

SAFETY DATA SHEET

according to the OSHA Hazard Communication Standard



Affinity® TankMix Herbicide (with TotalSol® soluble granules)

Version	Revision Date:	SDS Number:	Date of last issue: -
1.1	08/30/2024	50000041	Date of first issue: 02/01/2018

SECTION 1. IDENTIFICATION

Product identifier

Product name Affinity® TankMix Herbicide (with TotalSol® soluble granules)

Other means of identification

Product code 50000041

Recommended use of the chemical and restrictions on use

Recommended use Herbicide

Restrictions on use Use as recommended by the label.

Manufacturer or supplier's details

Manufacturer FMC Corporation
2929 WALNUT ST
PHILADELPHIA PA 19104
USA
(215) 299-6000
SDS-Info@fmc.com

Supplier Address FMC Corporation
2929 Walnut Street
Philadelphia PA 19104
USA

Emergency telephone

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

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

SECTION 2. HAZARDS IDENTIFICATION

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

Not a hazardous substance or mixture.

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GHS label elements

No hazard pictogram, no signal word, no hazard statement(s), no precautionary statement(s) required.

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)
thifensulfuron-methyl (ISO)	79277-27-3	40
tribenuron-methyl (ISO)	101200-48-0	10
sodium carbonate	497-19-8	$\geq 10 - < 30$
Phosphoric acid, trisodium salt, decahydrate	10101-89-0	$\geq 1 - < 5$

Actual concentration or concentration range is withheld as a trade secret

SECTION 4. FIRST AID MEASURES

- General advice : Move out of dangerous area.
Show this material safety data sheet to the doctor in attendance.
Do not leave the victim unattended.
- If inhaled : Remove to fresh air.
If unconscious, place in recovery position and seek medical advice.
If experiencing any discomfort, immediately remove from exposure. Light cases: Keep person under surveillance. Get medical attention immediately if symptoms develop. Serious cases: Get medical attention immediately or call for an ambulance.
- In case of skin contact : If on clothes, remove clothes.
If on skin, rinse well with water.
Wash off with soap and plenty of water.
Get medical attention immediately if irritation develops and persists.
- In case of eye contact : Immediately flush eye(s) with plenty of water.
Remove contact lenses.
Protect unharmed eye.
Keep eye wide open while rinsing.
If eye irritation persists, consult a specialist.

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| If swallowed | : Clean mouth with water and drink afterwards plenty of water.
Do not induce vomiting without medical advice.
Keep respiratory tract clear.
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 | : None known. |
| 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.
Immediate medical attention is required in case of ingestion. |

SECTION 5. FIRE-FIGHTING MEASURES

- | | |
|--|---|
| Suitable extinguishing media | : Dry chemical, CO2, water spray or regular foam.
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. |
| Unsuitable extinguishing media | : High volume water jet
Do not spread spilled material with high-pressure water streams. |
| Specific hazards during fire fighting | : Do not allow run-off from fire fighting to enter drains or water courses. |
| Hazardous combustion products | : Fire may produce irritating, corrosive and/or toxic gases.
Nitrogen oxides (NOx)
Sulfur oxides
Carbon oxides
Hydrogen cyanide
phosphorus oxides |
| Further information | : 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

- | | |
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| Personal precautions, protec- | : Evacuate personnel to safe areas. |
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tive equipment and emergency procedures

Do not touch or walk through the spilled material.
If it can be safely done, stop the leak.
Ensure adequate ventilation.
Use personal protective equipment.
Avoid dust formation.
Avoid breathing dust.
Never return spills in original containers for re-use.
Mark the contaminated area with signs and prevent access to unauthorized personnel.
Only qualified personnel equipped with suitable protective equipment may intervene.

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

: Keep in suitable, closed containers for disposal.

SECTION 7. HANDLING AND STORAGE

Advice on protection against fire and explosion

: Avoid dust formation.
Provide appropriate exhaust ventilation at places where dust is formed.

