

**AXIAL XL HERBICIDE**

Version 1.1      Revision Date: 01/23/2023      SDS Number: S00006673752      This version replaces all previous versions.

**SECTION 1. IDENTIFICATION**

Product name : AXIAL XL HERBICIDE

Design code. : A13617V

Product Registration number : 100-1256

**Manufacturer or supplier's details**

Company name of supplier : Syngenta Crop Protection, LLC

Address : Post Office Box 18300  
Greensboro NC 27419  
United States of America (USA)

Telephone : 1 800 334 9481

Telefax : 1 336 632 2192

E-mail address : sds.requests@syngenta.com

Emergency telephone : 1 800 888 8372

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

Recommended use : Herbicide

Restrictions on use : General Use Pesticide

**SECTION 2. HAZARDS IDENTIFICATION****GHS classification in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200)**

Flammable liquids : Category 4

Skin irritation : Category 2

Carcinogenicity : Category 2

Reproductive toxicity : Category 1B

Specific target organ toxicity : Category 2 (Urinary system, Liver)  
- repeated exposure

Aspiration hazard : Category 1

**GHS label elements**

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Hazard pictograms

:



Signal Word

:

Danger

Hazard Statements

:

H227 Combustible liquid.  
H304 May be fatal if swallowed and enters airways.  
H315 Causes skin irritation.  
H351 Suspected of causing cancer.  
H360Df May damage the unborn child. Suspected of damaging fertility.  
H373 May cause damage to organs (Urinary system, Liver) 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.  
P210 Keep away from heat/ sparks/ open flames/ hot surfaces. No smoking.  
P260 Do not breathe mist or vapors.  
P264 Wash skin thoroughly after handling.  
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 soap and water.  
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.  
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 + 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.

**Other hazards**

None known.

### SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture

:

Mixture

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### Components

Chemical name	CAS-No.	Concentration (% w/w)
solvent naphtha (petroleum), highly arom.	64742-94-5	$\geq 30 - < 50$
(tetrahydro-furan-2-yl)-methanol	97-99-4	$\geq 10 - < 20$
pinoxaden	243973-20-8	5.0505
calcium dodecylbenzene sulphonate	26264-06-2	$\geq 1 - < 5$
cloquintocet-mexyl	99607-70-2	$\geq 1 - < 5$
2-methylpropan-1-ol	78-83-1	$\geq 1 - < 5$
naphthalene	91-20-3	$\geq 0.1 - < 1$

Actual concentration is withheld as a trade secret

### SECTION 4. FIRST AID MEASURES

- General advice : Have the product container, label or Safety Data Sheet with you when calling the emergency number, a poison control center or physician, or going for treatment.
- If inhaled : Take the victim into fresh air.  
If breathing is irregular or stopped, administer artificial respiration.  
Keep patient warm and at rest.  
Call a physician or poison control center immediately.
- In case of skin contact : Take off all contaminated clothing immediately.  
Wash off immediately with plenty of water.  
If skin irritation persists, call a physician.  
Wash contaminated clothing before re-use.
- In case of eye contact : Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.  
Remove contact lenses.  
Immediate medical attention is required.
- If swallowed : If swallowed, seek medical advice immediately and show this container or label.  
Do not induce vomiting: contains petroleum distillates and/or aromatic solvents.
- Most important symptoms and effects, both acute and delayed : Aspiration may cause pulmonary edema and pneumonitis.
- Notes to physician : There is no specific antidote available.  
Treat symptomatically.  
Do not induce vomiting: contains petroleum distillates and/or aromatic solvents.

### SECTION 5. FIRE-FIGHTING MEASURES

- Suitable extinguishing media : Extinguishing media - small fires  
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

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- Extinguishing media - large fires  
Alcohol-resistant foam
- Unsuitable extinguishing media : Do not use a solid water stream as it may scatter and spread fire.
- Specific hazards during fire fighting : As the product contains combustible organic ingredients, fire will produce dense black smoke containing hazardous products of combustion (see section 10).  
Exposure to decomposition products may be a hazard to health.  
Flash back possible over considerable distance.
- Further information : Do not allow run-off from fire fighting to enter drains or water courses.  
Cool closed containers exposed to fire with water spray.
- Special protective equipment for fire-fighters : Wear full protective clothing and self-contained breathing apparatus.

