SAFETY DATA SHEET
according to the OSHA Hazard Communication Standard

Mustang® Maxx Insecticide

Version	Revision Date:	SDS Number:	Date of last issue: -
1.1	12/21/2023	50000547	Date of first issue: 03/12/2019

SECTION 1. IDENTIFICATION

Product identifier
Product name Mustang® Maxx Insecticide

Other means of identification
Product code 50000547

Recommended use of the chemical and restrictions on use
Recommended use Can be used as insecticide only.

Restrictions on use Use as recommended by the label.

Details of the supplier of the safety data sheet
Manufacturer
FMC Corporation
2929 WALNUT ST
PHILADELPHIA PA 19104
USA
(215) 299-6000
SDS-Info@fmc.com

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)

Acute toxicity (Oral)	:	Category 4
Acute toxicity (Inhalation)	:	Category 4
Skin irritation	:	Category 2
Eye irritation	:	Category 2A
Skin sensitization	:	Sub-category 1B
Carcinogenicity	:	Category 2
Specific target organ toxicity	:	Category 2 (Nervous system)

- single exposure

Specific target organ toxicity - single exposure	:	Category 3 (Respiratory system, Central nervous system)
Specific target organ toxicity - repeated exposure	:	Category 2
Aspiration hazard	:	Category 1

GHS label elements

Hazard pictograms :

Signal Word : Danger

Hazard Statements :

H302 + H332 Harmful if swallowed or if inhaled.
H304 May be fatal if swallowed and enters airways.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.
H336 May cause drowsiness or dizziness.
H351 Suspected of causing cancer.
H371 May cause damage to organs (Nervous system).
H373 May cause damage to organs through prolonged or repeated exposure.

Precautionary Statements :

Prevention:

P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
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/ 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 + P311 IF exposed or concerned: Call a POISON CENTER/ doctor.
P308 + P313 IF exposed or concerned: Get medical advice/ attention.
P331 Do NOT induce vomiting.
P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.
P337 + P313 If eye irritation persists: Get medical advice/ attention.
P362 Take off contaminated clothing and wash before reuse.

Storage:

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
P405 Store locked up.

Disposal:

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

Other hazards

Very toxic to aquatic life.
Very toxic to aquatic life with long lasting effects.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Components

Chemical name	CAS-No.	Concentration (% w/w)
Solvent naphtha (petroleum), heavy arom.; Kerosine — unspecified	64742-94-5	>= 50 - < 70
2-methylnaphthalene	91-57-6	>= 10 - < 20
acetophenone	98-86-2	>= 10 - < 20
Zeta cypermethrin (F2700)	52315-07-8	9.15
1-methylnaphthalene	90-12-0	>= 5 - < 10
Benzenesulfonic acid, C10-16-alkyl derivs., calcium salts	68584-23-6	>= 1 - < 5
naphthalene	91-20-3	>= 0.1 - < 1

Actual concentration is withheld as a trade secret

SECTION 4. FIRST AID MEASURES

General advice : Move out of dangerous area.
Show this safety data sheet to the doctor in attendance.
Symptoms of poisoning may appear several hours later.
Do not leave the victim unattended.

If inhaled : Move to fresh air.
Consult a physician after significant exposure.
If unconscious, place in recovery position and seek medical

advice.

In case of skin contact	:	If on clothes, remove clothes. Wash contaminated clothing before re-use. In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention immediately if irritation develops and persists.
In case of eye contact	:	Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician. Remove contact lenses. Protect unharmed eye. Keep eye wide open while rinsing. If eye irritation persists, consult a specialist.
If swallowed	:	Keep respiratory tract clear. Do not induce vomiting without medical advice. Do not give milk or alcoholic beverages. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician.
Most important symptoms and effects, both acute and delayed	:	Exposure to skin may result in mild symptoms include itching, hives or rash, and skin redness. More severe symptoms include sneezing, itchy watery eyes, and difficulty breathing. Swallowing or inhaling may result in sudden shortness of breath, coughing, nausea and or abdominal pain. Harmful if swallowed or if inhaled. May be fatal if swallowed and enters airways. Causes skin irritation. May cause an allergic skin reaction. Causes serious eye irritation. May cause respiratory irritation. May cause drowsiness or dizziness. Suspected of causing cancer. May cause damage to organs. May cause 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 protective clothing Avoid inhalation, ingestion and contact with skin and eyes. If potential for exposure exists refer to Section 8 for specific personal protective equipment.
Notes to physician	:	Treat symptomatically.

SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media	:	Dry chemical, CO2, water spray or regular foam.
Unsuitable extinguishing	:	Do not spread spilled material with high-pressure water

media		streams.
Specific hazards during fire fighting	:	Do not allow run-off from fire fighting to enter drains or water courses.
Hazardous combustion products	:	Carbon oxides Fire may produce irritating, corrosive and/or toxic gases. Nitrogen oxides (NOx) Chlorinated compounds Hydrogen chloride Hydrogen cyanide Chlorine 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. Never return spills in original containers for re-use. Make sure that there is a sufficient amount of neutralizing/ absorbent material near the storage area. Mark the contaminated area with signs and prevent access to unauthorized personnel. For disposal considerations see section 13.
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 safe handling	:	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. Persons susceptible to skin sensitization problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used.
Conditions for safe storage	:	Keep container tightly closed in a dry and 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.
Materials to avoid	:	Do not store near acids.
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
acetophenone	98-86-2	TWA	10 ppm	ACGIH
		TWA	10 ppm	US WEEL
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
		TWA	10 ppm 50 mg/m3	OSHA P0
		STEL	15 ppm 75 mg/m3	OSHA P0

Personal protective equipment

Respiratory protection	:	No personal respiratory protective equipment normally required. In the case of dust or aerosol formation use respirator with an approved filter.
Hand protection		
Material	:	Wear chemical resistant gloves, such as barrier laminate, butyl rubber or nitrile rubber.
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. Always have on hand a first-aid kit, together with proper instructions. Ensure that eye flushing systems and safety showers are located close to the working place. Wear suitable protective equipment.
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	:	amber
Odor	:	aromatic
Odor Threshold	:	No data available
pH	:	4.6 (72.1 °F / 22.3 °C)
Melting point/range	:	No data available
Boiling point/boiling range	:	No data available

Flash point	:	> 230 °F / 110 °C
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	:	8.72 lb/gal (77 °F / 25 °C) 1.04 g/cm3 (77 °F / 25 °C)
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	:	40.7 mm2/s (72.3 °F / 22.4 °C)
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	:	No decomposition if stored and applied as directed.
Conditions to avoid	:	Avoid extreme temperatures. Avoid formation of aerosol.
Incompatible materials	:	Avoid strong acids, bases, and oxidizers.
Hazardous decomposition products	:	No decomposition if stored and applied as directed.

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

Harmful if swallowed or if inhaled.

Product:

Acute oral toxicity	:	LD50 (Rat): 310 mg/kg
Acute inhalation toxicity	:	LC50 (Rat): > 2.03 mg/l Exposure time: 4 h Test atmosphere: dust/mist
Acute dermal toxicity	:	LD50 (Rabbit): > 5,000 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

acetophenone:

Acute oral toxicity	:	LD50 (Rat, male and female): 2,081 mg/kg
Acute dermal toxicity	:	LD50 (Rat, male and female): 3,300 mg/kg

cypermethrin (ISO):

Acute oral toxicity : LD50 (Rat, male and female): 69.2 - 142.3 mg/kg
Method: FIFRA 81.01
GLP: yes

Acute inhalation toxicity : LC50 (Rat, female): 1.6 - 3.4 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: EPA OPP 81 - 3

Acute dermal toxicity : LD50 (Rabbit): > 2,000 mg/kg

1-methylnaphthalene:

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

Benzenesulfonic acid, C10-16-alkyl derivs., calcium salts:

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 : LD50 (Rat, male and female): > 1.9 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 403
Assessment: The substance or mixture has no acute inhalation toxicity

Acute dermal toxicity : LD50 (Rabbit, male and female): > 4,000 mg/kg
Remarks: Based on data from similar materials

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

Skin corrosion/irritation

Causes skin irritation.

Product:

Assessment : Irritating to skin.

Result : Skin 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

acetophenone:

Species : Rabbit
Result : No skin irritation

cypermethrin (ISO):

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

1-methylnaphthalene:

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

Benzenesulfonic acid, C10-16-alkyl derivs., calcium salts:

Assessment : Irritating to skin.

naphthalene:

Species : Rabbit
Result : No skin irritation

Serious eye damage/eye irritation

Causes serious eye irritation.

Product:

Species : Rabbit
Result : Eye irritation
Assessment : Irritating to eyes.