Advice on safe handling

: Avoid formation of respirable particles.
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.
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.
Electrical installations / working materials must comply with the technological safety standards.

Further information on storage conditions

: The product is stable under normal conditions of warehouse storage.
Store in closed, labelled containers. The storage room should

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be constructed of incombustible material, closed, dry, ventilated and with impermeable floor, without access of unauthorised persons or children. The room should only be used for storage of chemicals. Food, drink, feed and seed should not be present. A hand wash station should be available.

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

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

Personal protective equipment

Respiratory protection	: General and local exhaust ventilation is recommended to maintain vapor exposures below recommended limits. Where concentrations are above recommended limits or are unknown, appropriate respiratory protection should be worn. Follow OSHA respirator regulations (29 CFR 1910.134) and use NIOSH/MSHA approved respirators. Protection provided by air purifying respirators against exposure to any hazardous chemical is limited. Use a positive pressure air supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown, or any other circumstance where air purifying respirators may not provide adequate protection.
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	: Dust impervious protective suit 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. Wear suitable protective equipment. When using do not eat, drink or smoke. In the context of professional plant protection use as recommended, the end user must refer to the label and the instruc-

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tions for use.

Hygiene measures : 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

Appearance	: granular
Form	: granular
Color	: light brown
Odor	: slight
pH	: 8.6 (68 °F / 20 °C) Concentration: 10 g/l 1 % Method: CIPAC MT 75
Flammability (solid, gas)	: Not highly flammable, may be ignitable
Self-ignition	: Not available for this mixture.
Relative vapor density	: Not applicable
Relative density	: Not applicable
Density	: No data available
Bulk density	: 688 kg/m3 packed
Solubility(ies)	
Water solubility	: soluble
Solubility in other solvents	: Not available for this mixture.
Autoignition temperature	: No data available
Viscosity	
Viscosity, dynamic	: No data available
Explosive properties	: Not explosive

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Oxidizing properties : The product is not oxidizing.

Minimum ignition energy : > 1,000 mJ

Particle size : No data available

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.
Dust may form explosive mixture in air.

Conditions to avoid : Heat, flames and sparks.
Heating of the mixture may evolve harmful and irritant vapours.

Incompatible materials : Avoid strong acids, bases, and oxidizers.

Hazardous decomposition products : Stable under recommended storage conditions.

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

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

Product:

Acute oral toxicity : LD50 (Rat, female): > 5,000 mg/kg
Method: Fixed Dose Method
GLP: yes
Remarks: Information given is based on data obtained from similar product.
Information source: Internal study report

Acute inhalation toxicity : LC50 (Rat): > 5.0 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist

Acute dermal toxicity : LD50 (Rat): > 5,000 mg/kg
Method: OECD Test Guideline 402
GLP: yes
Remarks: Information given is based on data obtained from similar product.
Information source: Internal study report

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Components:

thifensulfuron-methyl (ISO):

Acute oral toxicity	: LD50 (Rat): > 5,000 mg/kg
Acute inhalation toxicity	: LC50 (Rat): > 7.9 mg/l Exposure time: 4 h Test atmosphere: dust/mist
Acute dermal toxicity	: LD50 (Rat): > 2,000 mg/kg

tribenuron-methyl (ISO):

Acute oral toxicity	: LD50: > 5,000 mg/kg Method: OECD Test Guideline 425
Acute inhalation toxicity	: LC50 (Rat): > 5.14 mg/l Exposure time: 4 h Test atmosphere: dust/mist Method: OECD Test Guideline 403
Acute dermal toxicity	: LD50 (Rat): > 5,000 mg/kg Method: OECD Test Guideline 402

sodium carbonate:

Acute oral toxicity	: LD50 (Rat, male and female): 2,800 mg/kg
Acute inhalation toxicity	: LC50 (Rat, male): 2.3 mg/l Exposure time: 2 h Test atmosphere: dust/mist
Acute dermal toxicity	: LD50 (Rabbit): > 2,000 mg/kg Target Organs: Skin Symptoms: Erythema