### SECTION 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures : Refer to protective measures listed in sections 7 and 8.  
Keep people away from and upwind of spill/leak.  
Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.  
Remove all sources of ignition.  
Pay attention to flashback.
- Environmental precautions : Prevent further leakage or spillage if safe to do so.  
Do not flush into surface water or sanitary sewer system.  
If the product contaminates rivers and lakes or drains inform respective authorities.
- Methods and materials for containment and cleaning up : Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).  
Clean contaminated surface thoroughly.  
Clean with detergents. Avoid solvents.  
Retain and dispose of contaminated wash water.

### SECTION 7. HANDLING AND STORAGE

- Advice on safe handling : Avoid contact with skin and eyes.  
When using do not eat, drink or smoke.  
Use only in an area containing flame proof equipment.  
Take precautionary measures against static discharges.  
For personal protection see section 8.
- Conditions for safe storage : Keep containers tightly closed in a dry, cool and well-ventilated place.  
Keep out of the reach of children.  
Keep away from combustible material.

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Keep in an area equipped with sprinklers.  
Keep away from food, drink and animal feedingstuffs.  
No smoking.

### 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), highly arom.	64742-94-5	TWA	8 ppm 50 mg/m <sup>3</sup>	Supplier
		TWA	200 mg/m <sup>3</sup> (total hydrocarbon vapor)	ACGIH
(tetrahydro-furan-2-yl)-methanol	97-99-4	TWA	0.5 ppm	US WEEL
pinoxaden	243973-20-8	TLV-C	0.1 mg/m <sup>3</sup>	Syngenta
cloquintocet-mexyl	99607-70-2	TWA	1 mg/m <sup>3</sup>	Syngenta
2-methylpropan-1-ol	78-83-1	TWA	50 ppm	ACGIH
		TWA	50 ppm 150 mg/m <sup>3</sup>	NIOSH REL
		TWA	100 ppm 300 mg/m <sup>3</sup>	OSHA Z-1
		TWA	50 ppm 150 mg/m <sup>3</sup>	OSHA P0
naphthalene	91-20-3	TWA	10 ppm	ACGIH
		TWA	10 ppm 50 mg/m <sup>3</sup>	NIOSH REL
		ST	15 ppm 75 mg/m <sup>3</sup>	NIOSH REL
		TWA	10 ppm 50 mg/m <sup>3</sup>	OSHA Z-1
		TWA	10 ppm 50 mg/m <sup>3</sup>	OSHA P0
		STEL	15 ppm 75 mg/m <sup>3</sup>	OSHA P0

**Engineering measures** : THE FOLLOWING RECOMMENDATIONS FOR EXPOSURE CONTROLS/PERSONAL PROTECTION ARE INTENDED FOR THE MANUFACTURE, FORMULATION AND PACKAGING OF THE PRODUCT. FOR COMMERCIAL APPLICATIONS AND/OR ON-FARM APPLICATIONS CONSULT THE PRODUCT LABEL.

Containment and/or segregation is the most reliable technical protection measure if exposure cannot be eliminated.  
The extent of these protection measures depends on the actual risks in use.  
Maintain air concentrations below occupational exposure standards.  
Where necessary, seek additional occupational hygiene

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advice.

**Personal protective equipment**

Respiratory protection : No personal respiratory protective equipment normally required.  
When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

Hand protection

Remarks : Wear protective gloves. The choice of an appropriate glove does not only depend on its material but also on other quality features and is different from one producer to the other. Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time. The breakthrough time depends amongst other things from the material, the thickness and the type of glove and therefore has to be measured for each case. Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.

Eye protection : No special protective equipment required.

Skin and body protection : Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place.  
Remove and wash contaminated clothing before re-use.  
Wear as appropriate:  
Impervious clothing

Protective measures : The use of technical measures should always have priority over the use of personal protective equipment.  
When selecting personal protective equipment, seek appropriate professional advice.

**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

Appearance : liquid

Color : yellow amber

Odor : No data available

Odor Threshold : No data available

pH : 4.5  
Concentration: 1 % w/v

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Melting point/range	:	No data available
Boiling point/boiling range	:	No data available
Flash point	:	183 °F / 84 °C Method: Pensky-Martens closed cup
Evaporation rate	:	No data available
Flammability (solid, gas)	:	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
Density	:	0.99 g/cm <sup>3</sup>
Solubility(ies)		
Water solubility	:	No data available
Solubility in other solvents	:	No data available
Partition coefficient: n-octanol/water	:	Not applicable
Autoignition temperature	:	572 °F / 300 °C
Decomposition temperature	:	No data available
Viscosity		
Viscosity, kinematic	:	No data available
Explosive properties	:	Not explosive
Oxidizing properties	:	The substance or mixture is not classified as oxidizing.
Particle size	:	No data available

**SECTION 10. STABILITY AND REACTIVITY**

Reactivity	:	None reasonably foreseeable.
Chemical stability	:	Stable under normal conditions.

