

Revision date: 2022/04/04 Page: 1/14 Version: 9.0 (30504390/SDS_CPA_CA/EN)

1. Identification

Product identifier used on the label

Integrity

Recommended use of the chemical and restriction on use

Recommended use*: crop protection product, herbicide

Details of the supplier of the safety data sheet

Company:

BASF Agricultural Solutions Canada Inc. 510, 28 Quarry Park Boulevard SE, Calgary, AB, T2C 5P9 CANADA

Telephone: +1 (403) 523-3000

Emergency telephone number

24 Hour Emergency Response Information

CHEMTREC: 1-800-424-9300

BASF HOTLINE: (800) 454-COPE (2673)

Other means of identification

Molecular formula: C17 H17 CI F4 N4 O5 S + C12 H18 CI N O2 S

Chemical family: herbicide

PCP# 29371/30631

Synonyms: saflufenacil + dimethenamid -P

2. Hazards Identification

According to Hazardous Products Regulations (HPR) (SOR/2015-17)

Classification of the product

Skin Corr./Irrit. 2 Skin corrosion/irritation

Eye Dam./Irrit. 1 Serious eye damage/eye irritation

Skin Sens. 1B Skin sensitization

^{*} The "Recommended use" identified for this product is provided solely to comply with a Federal requirement and is not part of the seller's published specification. The terms of this Safety Data Sheet (SDS) do not create or infer any warranty, express or implied, including by incorporation into or reference in the seller's sales agreement.

Safety Data Sheet

Integrity

Revision date: 2022/04/04 Page: 2/14 Version: 9.0 (30504390/SDS_CPA_CA/EN)

Carc. 2 Carcinogenicity
Repr. 2 (unborn child) Reproductive toxicity

STOT SE 3 (irritating to Specific target organ toxicity — single exposure

respiratory system)

Aquatic Acute 1 Hazardous to the aquatic environment - acute Aquatic Chronic 1 Hazardous to the aquatic environment - chronic

Label elements

Pictogram:



Signal Word: Danger

Hazard Statement:

H318 Causes serious eye damage.

H315 Causes skin irritation.

H317 May cause an allergic skin reaction.
 H335 May cause respiratory irritation.
 H351 Suspected of causing cancer.

H361 Suspected of damaging the unborn child.

H400 Very toxic to aquatic life.

H410 Very toxic to aquatic life with long lasting effects.

Precautionary Statements (Prevention):

P280 Wear protective gloves, protective clothing and eye protection or face

protection.

P273 Avoid release to the environment.
P201 Obtain special instructions before use.
P261 Avoid breathing mist or vapour or spray.
P271 Use only outdoors or in a well-ventilated area.

P202 Do not handle until all safety precautions have been read and

understood.

P272 Contaminated work clothing should not be allowed out of the workplace.

P264 Wash contaminated body parts thoroughly after handling.

Precautionary Statements (Response):

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove

contact lenses, if present and easy to do. Continue rinsing.

P310 Immediately call a POISON CENTER or physician. P308 + P313 IF exposed or concerned: Get medical attention.

P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for

breathing.

P302 + P352 IF ON SKIN: Wash with plenty of soap and water.

P391 Collect spillage.

P362 + P364 Take off contaminated clothing and wash it before reuse.

Precautionary Statements (Storage):

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

P405 Store locked up.

Precautionary Statements (Disposal):

P501 Dispose of contents/container in accordance with local regulations.

Revision date: 2022/04/04 Page: 3/14 Version: 9.0 (30504390/SDS_CPA_CA/EN)

3. Composition / Information on Ingredients

According to Hazardous Products Regulations (HPR) (SOR/2015-17)

saflufenacil

CAS Number: 372137-35-4 Content (W/W): 6.24 % Synonym: Saflufenacil

dimethenamid-P

CAS Number: 163515-14-8 Content (W/W): 55.04 %

Synonym: Acetamide, 2-chloro-N-(2,4-dimethyl-3-thienyl)-N-[(1S)-2-methoxy-1-

methylethyl]-

Octanamide, N,N-dimethyl-

CAS Number: 1118-92-9 Content (W/W): 10.0 - 15.0% Synonym: No data available.