Phosphoric acid, trisodium salt, dodecahydrate:

Acute oral toxicity	: LD50 (Rat, female): > 2,000 mg/kg Method: OECD Test Guideline 420 Remarks: no mortality
Acute inhalation toxicity	: LC50 (Rat, male and female): > 0.83 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 Remarks: Based on data from similar materials no mortality
Acute dermal toxicity	: LD50 (Rat, male and female): > 2,000 mg/kg

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Method: OECD Test Guideline 402
Remarks: Based on data from similar materials
no mortality

Skin corrosion/irritation

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

Product:

Species	:	Rabbit
Exposure time	:	72 h
Assessment	:	Not classified as irritant
Method	:	OECD Test Guideline 404
Result	:	No skin irritation
GLP	:	yes
Remarks	:	Information given is based on data obtained from similar product. Information source: Internal study report

Components:

thifensulfuron-methyl (ISO):

Assessment	:	No skin irritation
Method	:	OECD Test Guideline 404
Remarks	:	Minimal effects that do not meet the threshold for classification.

tribenuron-methyl (ISO):

Species	:	Rabbit
Assessment	:	Not classified as irritant
Method	:	OECD Test Guideline 404
Remarks	:	May cause mild irritation. Based on available data, the classification criteria are not met.

sodium carbonate:

Species	:	Rabbit
Exposure time	:	4 h
Method	:	OECD Test Guideline 404
Result	:	No skin irritation

Phosphoric acid, trisodium salt, dodecahydrate:

Species	:	Rabbit
Result	:	Skin irritation

Serious eye damage/eye irritation

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

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Product:

Species	:	Rabbit
Result	:	No eye irritation
Exposure time	:	72 h
Assessment	:	Not classified as irritant
Method	:	OECD Test Guideline 405
GLP	:	yes
Remarks	:	Information given is based on data obtained from similar product. Information source: Internal study report

Components:

thifensulfuron-methyl (ISO):

Result	:	No eye irritation
Method	:	OECD Test Guideline 405

tribenuron-methyl (ISO):

Species	:	Rabbit
Assessment	:	No eye irritation
Method	:	OECD Test Guideline 405
Remarks	:	May cause mild irritation. Based on available data, the classification criteria are not met.

sodium carbonate:

Species	:	Rabbit
Result	:	Irritation to eyes, reversing within 21 days

Phosphoric acid, trisodium salt, dodecahydrate:

Species	:	Rabbit
Result	:	Irritation to eyes, reversing within 21 days
Method	:	EPA OTS 798.4500

Respiratory or skin sensitization

Skin sensitization

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

Respiratory sensitization

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

Product:

Test Type	:	Local lymph node test
Species	:	Mouse
Assessment	:	Not a skin sensitizer.
Method	:	OECD Test Guideline 429
Result	:	Not a skin sensitizer.
Remarks	:	Information source: Internal study report

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Components:

thifensulfuron-methyl (ISO):

Species	:	Guinea pig
Method	:	OECD Test Guideline 429
Result	:	Does not cause skin sensitization.

tribenuron-methyl (ISO):

Test Type	:	Maximization Test
Species	:	Guinea pig
Assessment	:	May cause sensitization by skin contact.
Method	:	OECD Test Guideline 406
Result	:	Causes skin sensitization.