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Possibility of hazardous reactions : No dangerous reaction known under conditions of normal use.

Conditions to avoid : No decomposition if used as directed.

Incompatible materials : None known.

Hazardous decomposition products : No hazardous decomposition products are known.

**SECTION 11. TOXICOLOGICAL INFORMATION****Information on likely routes of exposure**

Ingestion  
Inhalation  
Skin contact  
Eye contact

**Acute toxicity****Product:**

Acute oral toxicity : LD50 (Rat, female): > 5,000 mg/kg

Acute inhalation toxicity : LC50 (Rat, male and female): > 2.53 mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist  
Assessment: The substance or mixture has no acute inhalation toxicity

Acute dermal toxicity : LD50 (Rat, male and female): > 5,000 mg/kg

**Components:****pinoxaden:**

Acute oral toxicity : LD50 (Rat, male and female): > 5,000 mg/kg

Acute inhalation toxicity : LC50 (Rat, male): 4.63 mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist

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

**cloquintocet-mexyl:**

Acute oral toxicity : LD50 (Rat, male and female): > 5,000 mg/kg

Acute inhalation toxicity : LC50 (Rat, male and female): > 0.935 mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist  
Assessment: The component/mixture is moderately toxic after short term inhalation.  
Remarks: Highest attainable concentration



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

**2-methylpropan-1-ol:**

Acute oral toxicity : LD50 (Rat): 2,830 - 3,350 mg/kg

Acute inhalation toxicity : LC50 (Rat): > 24.6 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 - 2,460 mg/kg

**naphthalene:**

Acute oral toxicity : Assessment: The component/mixture is moderately toxic after single ingestion.

**Skin corrosion/irritation****Product:**

Species : Rabbit  
Result : Irritating to skin.

**Components:****pinoxaden:**

Method : Based on Human Evidence  
Result : Irritating to skin.

**calcium dodecylbenzene sulphonate:**

Result : Irritating to skin.

**cloquintocet-mexyl:**

Species : Rabbit  
Result : No skin irritation

**2-methylpropan-1-ol:**

Result : Irritating to skin.

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

Species : Rabbit  
Result : No eye irritation

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**Components:****(tetrahydro-furan-2-yl)-methanol:**

Result : Eye irritation

**pinoxaden:**

Species : Rabbit

Result : Irritation to eyes, reversing within 21 days

**calcium dodecylbenzene sulphonate:**

Result : Risk of serious damage to eyes.

**cloquintocet-mexyl:**

Species : Rabbit

Result : No eye irritation

**2-methylpropan-1-ol:**

Result : Risk of serious damage to eyes.

**Respiratory or skin sensitization****Product:**

Test Type : Buehler Test

Species : Guinea pig

Result : Did not cause sensitization on laboratory animals.

**Components:****pinoxaden:**

Test Type : mouse lymphoma cells

Species : Mouse

Result : The product is a skin sensitizer, sub-category 1A.

Test Type : Respiratory sensitization

Result : Does not cause respiratory sensitization.

Remarks : Experience with human exposure

**cloquintocet-mexyl:**

Species : Guinea pig

Result : May cause sensitization by skin contact.

**2-methylpropan-1-ol:**

Species : Guinea pig

Result : Did not cause sensitization on laboratory animals.

Remarks : Information given is based on data obtained from similar substances.

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**Germ cell mutagenicity****Components:****pinoxaden:**

Germ cell mutagenicity - Assessment : Animal testing did not show any mutagenic effects.

**cloquintocet-mexyl:**

Germ cell mutagenicity - Assessment : Animal testing did not show any mutagenic effects.

**Carcinogenicity****Components:****pinoxaden:**

Carcinogenicity - Assessment : No evidence of carcinogenicity in animal studies.

**cloquintocet-mexyl:**

Carcinogenicity - Assessment : No evidence of carcinogenicity in animal studies.