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

acetophenone:

Species	:	Rabbit
Result	:	No eye irritation
Method	:	Draize Test

cypermethrin (ISO):

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

1-methylnaphthalene:

Species	:	Rabbit
Result	:	No eye irritation

Benzenesulfonic acid, C10-16-alkyl derivs., calcium salts:

Assessment	:	Risk of serious damage to eyes.

naphthalene:

Species	:	Rabbit
Result	:	No eye irritation

Respiratory or skin sensitization

Skin sensitization

May cause an allergic skin reaction.

Respiratory sensitization

Not classified due to lack of data.

Product:

Result	:	Probability or evidence of low to moderate skin sensitization rate in humans
Remarks	:	Causes 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

acetophenone:

Test Type : Draize Test
Species : Guinea pig
Result : Does not cause skin sensitization.

cypermethrin (ISO):

Test Type : Local lymph node assay (LLNA)
Routes of exposure : Dermal
Species : mice
Assessment : May cause sensitization by skin contact.
Method : OECD Test Guideline 429
Result : May cause sensitization by skin contact.

Benzenesulfonic acid, C10-16-alkyl derivs., calcium salts:

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

naphthalene:

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

Germ cell mutagenicity

Not classified due to lack of data.

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

acetophenone:

Genotoxicity in vitro	:	Test Type: reverse mutation assay Method: Mutagenicity (Salmonella typhimurium - reverse mutation assay) Result: negative Test Type: In vitro mammalian cell gene mutation test Method: OECD Test Guideline 476 Result: negative Test Type: Chromosome aberration test in vitro Method: OECD Test Guideline 473 Result: negative Test Type: Chromosome aberration test in vitro Method: OECD Test Guideline 473 Result: positive
Genotoxicity in vivo	:	Test Type: Micronucleus test Species: Mouse (male and female) Application Route: Intraperitoneal injection Method: OECD Test Guideline 474 Result: negative

cypermethrin (ISO):

Genotoxicity in vitro	:	Test Type: Ames test Result: negative Test Type: unscheduled DNA synthesis assay Test system: rat hepatocytes Result: negative Test Type: Chromosome aberration test in vitro Metabolic activation: with and without metabolic activation Result: negative GLP: yes
Genotoxicity in vivo	:	Test Type: chromosome aberration assay Species: Chinese hamster Cell type: Bone marrow Application Route: Oral Result: negative
Germ cell mutagenicity - Assessment	:	Weight of evidence does not support classification as a germ cell mutagen.

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

Benzenesulfonic acid, C10-16-alkyl derivs., calcium salts:

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: Micronucleus test
Species: Mouse (male and female)
Application Route: Intraperitoneal injection
Exposure time: 72 hrs
Method: Mutagenicity (micronucleus test)
Remarks: Based on data from similar materials

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

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

cypermethrin (ISO):

Species	:	Rat
Application Route	:	Oral
Exposure time	:	24 month(s)
NOAEL	:	7.5 mg/kg bw/day
Result	:	negative

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 - Assessment	:	Limited evidence of carcinogenicity in animal studies

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

Not classified due to lack of data.

Components:

acetophenone:

Effects on fertility	:	Test Type: one-generation reproductive toxicity Species: Rat, male and female Application Route: Oral Dose: 0, 75, 225, 750 mg/kg bw/day General Toxicity Parent: NOAEL: 750 mg/kg bw/day General Toxicity F1: LOAEL: 750 mg/kg bw/day Method: OECD Test Guideline 422 Result: negative Test Type: one-generation reproductive toxicity Species: Rat, female Application Route: Oral Dose: 0, 75, 225, 750 mg/kg bw/day General Toxicity Parent: LOAEL: 750 mg/kg bw/day Method: OECD Test Guideline 422 Result: negative
Effects on fetal development	:	Test Type: Pre-natal Species: Rat Application Route: Oral Dose: 125, 300, 750mg/kgbw/day Duration of Single Treatment: 20 d General Toxicity Maternal: LOAEL: 300 mg/kg bw/day Embryo-fetal toxicity.: LOAEL: 300 mg/kg bw/day Method: OECD Test Guideline 414

cypermethrin (ISO):

Effects on fertility	:	Test Type: Two-generation study Species: Rat Application Route: Oral General Toxicity F1: NOAEL: 22 mg/kg bw/day Method: OECD Test Guideline 416 Result: negative
Effects on fetal development	:	Test Type: Embryo-fetal development Species: Rat Application Route: Oral General Toxicity Maternal: NOAEL: 12.5 mg/kg bw/day Developmental Toxicity: NOAEL: 35 mg/kg bw/day Method: OECD Test Guideline 426 Result: negative GLP: yes
Reproductive toxicity - Assessment	:	Weight of evidence does not support classification for reproductive toxicity

Benzenesulfonic acid, C10-16-alkyl derivs., calcium salts:

Effects on fertility : Test Type: one-generation reproductive toxicity
Species: Rat, male and female
Application Route: Oral
Method: OECD Test Guideline 415
Result: No effects on fertility and early embryonic development were detected.