Phosphoric acid, trisodium salt, dodecahydrate:

Test Type	:	Local lymph node assay (LLNA)
Species	:	Mouse
Method	:	OECD Test Guideline 429
Result	:	Does not cause skin sensitization.
Remarks	:	Based on data from similar materials

Germ cell mutagenicity

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

Components:

thifensulfuron-methyl (ISO):

Genotoxicity in vitro	:	Test system: Chinese hamster ovary cells Method: OECD Test Guideline 476 Result: negative Remarks: In vitro tests did not show mutagenic effects
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Germ cell mutagenicity - Assessment	:	Weight of evidence does not support classification as a germ cell mutagen.
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tribenuron-methyl (ISO):

Germ cell mutagenicity - Assessment	:	Did not show mutagenic effects in animal experiments.
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sodium carbonate:

Genotoxicity in vitro	:	Test Type: reverse mutation assay Method: Mutagenicity (Salmonella typhimurium - reverse mutation assay) Result: negative Remarks: Based on data from similar materials
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Germ cell mutagenicity - Assessment : Weight of evidence does not support classification as a germ cell mutagen.

Phosphoric acid, trisodium salt, dodecahydrate:

Genotoxicity in vitro : Test Type: gene mutation test
Method: OECD Test Guideline 490
Result: negative
Remarks: Based on data from similar materials

Test Type: Micronucleus test
Method: OECD Test Guideline 487
Result: negative

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

Carcinogenicity

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

Components:

thifensulfuron-methyl (ISO):

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

tribenuron-methyl (ISO):

Remarks : No significant adverse effects were reported

Carcinogenicity - Assessment : Did not show carcinogenic effects in animal experiments.

IARC No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

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 No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

Reproductive toxicity

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

Components:

thifensulfuron-methyl (ISO):

Reproductive toxicity - Assessment : Did not show teratogenic effects in animal experiments.

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tribenuron-methyl (ISO):

Reproductive toxicity - Assessment : No toxicity to reproduction
Animal testing did not show any effects on fetal development.,
Did not show teratogenic effects in animal experiments.

sodium carbonate:

Effects on fetal development : Species: Rat
Application Route: Oral
Dose: 2.45, 11.4, 52.9, 245 milligram per kilogram
Duration of Single Treatment: 6 - 15 d
General Toxicity Maternal: NOAEL: > 245 mg/kg body weight
Teratogenicity: NOAEL: > 245 mg/kg body weight
Result: negative

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

Phosphoric acid, trisodium salt, dodecahydrate:

Effects on fertility : Species: Rat, male and female
Application Route: Oral
Dose: 1000 mg/kg bw/day
General Toxicity Parent: NOAEL: 1,000 mg/kg bw/day
General Toxicity F1: NOAEL: 1,000 mg/kg bw/day
Method: OECD Test Guideline 422
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
Dose: 4.1, 19, 88.3, 410 mg/kg bw/day
Duration of Single Treatment: 20 d
General Toxicity Maternal: NOAEL: > 410 mg/kg bw/day
Embryo-fetal toxicity.: NOAEL: > 410 mg/kg bw/day
Result: negative
Remarks: Based on data from similar materials

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

STOT-single exposure

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

Components:

tribenuron-methyl (ISO):

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

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Phosphoric acid, trisodium salt, dodecahydrate:

Assessment : May cause respiratory irritation.

STOT-repeated exposure

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

Components:

tribenuron-methyl (ISO):

Target Organs : Thyroid, Nervous system
Assessment : May cause damage to organs through prolonged or repeated exposure.

sodium carbonate:

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

Repeated dose toxicity

Components:

thifensulfuron-methyl (ISO):

Species : Rat
LOAEL : ca. 200 mg/kg
Exposure time : 90 d
Target Organs : No specific target organs noted
Symptoms : Reduced body weight

tribenuron-methyl (ISO):

Species : Rabbit
LOAEL : 80 mg/kg
Target Organs : Thyroid, Nervous system
Assessment : The substance or mixture is classified as specific target organ toxicant, repeated exposure, category 2.
Remarks : Increased mortality or reduced survival

sodium carbonate:

Species : Rat, male and female
NOAEL : > 0.01 mg/kg
Application Route : inhalation (dust/mist/fume)
Test atmosphere : dust/mist

Phosphoric acid, trisodium salt, dodecahydrate:

Species : Dog, female
NOAEL : 492.77 mg/kg bw/day
LOAEL : 1433.56 mg/kg bw/day
Application Route : Oral - feed

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Exposure time : 90 d
Dose : 129.31, 492.77, 1433.56 mg/kg bw/day
Target Organs : Kidney
Remarks : Based on data from similar materials

Species : Dog, male
NOAEL : 322.88 mg/kg bw/day
LOAEL : 1107.12 mg/kg bw/day
Application Route : Oral - feed
Exposure time : 90 d
Dose : 94.23, 322.88, 1107.12 mg/kg bw/day
Target Organs : Kidney
Remarks : Based on data from similar materials

Aspiration toxicity

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

Components:

tribenuron-methyl (ISO):

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

Further information

Product:

Remarks : Information presented in this Section conforms to the requirements of the Occupational Safety and Health Administration (OSHA) Hazard Communication Standard of 2012. See Section 15 for applicable information conforming to the requirements of the Federal Insecticide Fungicide and Rodenticide Act (FIFRA), as required by the US Environmental Protection Agency (EPA), or by state Regulatory Agencies.

Remarks : No data available

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

thifensulfuron-methyl (ISO):

Toxicity to fish : LC50 (Salmo gairdneri): 100 mg/l
Exposure time: 96 h

LC50 (Oncorhynchus mykiss (rainbow trout)): > 250 mg/l
Exposure time: 96 h

Toxicity to daphnia and other : EC50 (Daphnia magna (Water flea)): 470 mg/l

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aquatic invertebrates	Exposure time: 48 h
Toxicity to algae/aquatic plants	: IC50 (green algae): 0.0159 mg/l Exposure time: 72 h ErC50 (Raphidocelis subcapitata (freshwater green alga)): 1.4 mg/l Exposure time: 72 h EC50 (Lemna minor (duckweed)): 1.3 µg/l
Toxicity to fish (Chronic toxicity)	: NOEC (Salmo gairdneri): 250 mg/l Exposure time: 28 d NOEC (Oncorhynchus mykiss (rainbow trout)): 10.6 mg/l Exposure time: 21 d
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	: NOEC (Daphnia magna (Water flea)): 100 mg/l Exposure time: 21 d
Toxicity to soil dwelling organisms	: LC50 (Eisenia fetida (earthworms)): > 2,000 mg/kg
Toxicity to terrestrial organisms	: LD50 (Anas platyrhynchos (Mallard duck)): > 2,510 mg/kg LD50 (Anas platyrhynchos (Mallard duck)): > 5,620 ppm Remarks: Dietary LD50 (Colinus virginianus (Bobwhite quail)): > 5,620 ppm LD50 (Apis mellifera (bees)): > 7.1 µg/bee End point: Acute oral toxicity LD50 (Apis mellifera (bees)): > 100 µg/bee End point: Acute contact toxicity

Ecotoxicology Assessment

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

tribenuron-methyl (ISO):

Toxicity to fish	: LC50 (Oncorhynchus mykiss (rainbow trout)): 738 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates	: EC50 (Crustaceans): > 320 mg/l Exposure time: 48 h

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		EC50 (Daphnia magna (Water flea)): > 894 mg/l Exposure time: 48 h
Toxicity to algae/aquatic plants	:	EC50 (Pseudokirchneriella subcapitata (green algae)): 0.0208 mg/l Exposure time: 120 h
		EC50 (Lemna gibba (duckweed)): 0.00424 mg/l Exposure time: 14 d
Toxicity to fish (Chronic toxicity)	:	NOEC (Cyprinodon variegatus (sheepshead minnow)): 114 mg/l Exposure time: 21 d Method: OECD Test Guideline 211
		NOEC (Oncorhynchus mykiss (rainbow trout)): 560 mg/l Exposure time: 21 d
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC (Daphnia magna (Water flea)): 41 mg/l Exposure time: 21 d
Toxicity to soil dwelling organisms	:	NOEC (Eisenia fetida (earthworms)): 3.2 mg/kg Exposure time: 56 d
Toxicity to terrestrial organisms	:	LD50 (Colinus virginianus (Bobwhite quail)): > 2,250 mg/kg
		LD50 (Colinus virginianus (Bobwhite quail)): > 5,620 ppm Remarks: Dietary
		LD50 (Anas platyrhynchos (Mallard duck)): > 5,620 ppm Remarks: Dietary
		LD50 (Apis mellifera (bees)): > 98.4 µg/bee Exposure time: 48 h End point: Acute contact toxicity
		LD50 (Apis mellifera (bees)): > 9.1 µg/bee Exposure time: 48 h End point: Acute oral toxicity