Decanamide, N,N-dimethyl-

CAS Number: 14433-76-2 Content (W/W): 7.0 - 15.0% Synonym: No data available.

solvent naphtha

CAS Number: 64742-94-5 Content (W/W): 1.0 - 3.0%

Synonym: Solvent naphtha, petroleum, heavy arom.

2-ethylhexan-1-ol

CAS Number: 104-76-7 Content (W/W): 1.0 - 3.0% Synonym: 2-Ethylhexanol

Naphthalene, 2-methyl-

CAS Number: 91-57-6 Content (W/W): < 3.0% Synonym: No data available.

naphthalene

CAS Number: 91-20-3 Content (W/W): < 1.0% Synonym: Naphthalin

4. First-Aid Measures

Description of first aid measures

General advice:

First aid providers should wear personal protective equipment to prevent exposure. Remove contaminated clothing. Move person to fresh air. If person is not breathing, call 911 or ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. In case of intoxication, call a

Revision date : 2022/04/04 Page: 4/14 Version: 9.0 (30504390/SDS CPA CA/EN)

poison control center or physician for treatment advice, taking the packaging or the label of the product.

If inhaled:

Remove the affected individual into fresh air and keep the person calm. Assist in breathing if necessary.

If on skin:

Rinse skin immediately with plenty of water for 15 - 20 minutes.

If in eyes:

Hold eyes open and rinse slowly and gently with water for 15 to 20 minutes. Remove contact lenses, if present, after first 5 minutes, then continue rinsing.

If swallowed:

Immediate medical attention required. Do not give solids or liquids. Do not induce vomiting. Never induce vomiting or give anything by mouth if the victim is unconscious or having convulsions.

Most important symptoms and effects, both acute and delayed

Symptoms: Information, i.e. additional information on symptoms and effects may be included in the GHS labeling phrases available in Section 2 and in the Toxicological assessments available in Section 11., (Further) symptoms and / or effects are not known so far Hazards: Vomiting may cause aspiration pneumonia due to the ingredients.

Indication of any immediate medical attention and special treatment needed

Note to physician

Treatment:

Treat according to symptoms (decontamination, vital functions), no known specific antidote.

5. Fire-Fighting Measures

Extinguishing media

Suitable extinguishing media:

foam, dry powder, carbon dioxide, water spray

Special hazards arising from the substance or mixture

Hazards during fire-fighting:

carbon monoxide, carbon dioxide, Sulphur dioxide, nitrogen dioxide, nitrogen oxide, Hydrogen chloride, halogenated hydrocarbons, hydrogen fluoride, hydrocarbons

The substances/groups of substances mentioned can be released in case of fire.

Advice for fire-fighters

Protective equipment for fire-fighting:

Firefighters should be equipped with self-contained breathing apparatus and turn-out gear.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Revision date: 2022/04/04 Page: 5/14 Version: 9.0 (30504390/SDS CPA CA/EN)

Take appropriate protective measures. Clear area. Shut off source of leak only under safe conditions. Extinguish sources of ignition nearby and downwind. Ensure adequate ventilation. Wear suitable personal protective clothing and equipment.

Environmental precautions

Do not discharge into the subsoil/soil. Do not discharge into drains/surface waters/groundwater. Contain contaminated water/firefighting water.

Methods and material for containment and cleaning up

Dike spillage. Pick up with suitable absorbent material. Place into suitable containers for reuse or disposal in a licensed facility. Spilled substance/product should be recovered and applied according to label rates whenever possible. If application of spilled substance/product is not possible, then spills should be contained, solidified, and placed in suitable containers for disposal. After decontamination, spill area can be washed with water. Collect wash water for approved disposal.

7. Handling and Storage

Precautions for safe handling

RECOMMENDATIONS ARE FOR MANUFACTURING, COMMERCIAL BLENDING, AND PACKAGING WORKERS. PESTICIDE APPLICATORS & WORKERS must refer to the Product Label and Directions for Use attached to the product. Ensure adequate ventilation. Keep away from sources of ignition - No smoking. Keep container tightly sealed. Handle and open container with care. Do not open until ready to use. Once container is opened, content should be used as soon as possible. Avoid aerosol formation. Avoid dust formation. Follow label warnings even after container is emptied. The substance/ product may be handled only by appropriately trained personnel. Avoid all direct contact with the substance/product. Avoid contact with the skin, eyes and clothing. Wear suitable personal protective clothing and equipment.

