SAFETY DATA SHEET

X0A38 12.5 EC

Version	Revision Date:	SDS Number:	Date of last issue: -
0.0	00.00.0000	90000081	Date of first issue: 18.05.2021

1. PRODUCT AND COMPANY IDENTIFICATION

Product name : X0A38 12.5 EC

Manufacturer or supplier's details

Company : FMC Corporation

Address : 2929 WALNUT ST
PHILADELPHIA PA 19104

Telephone : (215) 299-6000

Emergency telephone : 022 6704 5504/5404
000-800-100-7141 (CHEMTREC)

Recommended use of the chemical and restrictions on use

Recommended use : Can be used as herbicide for experimental purpose only.

Restrictions on use : Do not use product for anything outside of the above specified uses.

2. HAZARDS IDENTIFICATION

Manufacture, Storage and Import of Hazardous Chemicals Rules 1989

Classification

Highly flammable liquids

GHS Classification

Flammable liquids : Category 3

Acute toxicity (Oral) : Category 5

Skin corrosion/irritation : Category 2

Serious eye damage/eye irritation : Category 1

Specific target organ toxicity - single exposure : Category 3 (Respiratory system, Central nervous system)

Aspiration hazard : Category 1

Short-term (acute) aquatic hazard : Category 1

Long-term (chronic) aquatic hazard : Category 1

GHS label elements

Hazard pictograms :

Signal Word : Danger

Hazard Statements :

H226 Flammable liquid and vapor.
H303 May be harmful if swallowed.
H304 May be fatal if swallowed and enters airways.
H315 Causes skin irritation.
H318 Causes serious eye damage.
H335 May cause respiratory irritation.
H336 May cause drowsiness or dizziness.
H410 Very toxic to aquatic life with long lasting effects.

Precautionary Statements :

Prevention:

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233 Keep container tightly closed.
P240 Ground and bond container and receiving equipment.
P241 Use explosion-proof electrical/ ventilating/ lighting/ equipment.
P242 Use non-sparking tools.
P243 Take action to prevent static discharges.
P261 Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.
P264 Wash skin thoroughly after handling.
P271 Use only outdoors or in a well-ventilated area.
P273 Avoid release to the environment.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection/ hearing protection.

Response:

P301 + P316 IF SWALLOWED: Get emergency medical help immediately.
P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse affected areas with water.
P304 + P340 + P319 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Get medical help if you feel unwell.
P305 + P354 + P338 + P317 IF IN EYES: Immediately rinse with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical help.
P331 Do NOT induce vomiting.
P332 + P317 If skin irritation occurs: Get medical help.
P362 + P364 Take off contaminated clothing and wash it before reuse.
P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.
P391 Collect spillage.

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.

Other hazards which do not result in classification

None known.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Components

Chemical name	CAS-No.	Concentration (% w/w)
Solvent naphtha (petroleum), light arom.	64742-95-6	>= 50 - < 70
calcium dodecylbenzenesulphonate	26264-06-2	>= 10 - < 20
Quizalofop-P-ethyl	100646-51-3	>= 10 - < 20
Solvent naphtha (petroleum), heavy arom.	64742-94-5	>= 2.5 - < 10
Fluthiacet-methyl	117337-19-6	>= 1 - < 2.5

4. FIRST AID MEASURES

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

If inhaled : Consult a physician after significant exposure.
If unconscious, place in recovery position and seek medical advice.

In case of skin contact : If skin irritation persists, call a physician.
If on skin, rinse well with water.
If on clothes, remove clothes.

In case of eye contact : Small amounts splashed into eyes can cause irreversible tissue damage and blindness.
In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
Continue rinsing eyes during transport to hospital.
Remove contact lenses.
Protect unharmed eye.
Keep eye wide open while rinsing.
If eye irritation persists, consult a specialist.

If swallowed : Clean mouth with water and drink afterwards plenty of water.
Keep respiratory tract clear.