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

STOT-single exposure

May cause respiratory irritation.
May cause drowsiness or dizziness.
May cause damage to organs (Nervous system).

Product:

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

Components:

2-methylnaphthalene:

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

acetophenone:

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

cypermethrin (ISO):

Target Organs : Nervous system
Assessment : The substance or mixture is classified as specific target organ toxicant, single exposure, category 2.

Assessment : May cause respiratory irritation.

1-methylnaphthalene:

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

dizziness.

STOT-repeated exposure

May cause damage to organs through prolonged or repeated exposure.

Product:

Assessment : The substance or mixture is classified as specific target organ toxicant, repeated exposure, category 2.

Components:

cypermethrin (ISO):

Target Organs : Nervous system
Assessment : The substance or mixture is classified as specific target organ toxicant, repeated exposure, category 2.

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

acetophenone:

Species : Rat, male and female
NOAEL : 250 mg/kg bw/day
LOAEL : 500 mg/kg bw/day
Application Route : Oral - gavage
Exposure time : 90 d
Method : OECD Test Guideline 408

cypermethrin (ISO):

Species	:	Dog
NOAEL	:	5 mg/kg
LOAEL	:	15 mg/kg
Application Route	:	Oral
Exposure time	:	1 yr
Dose	:	1, 5, 15 mg/kg/d
Symptoms	:	Gastrointestinal disturbance, Neurological disorders

Species	:	Dog
NOAEL	:	6 mg/kg bw/day
LOAEL	:	18 mg/kg bw/day
Application Route	:	Oral
Exposure time	:	90 d
Target Organs	:	Nervous system

Species	:	Rat
NOAEL	:	16.7 mg/kg bw/day
LOAEL	:	33.7 mg/kg bw/day
Application Route	:	Oral
Exposure time	:	90 d
Target Organs	:	Nervous system

Species	:	Dog
NOAEL	:	6 mg/kg
LOAEL	:	18 mg/kg
Application Route	:	Oral
Exposure time	:	1 yr
Dose	:	3, 6, 18, 33 mg/kg/d
Method	:	EPA OPP 83-1
Symptoms	:	Tremors

Species	:	Rat
NOAEL	:	4.5 mg/kg
Application Route	:	Oral
Exposure time	:	2 yr
Dose	:	0.6, 4.5, 30, 45 mg/kg/d
Target Organs	:	Liver

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

Benzenesulfonic acid, C10-16-alkyl derivs., calcium salts:

Species	:	Rat, male and female
NOAEL	:	500 mg/kg
Application Route	:	Oral
Method	:	OECD Test Guideline 407
Remarks	:	Based on data from similar materials

Species	:	Rat, male and female
NOAEL	:	50 mg/m3
Application Route	:	Inhalation
Method	:	OECD Test Guideline 412
Remarks	:	Based on data from similar materials

Species	:	Rat, male and female
NOAEL	:	> 1,000 mg/kg
Application Route	:	Dermal
Method	:	OECD Test Guideline 410
Remarks	:	Based on data from similar materials

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.

cypermethrin (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

cypermethrin (ISO):

General Information : Symptoms: May cause paraesthesia

1-methylnaphthalene:

Skin contact : Target Organs: Skin
Symptoms: Irritation

Further information

Product:

Remarks : Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting.
Concentrations substantially above the TLV value may cause narcotic effects.
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

acetophenone:

Toxicity to fish	:	LC50 (Pimephales promelas (fathead minnow)): 162 mg/l Exposure time: 96 h Test Type: flow-through test
Toxicity to daphnia and other aquatic invertebrates	:	LC50 (Daphnia magna (Water flea)): 528 mg/l Exposure time: 48 h Test Type: static test
Toxicity to algae/aquatic plants	:	NOEC (Pseudokirchneriella subcapitata (algae)): 24.8 mg/l Exposure time: 72 h Method: OECD Test Guideline 201 EC50 (Pseudokirchneriella subcapitata (green algae)): 40 mg/l Exposure time: 72 h Method: OECD Test Guideline 201
Toxicity to microorganisms	:	IC50 (activated sludge): > 1,000 mg/l Exposure time: 3 h Method: OECD Test Guideline 209

cypermethrin (ISO):