Protection against fire and explosion:

Vapours may form ignitable mixture with air. Prevent electrostatic charge - sources of ignition should be kept well clear - fire extinguishers should be kept handy.

Conditions for safe storage, including any incompatibilities

Segregate from incompatible substances. Segregate from foods and animal feeds. Segregate from textiles and similar materials.

Further information on storage conditions: Keep away from heat. Protect against moisture. Protect from direct sunlight.

Protect from temperatures below: 0 °C

Product will freeze but should recover upon warming and mixing.

Protect from temperatures above: 40 °C

Changes in the properties of the product may occur if substance/product is stored above indicated temperature for extended periods of time.

8. Exposure Controls/Personal Protection

Users of a pesticidal product should refer to the product label for personal protective equipment requirements.

Components with occupational exposure limits

Safety Data Sheet

Integrity

Revision date : 2022/04/04 Version: 9.0		Page: 6/14 (30504390/SDS_CPA_CA/EN)
solvent naphtha	ACGIH, US:	TWA value 200 mg/m3 Non-aerosol (total hydrocarbon vapor); Application restricted to conditions in which there are negligible aerosol exposures.
	ACGIH, US:	Skin Designation Non-aerosol (total hydrocarbon vapor); Danger of cutaneous absorption
	ACGIH, US:	Skin Designation Non-aerosol (total hydrocarbon vapor); Danger of cutaneous absorption
	ACGIH, US:	TWA value 200 mg/m3 Non-aerosol (total hydrocarbon vapor); Application restricted to conditions in which there are negligible aerosol exposures.
Naphthalene, 2-methyl-	ACGIH, US: ACGIH, US:	TWA value 0.5 ppm; Skin Designation; The substance can be absorbed through the skin.
	ACGIH, US:	Skin Designation; Danger of cutaneous absorption

Advice on system design:

Whenever possible, engineering controls should be used to minimize the need for personal protective equipment.

Personal protective equipment

Respiratory protection:

Wear respiratory protection if ventilation is inadequate. Wear a NIOSH-certified (or equivalent) organic vapour/particulate respirator. For situations where the airborne concentrations may exceed the level for which an air purifying respirator is effective, or where the levels are unknown or Immediately Dangerous to Life or Health (IDLH), use NIOSH-certified full facepiece pressure demand self-contained breathing apparatus (SCBA) or a full facepiece pressure demand supplied-air respirator (SAR) with escape provisions.

Hand protection:

Chemical resistant protective gloves, Protective glove selection must be based on the user's assessment of the workplace hazards., butyl rubber (butyl) - 16 mm coating thickness, laminated plastic (Silver Shield), nitrile rubber (Buna N), Do not use neoprene gloves., Dispose of contaminated gloves after eight hours of use.

Eye protection:

Safety glasses with side-shields. Tightly fitting safety goggles (chemical goggles). Wear face shield if splashing hazard exists.

Body protection:

Body protection must be chosen depending on activity and possible exposure, e.g. head protection, apron, protective boots, chemical-protection suit.

General safety and hygiene measures:

Wear long sleeved work shirt and long work pants in addition to other stated personal protective equipment. Work place should be equipped with a shower and an eye wash. Handle in accordance with good industrial hygiene and safety practice. Store work clothing separately. Keep away from food, drink and animal feeding stuffs.

Page: 7/14 Revision date: 2022/04/04 Version: 9.0 (30504390/SDS CPA CA/EN)

9. Physical and Chemical Properties

Form: liquid Odour: aromatic

Odour threshold: Not determined due to potential health hazard by inhalation.

Colour: light brown, clear approx. 4 - 6 pH value: (1 %(m), 25 °C)

Freezing point: approx. -20 °C (1,013.3 hPa)

Information applies to the solvent.

Boiling range: approx. 232 - 278 °C

Information applies to the solvent.