Do NOT induce vomiting.
Do not give milk or alcoholic beverages.
Never give anything by mouth to an unconscious person.
If symptoms persist, call a physician.
Take victim immediately to hospital.

Most important symptoms and effects, both acute and delayed : May be harmful if swallowed.
May be fatal if swallowed and enters airways.
Causes skin irritation.
Causes serious eye damage.
May cause respiratory irritation.
May cause drowsiness or dizziness.

Notes to physician : Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media : Alcohol-resistant foam
Carbon dioxide (CO2)
Dry chemical

Unsuitable extinguishing media : High volume water jet

Specific hazards during fire fighting : Do not allow run-off from fire fighting to enter drains or water courses.

Hazardous combustion products : No hazardous combustion products are known

Specific extinguishing methods : 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.
For safety reasons in case of fire, cans should be stored separately in closed containments.
Use a water spray to cool fully closed containers.

Special protective equipment for fire-fighters : Wear self-contained breathing apparatus for firefighting if necessary.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures : Use personal protective equipment.
Ensure adequate ventilation.
Remove all sources of ignition.
Evacuate personnel to safe areas.
Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.

Environmental precautions : Prevent product from entering drains.
Prevent further leakage or spillage if safe to do so.
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).

7. HANDLING AND STORAGE

Advice on protection against fire and explosion : Do not spray on a naked flame or any incandescent material.
Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapors).
Keep away from open flames, hot surfaces and sources of ignition.

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.
Take precautionary measures against static discharges.
Provide sufficient air exchange and/or exhaust in work rooms.
Open drum carefully as content may be under pressure.
To avoid spills during handling keep bottle on a metal tray.
Dispose of rinse water in accordance with local and national regulations.

Conditions for safe storage : No smoking.
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.

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

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), light arom.	64742-95-6	TWA	300 ppm 900 mg/m3	IN OEL
		STEL	500 ppm 1,500 mg/m3	IN OEL
		TWA	200 mg/m3	ACGIH

			(total hydrocarbon vapor)	
Solvent naphtha (petroleum), heavy arom.	64742-94-5	TWA	200 mg/m3 (total hydrocarbon vapor)	ACGIH

Personal protective equipment

Respiratory protection : In case of mist, spray or aerosol exposure wear suitable personal respiratory protection and protective suit.

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
Wear face-shield and protective suit for abnormal processing problems.

Skin and body protection : Impervious clothing
Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Hygiene measures : When using do not eat or drink.
When using do not smoke.
Wash hands before breaks and at the end of workday.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : liquid

Color : light yellow, to, clear

Odor : aromatic

Flash point : 42 °C

Relative density : 0.94 - 0.97

Solubility(ies)
Water solubility : emulsifiable

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. Vapors may form explosive mixture with air.
Conditions to avoid	:	Heat, flames and sparks.
Incompatible materials	:	Strong acids Strong bases Strong oxidizing agents
Hazardous decomposition products	:	Stable under recommended storage conditions.

11. TOXICOLOGICAL INFORMATION

Acute toxicity

May be harmful if swallowed.

Product:

Acute oral toxicity	:	Acute toxicity estimate: 2,597 mg/kg Method: Calculation method
Acute inhalation toxicity	:	Acute toxicity estimate: > 10 mg/l Exposure time: 4 h Test atmosphere: dust/mist Method: Calculation method
Acute dermal toxicity	:	Acute toxicity estimate: > 5,000 mg/kg Method: Calculation method

Components:

Solvent naphtha (petroleum), light arom.:

Acute oral toxicity	:	LD50 (Rat, female): 3,492 mg/kg Method: OECD Test Guideline 401 LD50 (Rat, male): > 5,000 mg/kg Method: OECD Test Guideline 401
Acute inhalation toxicity	:	LC50 (Rat, male and female): > 6.193 mg/l Exposure time: 4 h Test atmosphere: vapor Assessment: The substance or mixture has no acute inhalation toxicity Remarks: no mortality
Acute dermal toxicity	:	LD50 (Rabbit, male and female): > 3,160 mg/kg Assessment: The substance or mixture has no acute dermal toxicity

calcium dodecylbenzenesulphonate:

Acute oral toxicity	:	LD50 (Rat, male and female): 1,300 mg/kg Remarks: Based on data from similar materials

Acute inhalation toxicity	:	Remarks: see user defined free text
Acute dermal toxicity	:	LD50 (Rat, male and female): > 2,000 mg/kg Method: OECD Test Guideline 402 Assessment: The substance or mixture has no acute dermal toxicity Remarks: Based on data from similar materials

Quizalofop-P-ethyl:

Acute oral toxicity	:	LD50 (Rat, male): 1,210 mg/kg LD50 (Rat, female): 1,182 mg/kg
Acute inhalation toxicity	:	LC50 (Rat, male and female): 3.5 mg/l Exposure time: 4 h Test atmosphere: dust/mist
Acute dermal toxicity	:	LD50 (Rabbit): > 2,000 mg/kg

Solvent naphtha (petroleum), heavy arom.:

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, male and female): > 5.28 mg/l Exposure time: 4 h Test atmosphere: vapor Assessment: The substance or mixture has no acute inhalation toxicity Remarks: Based on data from similar materials
Acute dermal toxicity	:	LD50 (Rabbit, male and female): > 2,000 mg/kg Method: OECD Test Guideline 402 Assessment: The substance or mixture has no acute dermal toxicity Remarks: Based on data from similar materials

Fluthiacet-methyl:

Acute oral toxicity	:	LD50 (Rat): > 5,000 mg/kg
Acute inhalation toxicity	:	LC50 (Rat): > 5.05 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): > 2,000 mg/kg

Skin corrosion/irritation

Causes skin irritation.

Product:

Remarks : Extremely corrosive and destructive to tissue.

Components:

Solvent naphtha (petroleum), light arom.:

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

calcium dodecylbenzenesulphonate:

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

Quizalofop-P-ethyl:

Result : Skin irritation

Solvent naphtha (petroleum), heavy arom.:

Species : Rabbit
Result : Skin irritation
Remarks : Based on data from similar materials

Fluthiacet-methyl:

Species : Rabbit
Result : No skin irritation

Serious eye damage/eye irritation

Causes serious eye damage.

Product:

Remarks : May cause irreversible eye damage.

Components:

Solvent naphtha (petroleum), light arom.:

Species : Rabbit
Result : No eye irritation

calcium dodecylbenzenesulphonate:

Species : Rabbit
Method : OECD Test Guideline 405
Result : Irreversible effects on the eye
Remarks : Based on data from similar materials

Species : Rabbit
Method : OECD Test Guideline 405
Result : Irreversible effects on the eye

Solvent naphtha (petroleum), heavy arom.:

Species	:	Rabbit
Result	:	No eye irritation
Remarks	:	Based on data from similar materials

Fluthiacet-methyl:

Species	:	Rabbit
Result	:	Mild eye irritation

Respiratory or skin sensitization

Skin sensitization

Not classified based on available information.

Respiratory sensitization

Not classified based on available information.

Components:

Solvent naphtha (petroleum), light arom.:

Test Type	:	Maximization Test
Routes of exposure	:	Skin contact
Species	:	Guinea pig
Method	:	OECD Test Guideline 406
Result	:	Not a skin sensitizer.

calcium dodecylbenzenesulphonate:

Test Type	:	Maximization Test
Species	:	Guinea pig
Method	:	OECD Test Guideline 406
Result	:	Not a skin sensitizer.
Remarks	:	Based on data from similar materials

Quizalofop-P-ethyl:

Result	:	Not a skin sensitizer.