Toxicity to fish	:	LC50 (Oncorhynchus mykiss (rainbow trout)): 0.69 µg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): 0.141 µg/l Exposure time: 48 h
Toxicity to algae/aquatic plants	:	EC50 (algae): > 1 mg/l Exposure time: 72 h
Toxicity to fish (Chronic toxicity)	:	NOEC (Fish): 0.015 µg/l Exposure time: 21 d

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC (Crustaceans): 0.01 µg/l Exposure time: 21 d
Toxicity to soil dwelling organisms	:	LC50 (worms): > 100 mg/kg Exposure time: 14 d
Toxicity to terrestrial organisms	:	LD50 (Colinus virginianus (Bobwhite quail)): > 2,025 mg/kg NOEC (Colinus virginianus (Bobwhite quail)): 150 mg/kg End point: Reproduction Test LD50 (Apis mellifera (bees)): 0.059 µg/bee LC50 (Apis mellifera (bees)): 0.033 µg/bee

Ecotoxicology Assessment

Acute aquatic toxicity	:	Very toxic to aquatic life.
Chronic aquatic toxicity	:	Very toxic to aquatic life with long lasting effects.

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

Benzenesulfonic acid, C10-16-alkyl derivs., calcium salts:

Toxicity to fish	:	LL50 (Marine species): 10,000 mg/l Exposure time: 96 h Remarks: Based on data from similar materials LL50 (Pimephales promelas (fathead minnow)): 1,000 mg/l Exposure time: 96 h Remarks: Based on data from similar materials
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): > 1,000 mg/l Exposure time: 48 h Remarks: Based on data from similar materials
Toxicity to algae/aquatic plants	:	EL50 (Pseudokirchneriella subcapitata (green algae)): > 1,000 mg/l Exposure time: 96 h Remarks: Based on data from similar materials

Toxicity to microorganisms	:	NOEC (activated sludge): 10,000 mg/l Method: OECD Test Guideline 209 GLP: yes

Ecotoxicology Assessment

Acute aquatic toxicity	:	Toxic to aquatic life.
Chronic aquatic toxicity	:	Harmful to aquatic life with long lasting effects.

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

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

acetophenone:

Biodegradability	:	Inoculum: activated sludge Result: Readily biodegradable. Biodegradation: 64.7 % Exposure time: 14 d Method: OECD Test Guideline 301C

cypermethrin (ISO):

Biodegradability : Result: Not readily biodegradable.

1-methylnaphthalene:

Biodegradability : Result: Not readily biodegradable.

Benzenesulfonic acid, C10-16-alkyl derivs., calcium salts:

Biodegradability : Result: Not readily biodegradable.

naphthalene:

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

Bioaccumulative potential

Product:

Bioaccumulation : 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

acetophenone:

Bioaccumulation : Species: Fish
Bioconcentration factor (BCF): 0.47
Method: QSAR

Partition coefficient: n-octanol/water : log Pow: 1.65

cypermethrin (ISO):

Bioaccumulation : Remarks: Accumulation in aquatic organisms is expected.

Partition coefficient: n-octanol/water : log Pow: 5 - 6 (75 °F / 24 °C)

1-methylnaphthalene:

Partition coefficient: n- : log Pow: 3.87

octanol/water

Benzenesulfonic acid, C10-16-alkyl derivs., calcium salts:

Partition coefficient: n-octanol/water : log Pow: 22.1

naphthalene:

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

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

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.

cypermethrin (ISO):

Distribution among environmental compartments : Remarks: immobile

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.

Components:

cypermethrin (ISO):

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.

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.
Contaminated packaging	:	Empty remaining contents. Dispose of as unused product. Do not re-use empty containers.

SECTION 14. TRANSPORT INFORMATION

International Regulations

UNRTDG

UN number	:	UN 3082
Proper shipping name	:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Zeta-Cypermethrin)
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. (Zeta-Cypermethrin)
Class	:	9
Packing group	:	III
Labels	:	Miscellaneous
Packing instruction (cargo aircraft)	:	964
Packing instruction (passenger aircraft)	:	964

IMDG-Code

UN number	:	UN 3082
Proper shipping name	:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Zeta-Cypermethrin)
Class	:	9
Packing group	:	III
Labels	:	9
EmS Code	:	F-A, S-F
Marine pollutant	:	yes

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

Not applicable for product as supplied.