Ecotoxicology Assessment

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

sodium carbonate:

Toxicity to fish	:	LC50 (Lepomis macrochirus (Bluegill sunfish)): 300 mg/l Exposure time: 96 h
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Test Type: static test

Toxicity to daphnia and other aquatic invertebrates : EC50 (Ceriodaphnia (water flea)): 200 mg/l
Exposure time: 48 h
Test Type: semi-static test

Phosphoric acid, trisodium salt, dodecahydrate:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): > 100 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203
Remarks: Based on data from similar materials

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 100 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202
Remarks: Based on data from similar materials

Toxicity to algae/aquatic plants : EC50 (Desmodesmus subspicatus (green algae)): > 100 mg/l
Exposure time: 72 h
Method: EU Method C3
Remarks: Based on data from similar materials

NOEC (Desmodesmus subspicatus (green algae)): > 100 mg/l
Exposure time: 72 h
Method: EU Method C3
Remarks: Based on data from similar materials

Toxicity to microorganisms : EC50 (activated sludge): 1,000 mg/l
Exposure time: 3 h
Method: OECD Test Guideline 209
Remarks: Based on data from similar materials

NOEC (activated sludge): 1,000 mg/l
Exposure time: 3 h
Method: OECD Test Guideline 209
Remarks: Based on data from similar materials

Toxicity to soil dwelling organisms : LC50 (Eisenia fetida (earthworms)): > 3,500 mg/kg
Exposure time: 14 d
Method: OECD Test Guideline 207
Remarks: Based on data from similar materials

Persistence and degradability

Components:

thifensulfuron-methyl (ISO):

Biodegradability : Remarks: Not readily biodegradable.
Primary degradation half-lives vary with circumstances, from a few days to a few weeks in aerobic water and soil.

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tribenuron-methyl (ISO):

Biodegradability : Biodegradation: 29.4 %
Exposure time: 28 d

sodium carbonate:

Biodegradability : Remarks: The methods for determining biodegradability are not applicable to inorganic substances.

Bioaccumulative potential

Components:

thifensulfuron-methyl (ISO):

Bioaccumulation : Bioconcentration factor (BCF): 1
Remarks: Does not bioaccumulate.

tribenuron-methyl (ISO):

Bioaccumulation : Bioconcentration factor (BCF): < 1
Remarks: Does not bioaccumulate.

Partition coefficient: n-octanol/water : log Pow: -0.38

sodium carbonate:

Bioaccumulation : Remarks: Does not bioaccumulate.

Mobility in soil

Components:

thifensulfuron-methyl (ISO):

Distribution among environmental compartments : Koc: 28.3, log Koc: 1.45
Remarks: Highly mobile in soils

Stability in soil :

tribenuron-methyl (ISO):

Distribution among environmental compartments : Remarks: Under normal conditions the active ingredient/s is/are of high to intermediate mobility in soil. There is a potential for leaching to groundwater.

Other adverse effects

Product:

Ozone-Depletion Potential : Regulation: 40 CFR Protection of Environment; Part 82 Pro-

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tection 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.

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.
Do not re-use empty containers.
Packaging that is not properly emptied must be disposed of as the unused product.
Empty containers should be taken to an approved waste handling site for recycling or disposal.