Solvent naphtha (petroleum), heavy arom.:

Test Type	:	Buehler Test
Species	:	Guinea pig
Result	:	Does not cause skin sensitization.
Remarks	:	Based on data from similar materials

Fluthiacet-methyl:

Result	:	Does not cause skin sensitization.

Germ cell mutagenicity

Not classified based on available information.

Components:

Solvent naphtha (petroleum), light arom.:

Genotoxicity in vitro : Test Type: in vitro DNA damage and/or repair study
Test system: Chinese hamster ovary cells
Metabolic activation: with and without metabolic activation
Result: negative

Test Type: reverse mutation assay
Metabolic activation: with and without metabolic activation
Result: negative

Genotoxicity in vivo : Test Type: Bone marrow chromosome aberration
Species: Rat (male and female)
Application Route: Inhalation
Result: negative

calcium dodecylbenzenesulphonate:

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: chromosome aberration assay
Species: Rat (male and female)
Application Route: Oral
Exposure time: 90 d
Result: negative
Remarks: Based on data from similar materials

Germ cell mutagenicity - Assessment : Weight of evidence does not support classification as a germ cell mutagen.

Solvent naphtha (petroleum), heavy arom.:

Genotoxicity in vitro : Test Type: reverse mutation assay
Result: negative
Remarks: Based on data from similar materials

Genotoxicity in vivo : Test Type: sister chromatid exchange assay
Species: Mouse
Application Route: Intraperitoneal injection
Result: negative
Remarks: Based on data from similar materials

Fluthiacet-methyl:

Genotoxicity in vivo : Remarks: In vivo tests did not show mutagenic effects

Carcinogenicity

Not classified based on available information.

Components:

calcium dodecylbenzenesulphonate:

Species : Rat, male and female
Application Route : Oral

Exposure time	:	720 d
NOAEL	:	250 mg/kg body weight
Result	:	negative
Remarks	:	Based on data from similar materials

Carcinogenicity - Assessment	:	Weight of evidence does not support classification as a carcinogen

Solvent naphtha (petroleum), heavy arom.:

Species	:	Mouse
Application Route	:	Dermal
Exposure time	:	104 weeks
Result	:	negative
Remarks	:	Based on data from similar materials

Fluthiacet-methyl:

Carcinogenicity - Assessment	:	Overall weight of evidence indicates that the substance is not carcinogenic

Reproductive toxicity

Not classified based on available information.

Components:

Solvent naphtha (petroleum), light arom.:

Effects on fertility	:	Test Type: Three-generation study Species: Rat Application Route: inhalation (vapor) Fertility: NOAEC Mating/Fertility: 7.5 mg/l Result: negative Remarks: Based on data from similar materials
Effects on fetal development	:	Species: Mouse Application Route: inhalation (vapor) General Toxicity Maternal: LOAEC: 500 part per million Symptoms: Maternal effects.

calcium dodecylbenzenesulphonate:

Effects on fertility	:	Test Type: Fertility/early embryonic development Species: Rat, male and female Application Route: Ingestion General Toxicity Parent: NOAEL: 400 mg/kg body weight Method: OECD Test Guideline 422 Result: negative
Effects on fetal development	:	Test Type: reproductive and developmental toxicity study Species: Rat Application Route: Ingestion General Toxicity Maternal: NOAEL: 300 mg/kg body weight Developmental Toxicity: NOAEL: 600 mg/kg body weight

Method: OECD Test Guideline 422
Result: negative

Reproductive toxicity - Assessment : Weight of evidence does not support classification for reproductive toxicity

Solvent naphtha (petroleum), heavy arom.:

Effects on fertility : Test Type: Fertility
Species: Rat, male and female
Application Route: Oral
Method: OECD Test Guideline 415
Result: negative
Remarks: Based on data from similar materials

Effects on fetal development : Test Type: reproductive and developmental toxicity study
Species: Rat
Application Route: Oral
Method: OECD Test Guideline 414
Result: negative
Remarks: Based on data from similar materials

Fluthiacet-methyl:

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

STOT-single exposure

May cause respiratory irritation.
May cause drowsiness or dizziness.

