

Revision date: 2022/03/25 Page: 1/11
Version: 8.1 (30559876/SDS CPA CA/EN)

1. Identification

Product identifier used on the label

Armezon Herbicide

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 Canada Inc. 5025 Creekbank Road Building A, Floor 2 Mississauga, ON, L4W 0B6, CANADA

Telephone: +1 289 360-1300

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: C16 H17 N3 O5 S

PCP # 30131

Synonyms: topramezone (active ingredient)

2. Hazards Identification

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

Classification of the product

Repr. 1B (unborn child) Reproductive toxicity

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

^{*} 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.

Revision date: 2022/03/25 Page: 2/11 Version: 8.1 (30559876/SDS_CPA_CA/EN)

Label elements

Pictogram:



Signal Word: Danger

Hazard Statement:

H360 May damage the unborn child. H400 Very toxic to aquatic life.

H410 Very toxic to aquatic life with long lasting effects.

Precautionary Statements (Prevention):

P273 Avoid release to the environment.

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

protection.

P201 Obtain special instructions before use.

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

understood.

Precautionary Statements (Response):

P308 + P313 IF exposed or concerned: Get medical attention.

P391 Collect spillage.

Precautionary Statements (Storage): P405 Store locked up.

Precautionary Statements (Disposal):

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

3. Composition / Information on Ingredients

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

Topramezone

CAS Number: 210631-68-8 Content (W/W): 29.7 %

Synonym: Methanone, [3-(4,5-dihydro-3-isoxazolyl)-2-methyl-4-(methylsulfonyl)phenyl](5-hydroxy-1-methyl-1H-pyrazol-4-yl)-

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

Revision date : 2022/03/25 Page: 3/11 Version: 8.1 (30559876/SDS_CPA_CA/EN)

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 irritation develops, seek medical attention.

If swallowed:

Immediate medical attention required. Do not induce vomiting unless told to by a poison control center or doctor. Do not give solids or liquids. 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: water spray, foam, dry powder, carbon dioxide

Unsuitable extinguishing media for safety reasons: water jet

Special hazards arising from the substance or mixture

Hazards during fire-fighting:

carbon monoxide, carbon dioxide, Hydrogen chloride, nitrogen oxides, sulfur oxides, halogenated compounds

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.

Further information:

In case of fire and/or explosion do not breathe fumes. Keep containers cool by spraying with water if exposed to fire. Collect contaminated extinguishing water separately, do not allow to reach sewage or effluent systems. Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.

Revision date: 2022/03/25 Page: 4/11 Version: 8.1 (30559876/SDS_CPA_CA/EN)

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

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 drains/surface waters/groundwater. Do not discharge into the subsoil/soil.

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

No special measures necessary if stored and handled correctly. Ensure thorough ventilation of stores and work areas. When using do not eat, drink or smoke. Hands and/or face should be washed before breaks and at the end of the shift.

Protection against fire and explosion:

No special precautions necessary. The substance/product is non-combustible. Product is not explosive.

Conditions for safe storage, including any incompatibilities

Segregate from foods and animal feeds.

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

Protect from temperatures below: 0 °C

The product can crystallize below the limit temperature.

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.

No occupational exposure limits known.

Advice on system design:

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

Revision date: 2022/03/25 Page: 5/11 Version: 8.1 (30559876/SDS_CPA_CA/EN)

Personal protective equipment

Respiratory protection:

Wear respiratory protection if ventilation is inadequate. Wear a NIOSH-certified (or equivalent) organic vapour/particulate respirator.

Hand protection:

Chemical resistant protective gloves

Eye protection:

Wear face shield or tightly fitting safety goggles (chemical goggles) 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:

The statements on personal protective equipment in the instructions for use apply when handling crop-protection agents in final-consumer packing. Wearing of closed work clothing is recommended. Store work clothing separately. Keep away from food, drink and animal feeding stuffs.

9. Physical and Chemical Properties

Form: liquid Odour: aromatic

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

Colour: off-white

pH value: approx. 2.5 - 4.5

(1%(m), 20°C)

crystallization approx. -4 °C

temperature:

Boiling point: approx. 100 °C

Flash point: No flash point - Measurement made

up to the boiling point.

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: 425 °C (Directive 92/69/EEC, A.15)

SADT: > 75 °C

Vapour pressure: approx. 23.3 hPa

(20°C)

Information applies to the solvent.

Density: approx. 1.12 g/cm3

(20°C)

Vapour density: not applicable Partitioning coefficient n-

octanol/water (log Pow):

Thermal decomposition: 210 °C, 330 kJ/kg

Revision date: 2022/03/25 Page: 6/11 Version: 8.1 (30559876/SDS_CPA_CA/EN)

Not a substance liable to self-decomposition according to UN

transport regulations, class 4.1.

Viscosity, dynamic: approx. 78 mPa.s

(20 °C)

Solubility in water: dispersible Evaporation rate: not applicable

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

parameters is indicated in this section.