**naphthalene:**

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****Components:****(tetrahydro-furan-2-yl)-methanol:**

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

**pinoxaden:**

Reproductive toxicity - Assessment : No toxicity to reproduction

**cloquintocet-mexyl:**

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Reproductive toxicity - Assessment : No toxicity to reproduction

**STOT-single exposure****Components:****pinoxaden:**

Assessment : Based on Human Evidence, The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with respiratory tract irritation.

Remarks : Breathing difficulties  
Cough  
Acute irritation of the respiratory system leading to tightness of the chest and an asthmatic condition.

**cloquintocet-mexyl:**

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

**2-methylpropan-1-ol:**

Assessment : The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with respiratory tract irritation., The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with narcotic effects.

**STOT-repeated exposure****Components:****pinoxaden:**

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

**cloquintocet-mexyl:**

Target Organs : Urinary system, Liver

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

**Aspiration toxicity****Components:****solvent naphtha (petroleum), highly arom.:**

May be fatal if swallowed and enters airways.

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### SECTION 12. ECOLOGICAL INFORMATION

#### Ecotoxicity

##### Components:

**solvent naphtha (petroleum), highly arom.:**

##### Ecotoxicology Assessment

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

##### **pinoxaden:**

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 10.3 mg/l  
Exposure time: 96 h

Toxicity to daphnia and other : EC50 (Daphnia magna (Water flea)): 52 mg/l  
aquatic invertebrates Exposure time: 48 h

Toxicity to algae/aquatic : ErC50 (Raphidocelis subcapitata (freshwater green alga)): 3.6  
plants mg/l  
Exposure time: 72 h

ErC50 (Skeletonema costatum (marine diatom)): 1.72 mg/l  
Exposure time: 72 h

NOEC (Skeletonema costatum (marine diatom)): 0.94 mg/l  
End point: Growth rate  
Exposure time: 96 h

NOEC (Lemna gibba (gibbous duckweed)): 0.73 mg/l  
End point: Growth rate  
Exposure time: 7 d

Toxicity to fish (Chronic tox- : NOEC (Oncorhynchus mykiss (rainbow trout)): 6.6 mg/l  
icity) Exposure time: 28 d

##### **calcium dodecylbenzene sulphonate:**

##### Ecotoxicology Assessment

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

##### **cloquintocet-mexyl:**

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): > 0.97 mg/l  
Exposure time: 96 h

LC50 (Gobiocypris rarus (rare gudgeon)): 0.102 mg/l  
Exposure time: 96 h

Toxicity to daphnia and other : EC50 (Daphnia magna (Water flea)): > 0.82 mg/l  
aquatic invertebrates Exposure time: 48 h

Toxicity to algae/aquatic : ErC50 (Desmodesmus subspicatus (green algae)): > 2.2 mg/l  
plants Exposure time: 72 h

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NOEC (Desmodesmus subspicatus (green algae)): 0.12 mg/l  
End point: Growth rate  
Exposure time: 72 h

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia): > 0.437 mg/l  
Exposure time: 21 d

Toxicity to microorganisms : EC50 (activated sludge): > 1,000 mg/l  
Exposure time: 3 h

**2-methylpropan-1-ol:**

Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): 1,430 mg/l  
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia pulex (Water flea)): 1,100 mg/l  
Exposure time: 48 h

Toxicity to algae/aquatic plants : EC50 (Raphidocelis subcapitata (freshwater green alga)): 1,799 mg/l  
Exposure time: 72 h

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): 20 mg/l  
Exposure time: 21 d

**naphthalene:****Ecotoxicology Assessment**

Acute aquatic toxicity : Very toxic to aquatic life.

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

**Persistence and degradability****Components:****pinoxaden:**

Biodegradability : Result: rapidly degradable

Stability in water : Degradation half life: 0.3 d  
Remarks: Product is not persistent.

**cloquintocet-mexyl:**

Biodegradability : Result: Not readily biodegradable.

Stability in water : Degradation half life: 0.4 d  
Remarks: Product is not persistent.

**2-methylpropan-1-ol:**

Biodegradability : Result: Readily biodegradable.

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**Bioaccumulative potential****Components:****pinoxaden:**

Bioaccumulation : Remarks: Low bioaccumulation potential.

**cloquintocet-mexyl:**

Bioaccumulation : Remarks: Does not bioaccumulate.

Partition coefficient: n-octanol/water : log Pow: 5.24 (77 °F / 25 °C)

**Mobility in soil****Components:****pinoxaden:**

Distribution among environmental compartments : Remarks: Moderately mobile in soils

Stability in soil : Dissipation time: 0.1 - 1.8 d  
Percentage dissipation: 50 % (DT50)  
Remarks: Product is not persistent.