Components:

Solvent naphtha (petroleum), light arom.:

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

Solvent naphtha (petroleum), heavy arom.:

Assessment : May cause drowsiness or dizziness.

STOT-repeated exposure

Not classified based on available information.

Components:

Solvent naphtha (petroleum), light arom.:

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

Repeated dose toxicity

Components:

Solvent naphtha (petroleum), light arom.:

Species	:	Rat, male and female
	:	0.8 - 0.9 mg/l
Application Route	:	Inhalation
Test atmosphere	:	vapor
Remarks	:	Based on data from similar materials

Species	:	Rat, male
NOAEL	:	600 mg/kg
Application Route	:	Oral
Remarks	:	Based on data from similar materials

calcium dodecylbenzenesulphonate:

Species	:	Rat, male and female
NOAEL	:	85 mg/kg
LOAEL	:	145 mg/kg
Application Route	:	Oral
Exposure time	:	9 months
Remarks	:	Based on data from similar materials

Species	:	Rat, male and female
NOAEL	:	100 mg/kg
LOAEL	:	200 mg/kg
Application Route	:	Oral
Exposure time	:	28 d
Method	:	OECD Test Guideline 422
Remarks	:	Based on data from similar materials

Species	:	Rat, male
LOAEL	:	286 mg/kg
Application Route	:	Skin contact
Exposure time	:	15 d
Remarks	:	Based on data from similar materials

Solvent naphtha (petroleum), heavy arom.:

Species	:	Rat, male and female
NOAEL	:	750 mg/kg
Application Route	:	Oral - gavage
Exposure time	:	90 day
Remarks	:	Based on data from similar materials

Species	:	Rat, male and female
NOAEL	:	1 mg/l
LOAEL	:	0.5 mg/l
Application Route	:	inhalation (vapor)
Exposure time	:	90 day
Symptoms	:	Alpha-2u-globulin nephropathy

Fluthiacet-methyl:

Species	:	Rat, male and female
NOAEL	:	6.19 - 6.8 mg/kg
LOAEL	:	216 - 249 mg/kg
Application Route	:	Oral
Exposure time	:	90 d

Aspiration toxicity

May be fatal if swallowed and enters airways.

Components:

Solvent naphtha (petroleum), light arom.:

May be fatal if swallowed and enters airways.

Solvent naphtha (petroleum), heavy arom.:

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.

Fluthiacet-methyl:

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

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.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

Solvent naphtha (petroleum), light arom.:

Toxicity to fish : NOEC (Oncorhynchus mykiss (rainbow trout)): 4.5 mg/l
Exposure time: 96 h
Test Type: semi-static test
Method: OECD Test Guideline 203
Remarks: Based on data from similar materials

LL50 (Pimephales promelas (fathead minnow)): 8.2 mg/l
Exposure time: 96 h
Test Type: semi-static test
Remarks: Based on data from similar materials

Toxicity to daphnia and other aquatic invertebrates : EL50 (Daphnia magna (Water flea)): 4.5 mg/l
Exposure time: 48 h
Test Type: static test
Method: OECD Test Guideline 202
Remarks: Based on data from similar materials

Toxicity to algae/aquatic plants : EL50 (Pseudokirchneriella subcapitata (microalgae)): 3.1 mg/l
Exposure time: 72 h
Test Type: static test

Method: OECD Test Guideline 201
Remarks: Based on data from similar materials

Toxicity to microorganisms : EC50 (Tetrahymena pyriformis): 15.41 mg/l
Exposure time: 40 h
Test Type: Growth inhibition
Remarks: The value is given based on a SAR/AAR approach using OECD Toolbox, DEREK, VEGA QSAR models (CAESAR models), etc.