10. Stability and Reactivity

Reactivity

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

Oxidizing properties: not fire-propagating

Chemical stability

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

Possibility of hazardous reactions

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

Conditions to avoid

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

Incompatible materials

strong acids, strong bases, strong oxidizing agents

Hazardous decomposition products

Decomposition products:

Hazardous decomposition products: No hazardous decomposition products if stored and handled as prescribed/indicated.

Thermal decomposition:

210 °C, 3 K/min

Not a substance liable to self-decomposition according to UN transport regulations, class 4.1.

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. Slightly toxic after short-term skin contact. Slightly toxic after short-term inhalation.

Revision date: 2022/03/25 Page: 7/11 Version: 8.1 (30559876/SDS_CPA_CA/EN)

<u>Oral</u>

Type of value: LD50 Species: rat (male/female)

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

No mortality was observed.

Inhalation

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

Value: > 5.8 mg/l (OECD Guideline 403)

Exposure time: 4 h An aerosol was tested. No mortality was observed.

<u>Dermal</u>

Type of value: LD50 Species: rat (male/female)

Value: > 4,000 mg/kg (OECD Guideline 402)

No mortality was observed.

Assessment other acute effects

Assessment of STOT single:

Based on the available information there is no specific target organ toxicity to be expected after a single exposure.

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

Irritation / corrosion

Assessment of irritating effects: Not irritating to eyes and skin.

<u>Skin</u>

Species: rabbit Result: non-irritant

Method: OECD Guideline 404

<u>Eye</u>

Species: rabbit Result: non-irritant

Method: OECD Guideline 405

Sensitization

Assessment of sensitization: The product has not been tested. The statement has been derived from substances/products of a similar structure or composition. There is no evidence of a skin-sensitizing potential.

Mouse Local Lymph Node Assay (LLNA)

Species: mouse

Result: Skin sensitizing effects were not observed in animal studies.

Method: OECD Guideline 429

Aspiration Hazard

No aspiration hazard expected. The product has not been tested. The statement has been derived from the properties of the individual components.

Chronic Toxicity/Effects

Repeated dose toxicity

Revision date: 2022/03/25 Page: 8/11 Version: 8.1 (30559876/SDS_CPA_CA/EN)

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: Topramezone technical

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

animal studies.

Genetic toxicity

Assessment of mutagenicity: The product has not been tested. The statement has been derived from the properties of the individual components. Mutagenicity tests revealed no genotoxic potential.

Carcinogenicity

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

Information on: Topramezone technical

Assessment of carcinogenicity: When given in high doses, the substance was carcinogenic in animal studies. Based on its mechanism of action, a carcinogenic potential is not expected after exposure to low doses.

Reproductive toxicity

Assessment of reproduction toxicity: The product has not been tested. The statement has been derived from the properties of the individual components. 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: Topramezone technical

Assessment of teratogenicity: May cause harm to the unborn child.

Other Information

Misuse can be harmful to health.

12. Ecological Information

Toxicity

Aquatic toxicity

Assessment of aquatic toxicity:

Very toxic (acute effect) to aquatic organisms.

Toxicity to fish

LC50 (96 h) 8.71 mg/l, Oncorhynchus mykiss

Aquatic invertebrates

EC50 (48 h) 12.1 mg/l, Daphnia magna

Aquatic plants

EC50 (7 d) > 0.064 mg/l (growth rate), Lemna gibba (OECD guideline 221)

Revision date: 2022/03/25 Page: 9/11 Version: 8.1 (30559876/SDS_CPA_CA/EN)

EC50 (7 d) 0.0008 mg/l (growth rate), Lemna gibba (OECD guideline 221)

Chronic toxicity to aquatic invertebrates

No observed effect concentration (35 d) 0.12 mg/l, Mysidopsis bahia

Bioaccumulative potential

Bioaccumulation potential

Information on: Topramezone technical

Bioconcentration factor: 0.69 (42 d), Lepomis macrochirus (OPPTS 850.1730 (EPA Guideline))

Does not significantly accumulate in organisms.

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: Topramezone technical

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

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:

Contaminated packaging should be emptied as far as possible and disposed of in the same manner as the substance/product.

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

Revision date : 2022/03/25 Page: 10/11 Version: 8.1 (30559876/SDS_CPA_CA/EN)

Hazard label: 9, EHSM Marine pollutant: YES

Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,

N.O.S. (contains TOPRAMEZONE)

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 TOPRAMEZONE)

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 / listed

Chemical DSL, CA blocked / not 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:

WARNING:

Contains the allergen soy.

KEEP OUT OF REACH OF CHILDREN.

HARMFUL IF SWALLOWED.

Avoid inhalation of mists/vapours.

Avoid contact with the skin, eyes and clothing.

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 NA Product Regulations

Revision date : 2022/03/25 Page: 11/11
Version: 8.1 (30559876/SDS_CPA_CA/EN)

SDS Prepared on: 2022/03/25

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END OF DATA SHEET