regulations

Massachusetts Right To Know

1-methylnaphthalene	90-12-0
butan-1-ol	71-36-3

Pennsylvania Right To Know

Solvent naphtha (petroleum), heavy arom.; Kerosine — unspecified	64742-94-5
2-methylnaphthalene	91-57-6
carfentrazone-ethyl (ISO)	128639-02-1
1-methylnaphthalene	90-12-0
butan-1-ol	71-36-3
naphthalene	91-20-3

Maine Chemicals of High Concern

Product does not contain any listed chemicals

Vermont Chemicals of High Concern

Product does not contain any listed chemicals

Washington Chemicals of High Concern

Product does not contain any listed chemicals

California Prop. 65

WARNING: This product can expose you to chemicals including naphthalene, which is/are known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

California List of Hazardous Substances

butan-1-ol	71-36-3

California Permissible Exposure Limits for Chemical Contaminants

butan-1-ol	71-36-3

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

TW TCSI	:	On the inventory, or in compliance with the inventory
US TSCA	:	Product contains substance(s) not listed on TSCA inventory.
AU AIIC	:	Not in compliance with the inventory
CA. DSL	:	This product contains chemical substance(s) exempt from CEPA DSL Inventory requirements. It is regulated as a pesticide subject to Pest Control Products Act (PCPA) requirements. Read the PCPA label, authorized under the Pest Control Products Act, prior to using or handling this pest control product.
JP ENCS	:	Not in compliance with the inventory
JP ISHL	:	On the inventory, or in compliance with the inventory
KR KECI	:	On the inventory, or in compliance with the inventory
PH PICCS	:	Not in compliance with the inventory
CN IECSC	:	On the inventory, or in compliance with the inventory
NZ NZIoC	:	Not in compliance with the inventory
TH TECI	:	Not in compliance with the inventory

TSCA list

No substances are subject to a Significant New Use Rule.

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

FIFRA information

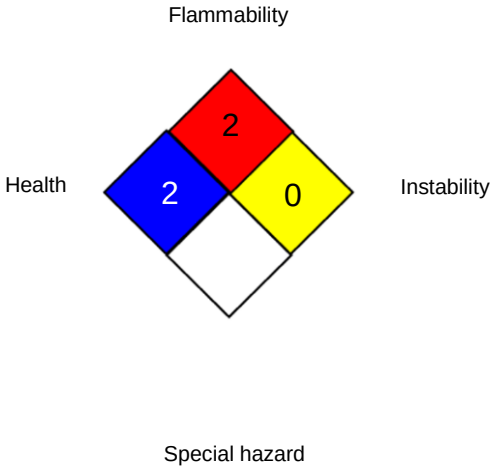
This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label:

Avoid breathing dust or spray mist. Avoid contact with skin, eyes and clothing. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove and wash contaminated clothing before reuse. This product is toxic to fish and invertebrates.

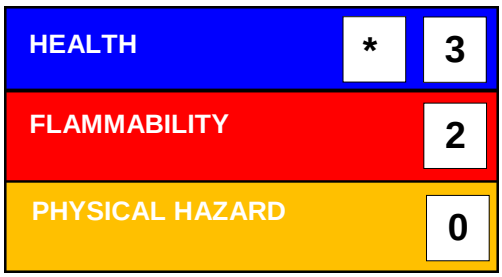
SECTION 16. OTHER INFORMATION

Further information

NFPA 704:



HMIS® IV / CED:



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
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
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
NIOSH REL / C	:	Ceiling value not be exceeded at any time.
OSHA P0 / TWA	:	8-hour time weighted average
OSHA P0 / STEL	:	Short-term exposure limit
OSHA P0 / C	:	Ceiling 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 Standardization; 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 Organization 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, Authorization 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

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US / EN

Person who prepared the SDS:

FMC Corporation

End of Material Safety Data Sheet