Toxicity to fish (Chronic toxicity) : NOELR: 2.6 mg/l
Exposure time: 14 d
Species: Pimephales promelas (fathead minnow)
Method: OECD Test Guideline 204
Remarks: Based on data from similar materials

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOELR: 2.6 mg/l
Exposure time: 21 d
Species: Daphnia magna (Water flea)
Method: OECD Test Guideline 211

calcium dodecylbenzenesulphonate:

Toxicity to fish : LC50 (Cyprinus carpio (Carp)): 2.8 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 203
Remarks: No toxicity at the limit of solubility.

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 2.5 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202
Remarks: No toxicity at the limit of solubility.

Toxicity to algae/aquatic plants : NOEC (Pseudokirchneriella subcapitata (green algae)): 7.9 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201
Remarks: Based on data from similar materials
No toxicity at the limit of solubility.

EC50 (Pseudokirchneriella subcapitata (green algae)): 65.4 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201
Remarks: Based on data from similar materials
No toxicity at the limit of solubility.

Toxicity to microorganisms : EC50 (activated sludge): 500 mg/l
Exposure time: 3 h
Method: OECD Test Guideline 209

Toxicity to fish (Chronic toxicity) : NOEC: 0.23 mg/l
Exposure time: 30 d
Species: Fish
Method: QSAR

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC: 0.253 mg/l Exposure time: 30 d Species: Daphnia Method: QSAR
Toxicity to soil dwelling organisms	:	LC50: 1,000 mg/kg Exposure time: 14 d Species: Eisenia fetida (earthworms) Method: OECD Test Guideline 207
Toxicity to terrestrial organisms	:	LD50: 1,356 mg/kg Exposure time: 14 d Species: Colinus virginianus (Bobwhite quail) Method: OECD Test Guideline 223

Quizalofop-P-ethyl:

Toxicity to fish	:	LC50 (Oncorhynchus mykiss (rainbow trout)): > 0.5 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia): 0.29 mg/l Exposure time: 48 h Remarks: Based on data from similar materials
M-Factor (Acute aquatic toxicity)	:	1
M-Factor (Chronic aquatic toxicity)	:	1
Toxicity to soil dwelling organisms	:	LC50: > 1,000 mg/kg Species: worms
Toxicity to terrestrial organisms	:	LD50: > 2,000 mg/kg Species: Colinus virginianus (Bobwhite quail) LD50: > 2,000 mg/kg Species: Anas platyrhynchos (Mallard duck)

Solvent naphtha (petroleum), heavy arom.:

Toxicity to fish	:	LL50 (Oncorhynchus mykiss (rainbow trout)): 2 - 5 mg/l Exposure time: 96 h Method: OECD Test Guideline 203 Remarks: water accommodated fractions (WAF)
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 Remarks: water accommodated fractions (WAF)
Toxicity to algae/aquatic plants	:	EL50 (Pseudokirchneriella subcapitata (green algae)): > 1 - 3 mg/l Exposure time: 72 h Method: OECD Test Guideline 201

Remarks: water accommodated fractions (WAF)

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

Fluthiacet-methyl:

Toxicity to fish : LC50 (Fish): 0.043 mg/l
Exposure time: 96 h
Method: No information available.

Toxicity to daphnia and other aquatic invertebrates : EC50 (Crustaceans): 2.3 mg/l
Exposure time: 48 h
Method: No information available.

Toxicity to algae/aquatic plants : EC50 (algae): 0.00251 mg/l
Exposure time: 72 h

M-Factor (Acute aquatic toxicity) : 100

Toxicity to fish (Chronic toxicity) : NOEC: 0.0027 mg/l
Exposure time: 21 d
Species: Fish
Method: No data available

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: 0.035 mg/l
Exposure time: 21 d
Species: Crustaceans
Method: No data available

M-Factor (Chronic aquatic toxicity) : 100

Persistence and degradability

Components:

Solvent naphtha (petroleum), light arom.:

Biodegradability : Concentration: 49.2 mg/l
Result: Inherently biodegradable.
Biodegradation: 77.05 %
Exposure time: 28 d
Method: OECD Test Guideline 301F

calcium dodecylbenzenesulphonate:

Biodegradability : Result: Readily biodegradable.
Method: OECD Test Guideline 301E

Solvent naphtha (petroleum), heavy arom.:

Biodegradability : Result: Inherently biodegradable.
Biodegradation: 58.6 %

Exposure time: 28 d
Method: OECD Test Guideline 301F
Remarks: Based on data from similar materials

Fluthiacet-methyl:

Biodegradability : Result: Not readily biodegradable.

Bioaccumulative potential

Components:

calcium dodecylbenzenesulphonate:

Bioaccumulation : Species: Fish
Bioconcentration factor (BCF): 70.79
Method: QSAR

Partition coefficient: n-octanol/water : log Pow: 4.77 (25 °C)

Quizalofop-P-ethyl:

Partition coefficient: n-octanol/water : log Pow: 4.66 (22 - 24 °C)

Solvent naphtha (petroleum), heavy arom.:

Partition coefficient: n-octanol/water : log Pow: 1.99 - 18.02
Method: QSAR

Fluthiacet-methyl:

Bioaccumulation : Remarks: Does not bioaccumulate.

Mobility in soil

Components:

Fluthiacet-methyl:

Distribution among environmental compartments : Remarks: Slightly mobile in soils

Other adverse effects

Product:

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.

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.
Do not burn, or use a cutting torch on, the empty drum.

14. TRANSPORT INFORMATION

International Regulations

UNRTDG

UN number	:	UN 1993
Proper shipping name	:	FLAMMABLE LIQUID, N.O.S. (Naptha Aromatic)
Class	:	3
Packing group	:	III
Labels	:	3

IATA-DGR

UN/ID No.	:	UN 1993
Proper shipping name	:	Flammable liquid, n.o.s. (Naptha Aromatic)
Class	:	3
Packing group	:	III
Labels	:	Flammable Liquids
Packing instruction (cargo aircraft)	:	366
Packing instruction (passenger aircraft)	:	355

IMDG-Code

UN number	:	UN 1993
Proper shipping name	:	FLAMMABLE LIQUID, N.O.S. (Naptha Aromatic, Fluthiacet-methyl, Quizalofop-P-ethyl)
Class	:	3
Packing group	:	III
Labels	:	3
EmS Code	:	F-E, S-E
Marine pollutant	:	yes

Transport in bulk according to IMO instruments

Not applicable for product as supplied.

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.

15. REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture

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

TCSI	:	Not in compliance with the inventory
TSCA	:	Product contains substance(s) not listed on TSCA inventory.
AICS	:	Not in compliance with the inventory
DSL	:	This product contains the following components that are not on the Canadian DSL nor NDSL. FTM TECHNICAL (JL) Quizalofop-P-ethyl
ENCS	:	Not in compliance with the inventory
ISHL	:	Not in compliance with the inventory
KECI	:	Not in compliance with the inventory
PICCS	:	Not in compliance with the inventory
IECSC	:	Not in compliance with the inventory
NZIoC	:	Not in compliance with the inventory

16. OTHER INFORMATION

Date format	:	dd.mm.yyyy

Full text of other abbreviations

ACGIH	:	USA. ACGIH Threshold Limit Values (TLV)
IN OEL	:	India. Permissible levels of certain chemical substances in work environment.
ACGIH / TWA	:	8-hour, time-weighted average
IN OEL / TWA	:	Time-Weighted Average Concentration (TWA) (8 hrs.)
IN OEL / STEL	:	Short-term exposure Limit STEL (15 min)

AICS - Australian Inventory of Chemical Substances; AIIC - Australian Inventory of Industrial Chemicals; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; 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; IARC - In-

ternational 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; n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; 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; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; 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; WHMIS - Workplace Hazardous Materials Information System

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