Domestic regulation

49 CFR Road

UN/ID/NA number	:	UN 3082
Proper shipping name	:	Environmentally hazardous substance, liquid, n.o.s. (Zeta-Cypermethrin)
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

Listed substances in the product are at low enough levels to not be expected to exceed the 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 : No SARA Hazards

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

acetophenone	98-86-2	>= 10 - < 20 %
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).
The following chemical(s) are listed as HAP under the U.S. Clean Air Act, Section 112 (40 CFR 61):

acetophenone	98-86-2	>= 10 - < 20 %

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 %
acetophenone	98-86-2	>= 10 - < 20 %
1-methylnaphthalene	90-12-0	>= 5 - < 10 %

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 %
acetic acid	64-19-7	>= 0 - < 0.1 %

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

naphthalene	91-20-3	>= 0.1 - < 1 %
acetic acid	64-19-7	>= 0 - < 0.1 %

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

acetophenone Zeta	98-86-2
cypermethrin (F2700)	52315-07-8
1-methylnaphthalene	90-12-0

Pennsylvania Right To Know

Solvent naphtha (petroleum), heavy arom.; Kerosine — unspecified	64742-94-5
2-methylnaphthalene	91-57-6
acetophenone	98-86-2
Zeta cypermethrin (F2700)	52315-07-8
1-methylnaphthalene	90-12-0
Castoroil, polyethoxylated	61791-12-6
naphthalene	91-20-3
acetic acid	64-19-7

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 Permissible Exposure Limits for Chemical Contaminants

acetophenone	98-86-2

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

TCSI	:	On the inventory, or in compliance with the inventory
TSCA	:	Product contains substance(s) not listed on TSCA inventory.
AIIC	:	Not in compliance with the inventory
DSL	:	This product contains the following components that are not on the Canadian DSL nor NDSL.

Zeta cypermethrin (F2700)

ENCS	:	Not in compliance with the inventory
ISHL	:	Not in compliance with the inventory
KECI	:	On the inventory, or in compliance with the inventory
PICCS	:	On the inventory, or in compliance with the inventory
IECSC	:	On the inventory, or in compliance with the inventory
NZIoC	:	Not in compliance with the inventory
TECI	:	On the inventory, or in compliance with the inventory

TSCA list

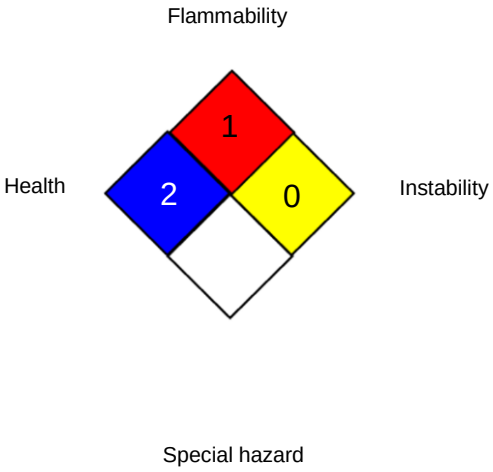
No substances are subject to a Significant New Use Rule.

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

SECTION 16. OTHER INFORMATION

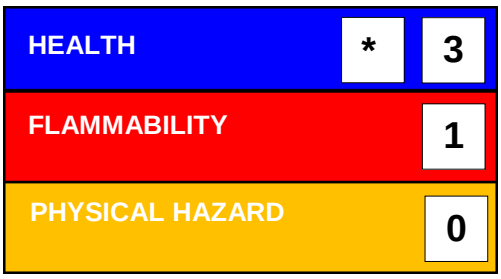
Further information

NFPA 704:



0 No health threat, **1** Slightly Hazardous, **2** Hazardous, **3** Extreme danger, **4** Deadly

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

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
US WEEL	:	USA. Workplace Environmental Exposure Levels (WEEL)
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
OSHA P0 / TWA	:	8-hour time weighted average
OSHA P0 / STEL	:	Short-term exposure limit
OSHA Z-1 / TWA	:	8-hour time weighted average
US WEEL / TWA	:	8-hr TWA

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

FMC Corporation

End of Material Safety Data Sheet