**cloquintocet-mexyl:**

Distribution among environmental compartments : Remarks: immobile

Stability in soil : Dissipation time: 2.4 d  
Percentage dissipation: 50 % (DT50)  
Remarks: Product is not persistent.

**Other adverse effects****Components:****pinoxaden:**

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

**cloquintocet-mexyl:**

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

**2-methylpropan-1-ol:**

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

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very persistent and very bioaccumulating (vPvB).

**naphthalene:**

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

**SECTION 13. DISPOSAL CONSIDERATIONS****Disposal methods**

Waste from residues : Do not contaminate ponds, waterways or ditches with chemical or used container.  
Do not dispose of waste into sewer.  
Where possible recycling is preferred to disposal or incineration.  
If recycling is not practicable, dispose of in compliance with local regulations.

Contaminated packaging : Empty remaining contents.  
Triple rinse containers.  
Empty containers should be taken to an approved waste handling site for recycling or disposal.  
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.  
(SOLVENT NAPHTHA, CLOQUINTOCET-MEXYL)  
Class : 9  
Packing group : III  
Labels : 9

**IATA-DGR**

UN/ID No. : UN 3082  
Proper shipping name : Environmentally hazardous substance, liquid, n.o.s.  
(SOLVENT NAPHTHA, CLOQUINTOCET-MEXYL)  
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,



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	N.O.S. (SOLVENT NAPHTHA, CLOQUINTOCET-ME XYL)
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**

UN/ID/NA number	: NA 1993
Proper shipping name	: Compounds, weed killing, liquid (ISOBUTANOL, SOLVENT NAPHTHA)
Class	: 3
Packing group	: III
Labels	: FLAMMABLE LIQUID
ERG Code	: 128
Marine pollutant	: no
Remarks	: Above applies only to containers over 119 gallons or 450 liters. Not regulated if shipped in packages less than or equal to 119 gallons (450 liters). Above applies only to containers over 119 gallons or 450 liters. Not regulated if shipped in packages less than or equal to 119 gallons (450 liters).

**Special precautions for user**

Remarks	: Above applies only to containers over 119 gallons or 450 liters. Not regulated if shipped in packages less than or equal to 119 gallons (450 liters). Above applies only to containers over 119 gallons or 450 liters. Not regulated if shipped in packages less than or equal to 119 gallons (450 liters). 49CFR: no dangerous good in non-bulk packaging
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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**

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:

**Warning**

Causes skin irritation.  
Do not get on skin or clothing.  
Causes moderate eye irritation.  
Avoid contact with eyes or clothing.  
Harmful if swallowed.  
Harmful if inhaled.

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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 re-use.

**CERCLA Reportable Quantity**

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
naphthalene	91-20-3	100	32669

**SARA 304 Extremely Hazardous Substances Reportable Quantity**

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

**SARA 302 Extremely Hazardous Substances Threshold Planning Quantity**

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

**SARA 311/312 Hazards** : Flammable (gases, aerosols, liquids, or solids)  
Carcinogenicity  
Reproductive toxicity  
Specific target organ toxicity (single or repeated exposure)  
Aspiration hazard  
Skin corrosion or irritation

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

naphthalene      91-20-3       $\geq 0.1 - < 1 \%$

**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, and

1-methyl-2-pyrrolidone, toluene, which is/are known to the State of California to cause birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

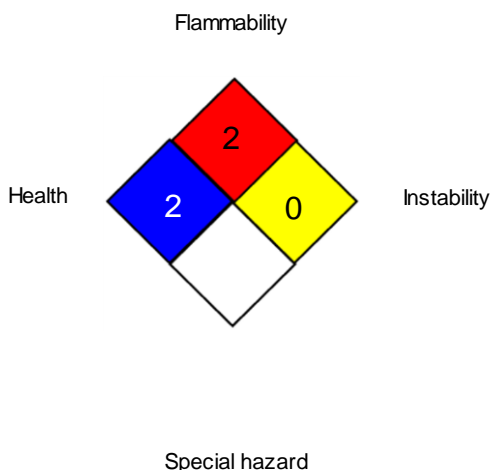
**SECTION 16. OTHER INFORMATION****Further information**

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### NFPA 704:



### HMIS® IV:

HEALTH	*	3
FLAMMABILITY		2
PHYSICAL HAZARD		0

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 Pre-

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

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