Flash point: 112.8 °C Flammability: not applicable

Lower explosion limit: As a result of our experience with this

product and our knowledge of its composition we do not expect any hazard as long as the product is used appropriately and in accordance with

the intended use.

Upper explosion limit: As a result of our experience with this

> product and our knowledge of its composition we do not expect any hazard as long as the product is used appropriately and in accordance with

the intended use.

Autoignition: approx. 491 °C

Information applies to the solvent.

Vapour pressure: approx. 0.05 hPa

(20°C)

Information applies to the solvent.

Density: approx. 1.092 g/cm3

(20°C)

Vapour density: not applicable

Partitioning coefficient n-The statements are based on the octanol/water (log Pow): properties of the individual

components.

Information on: saflufenacil

Partitioning coefficient n-2.6 octanol/water (log Pow): (20°C) Information on: dimethenamid-P Partitioning coefficient n-1.89

octanol/water (log Pow):

Thermal decomposition: No decomposition if stored and handled as

prescribed/indicated.

19.56 mPa.s Viscosity, dynamic:

(40°C)

Solubility in water: emulsifiable, insoluble

Evaporation rate: not applicable

If necessary, information on other physical and chemical Other Information:

parameters is indicated in this section.

10. Stability and Reactivity

Reactivity

Revision date: 2022/04/04 Page: 8/14 Version: 9.0 (30504390/SDS_CPA_CA/EN)

No hazardous reactions if stored and handled as prescribed/indicated.

Oxidizing properties:

Not an oxidizer. not fire-propagating

Chemical stability

The product is stable if stored and handled as prescribed/indicated.

Possibility of hazardous reactions

The product is chemically stable.

Hazardous polymerization will not occur. No hazardous reactions if stored and handled as prescribed/indicated.

Conditions to avoid

Avoid all sources of ignition: heat, sparks, open flame. Avoid prolonged storage. Avoid electro-static discharge. Avoid contamination. Avoid prolonged exposure to extreme heat. Avoid extreme temperatures.

Incompatible materials

Nitric Acid, Sulfuric acid, strong oxidizing agents

Hazardous decomposition products

Decomposition products:

No hazardous decomposition products if stored and handled as prescribed/indicated., Prolonged thermal loading can result in products of degradation being given off.

Thermal decomposition:

No decomposition if stored and handled as prescribed/indicated.

11. Toxicological information

Primary routes of exposure

Routes of entry for solids and liquids are ingestion and inhalation, but may include eye or skin contact. Routes of entry for gases include inhalation and eye contact. Skin contact may be a route of entry for liquefied gases.

Acute Toxicity/Effects

Acute toxicity

Assessment of acute toxicity: Slightly toxic after single ingestion. Relatively nontoxic after short-term skin contact. Relatively nontoxic after short-term inhalation.

<u>Oral</u>

Type of value: LD50

Species: rat

Value: > 2,000 mg/kg (OECD Guideline 423)

Inhalation

Type of value: LC50 Species: rat (male/female)

Value: > 5.77 mg/l (OECD Guideline 403)

An aerosol was tested.

Dermal

Revision date: 2022/04/04 Page: 9/14 Version: 9.0 (30504390/SDS CPA CA/EN)

Type of value: LD50 Species: rat

Value: > 5,000 mg/kg (OECD Guideline 402)

No mortality was observed.

Assessment other acute effects

Assessment of STOT single:

Causes temporary irritation of the respiratory tract.

The product has not been tested. The statement has been derived from the properties of the individual components.

<u>Irritation / corrosion</u>

Assessment of irritating effects: Causes substantial but temporary eye injury. May cause slight irritation to the skin.

Skin

Species: rabbit

Result: Slightly irritating.

May cause moderate irritation to the skin.

Eve

Species: rabbit

Result: Moderately to severely irritating. Causes substantial but temporary eye injury.

Sensitization

Assessment of sensitization: Sensitization after skin contact possible.

modified Buehler test Species: guinea pig Result: sensitizing

Chronic Toxicity/Effects

Repeated dose toxicity

Assessment of repeated dose toxicity: The product has not been tested. The statement has been derived from the properties of the individual components.