SECTION 14. TRANSPORT INFORMATION

International Regulations

UNRTDG

UN number : UN 3077
Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
(Thifensulfuron-methyl, Tribenuron-methyl)
Class : 9
Subsidiary risk : ENVIRONM.
Packing group : III
Labels : 9 (ENVIRONM.)
Environmentally hazardous : yes

IATA-DGR

UN/ID No. : UN 3077
Proper shipping name : Environmentally hazardous substance, solid, n.o.s.
(Thifensulfuron-methyl, Tribenuron-methyl)
Class : 9
Packing group : III
Labels : Miscellaneous
Packing instruction (cargo) : 956

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aircraft)
Packing instruction (passenger aircraft) : 956
Environmentally hazardous : yes

IMDG-Code

UN number : UN 3077
Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
(Thifensulfuron-methyl, Tribenuron-methyl)
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

Not regulated as a dangerous good

Remarks : Shipment by ground under DOT is non-regulated; however it may be shipped per the applicable hazard classification to facilitate multi-modal transport involving ICAO (IATA) or IMO.

Special precautions for user

Remarks : 49CFR: no dangerous good in non-bulk packaging

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

This material does not contain any components with a CERCLA 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 : Respiratory or skin sensitization
Specific target organ toxicity (single or repeated exposure)
Serious eye damage or eye irritation

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SARA 313

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

tribenuron-methyl (ISO)	101200-48-0	>= 5 - < 10 %
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Clean Air Act

This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCM Intermediate or Final VOC's (40 CFR 60.489).

Clean Water Act

This product does not contain any Hazardous Substances listed under the U.S. CleanWater Act, Section 311, Table 116.4A.

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

Phosphoric acid, trisodium salt, dodecahydrate	10101-89-0	>= 1 - < 5 %
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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

Phosphoric acid, trisodium salt, dodecahydrate	10101-89-0
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Pennsylvania Right To Know

thifensulfuron-methyl (ISO)	79277-27-3
Lactose monohydrate	10039-26-6
sodium carbonate	497-19-8
tribenuron-methyl (ISO)	101200-48-0
Phosphoric acid, trisodium salt, dodecahydrate	10101-89-0

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 List of Hazardous Substances

Phosphoric acid, trisodium salt, dodecahydrate	10101-89-0
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The ingredients of this product are reported in the following inventories:

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TCSI	: Not 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 chemical substance(s) exempt from CEPA DSL Inventory requirements. It is regulated as a pesticide subject to Pest Control Products Act (PCPA) requirements. Read the PCPA label, authorized under the Pest Control Products Act, prior to using or handling this pest control product.
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
TECI	: Not in compliance with the inventory

TSCA list

No substances are subject to a Significant New Use Rule.

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

FIFRA information

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

CAUTION

Avoid contact with skin, eyes and clothing., Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals., Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet.

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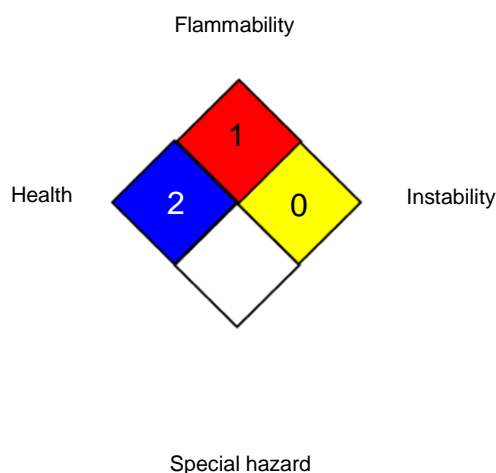
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50000041

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SECTION 16. OTHER INFORMATION

Further information

NFPA 704:



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

HMIS® IV:

HEALTH	*	2
FLAMMABILITY		1
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

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, Bioaccumu-

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lative 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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End of Material Safety Data Sheet