Information on: dimethenamid-P

Assessment of repeated dose toxicity: Adaptive effects were observed after repeated exposure in animal studies.

Information on: Decanamide, N,N-dimethyl-

Assessment of repeated dose toxicity: The product has not been tested. The statement has been derived from substances/products of a similar structure or composition. After repeated exposure the prominent effect is local irritation.

Information on: naphthalene

Assessment of repeated dose toxicity: Repeated oral uptake of the substance did not cause substance-related effects. The substance may cause damage to the olfactory epithelium after repeated inhalation. Repeated dermal uptake of the substance did not cause substance-related effects.

Genetic toxicity

Revision date : 2022/04/04 Page: 10/14 Version: 9.0 (30504390/SDS_CPA_CA/EN)

Assessment of mutagenicity: The product has not been tested. The statement has been derived from the properties of the individual components.

Information on: Dimethenamid-P

Assessment of mutagenicity: Results from a number of mutagenicity studies with microorganisms and mammalian cell culture are available. Taking into account all of the information, there is no indication that the substance is mutagenic.

Information on: Saflufenacil

Assessment of mutagenicity: Results from a number of genotoxicity studies with microorganisms, mammalian cell culture and mammals are available. Taking into account all of the information, there is no indication that the substance is genotoxic.

Information on: naphthalene

Assessment of mutagenicity: The substance was not mutagenic in bacteria. The substance was mutagenic in a mammalian cell culture test system. The substance was not mutagenic in a test with mammals. Literature data.

Carcinogenicity

Assessment of carcinogenicity: The product has not been tested. The statement has been derived from the properties of the individual components.

Information on: Dimethenamid-P

Assessment of carcinogenicity: In long-term studies in rats and mice in which the substance was given by feed, a carcinogenic effect was not observed.

Information on: Saflufenacil

Assessment of carcinogenicity: Not carcinogenic.

Information on: solvent naphtha

Assessment of carcinogenicity: Indication of possible carcinogenic effect in animal tests. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Information on: naphthalene

Assessment of carcinogenicity: In long-term studies in rats and mice in which the substance was given by inhalation, a carcinogenic effect was observed. EU-classification The substance was classified as a group 3 carcinogen by the German MAK-Commission (substances for which a suspicion of a carcinogenic potential exists). IARC (International Agency for Research on Cancer) has classified this substance as group 2B (The agent is possibly carcinogenic to humans). IARC (International Agency for Research on Cancer) has classified this substance as group 2B (The agent is possibly carcinogenic to humans).

Reproductive toxicity

Assessment of reproduction toxicity: The results of animal studies gave no indication of a fertility impairing effect. The product has not been tested. The statement has been derived from the properties of the individual components.

Information on: Dimethenamid-P

Revision date: 2022/04/04 Page: 11/14 Version: 9.0 (30504390/SDS_CPA_CA/EN)

Assessment of reproduction toxicity: The results of animal studies gave no indication of a fertility impairing effect.

Information on: Saflufenacil

Assessment of reproduction toxicity: The results of animal studies gave no indication of a fertility

impairing effect.

Teratogenicity

Assessment of teratogenicity: The product has not been tested. The statement has been derived from the properties of the individual components.

Information on: Dimethenamid-P

Assessment of teratogenicity: Causes developmental effects in animals at high, maternally toxic

doses.

Information on: Saflufenacil

Assessment of teratogenicity: Indications of possible developmental toxicity/teratogenicity were seen

in animal studies.

Other Information

Misuse can be harmful to health.

12. Ecological Information

Toxicity

Aquatic toxicity

Assessment of aquatic toxicity:

Acutely toxic for aquatic organisms.

Very toxic to aquatic life with long lasting effects.

Toxicity to fish

LC50 (96 h) 18 mg/l, Oncorhynchus mykiss

Aquatic invertebrates

EC50 (48 h) 8.1 mg/l, Daphnia magna

<u>Aquatic plants</u>

EC50 (72 h) 0.014 mg/l (growth rate), Pseudokirchneriella subcapitata

NOAEC (72 h) 0.004 mg/l, Pseudokirchneriella subcapitata

Assessment of terrestrial toxicity

With high probability not acutely harmful to terrestrial organisms.

Persistence and degradability

Assessment biodegradation and elimination (H2O)

The product has not been tested. The statement has been derived from the properties of the individual components.

Assessment biodegradation and elimination (H2O)

Revision date : 2022/04/04 Page: 12/14 Version: 9.0 (30504390/SDS_CPA_CA/EN)

Information on: dimethenamid-P

Not readily biodegradable (by OECD criteria).

Information on: saflufenacil

Not readily biodegradable (by OECD criteria).

Bioaccumulative potential

Assessment bioaccumulation potential

Information on: saflufenacil

Because of the n-octanol/water distribution coefficient (log Pow) accumulation in organisms is not to be expected.

Information on: dimethenamid-P

Because of the n-octanol/water distribution coefficient (log Pow) accumulation in organisms is not to be expected.

Mobility in soil

Assessment transport between environmental compartments

The product has not been tested. The statement has been derived from the properties of the individual components.

Information on: dimethenamid-P

Following exposure to soil, the product trickles away and can - dependant on degradation - be transported to deeper soil areas with larger water loads.

Information on: saflufenacil

Following exposure to soil, the product trickles away and can - dependant on degradation - be transported to deeper soil areas with larger water loads.

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Additional information

Other ecotoxicological advice:

Do not discharge product into the environment without control.

13. Disposal considerations

Waste disposal of substance:

See product label for disposal and recycling instructions.

Container disposal:

Empty contaminated containers/packaging must be handled according to applicable regulations for the hazardous properties of the contaminating material. Consult the product label for additional details.

Revision date: 2022/04/04 Page: 13/14 Version: 9.0 (30504390/SDS_CPA_CA/EN)

14. Transport Information

Land transport

TDG

Not classified as a dangerous good under transport regulations

Sea transport

IMDG

Hazard class: 9
Packing group: III

ID number: UN 3082 Hazard label: 9, EHSM Marine pollutant: YES

Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,

N.O.S. (contains DIMETHENAMID-P, SAFLUFENACIL)

Air transport

IATA/ICAO

Hazard class: 9
Packing group: III

ID number: UN 3082 Hazard label: 9, EHSM

Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,

N.O.S. (contains DIMETHENAMID-P, SAFLUFENACIL)

Further information

Exempt from regulation when transported by road or rail, in accordance with TDG Regulations 1.45.1. This exemption provides that this product does not require dangerous goods shipping documentation or safety marks when transported on land by road or rail.

15. Regulatory Information

Federal Regulations

Registration status:

Crop Protection DSL, CA released / exempt

Chemical DSL, CA released / listed

Labeling requirements under Pest Control Products Act

Read the label, authorized under the Pest Control Products Act, prior to using or handling the pest control product.

This chemical is a pest control product registered by Health Canada Pest Management Regulatory Agency and is subject to certain labelling requirements under the Pest Control Products Act. These requirements differ from the classification criteria and hazard information required for GHS-consistent safety data sheets. The following is the hazard information required on the pest control product label:

Revision date : 2022/04/04 Page: 14/14 Version: 9.0 (30504390/SDS_CPA_CA/EN)

WARNING: Skin Irritant Eye irritant.

Potential skin sensitizer.

KEEP OUT OF REACH OF CHILDREN.

HARMFUL IF SWALLOWED.

Do not get in eyes, on skin, or on clothing.

Avoid inhalation of mists/vapours.

There are Canada-specific environmental requirements for handling, use, and disposal of this pest control product that are indicated on the label.

16. Other Information

SDS Prepared by:

BASF Agricultural Solutions Canada NA Product Regulations

SDS Prepared on: 2022/04/04

We support worldwide Responsible Care® initiatives. We value the health and safety of our employees, customers, suppliers and neighbors, and the protection of the environment. Our commitment to Responsible Care is integral to conducting our business and operating our facilities in a safe and environmentally responsible fashion, supporting our customers and suppliers in ensuring the safe and environmentally sound handling of our products, and minimizing the impact of our operations on society and the environment during production, storage, transport, use and disposal of our products.

END OF DATA SHEET