

1. Identification

Product identifier	IMPACT® Herbicide		
Other means of identification			
SDS number	323		
Product registration number	28141		
Synonyms	Topramezone SC Herbicide		
Recommended use	For sale for use on field corn (including both conventional and herbicide tolerant varieties), sweet corn and seed corn.		
Recommended restrictions	Keep out of the Reach of Children!		
Manufacturer/Importer/Supplier/Distributor information			
Manufacturer			
Company name	AMVAC Chemical Corporation		
Address	4695 MacArthur Court Suite 1200 Newport Beach, CA 92660 United States		
Telephone	AMVAC Chemical Corp	949-260-1200	
	AMVAC Chemical Corp	949-260-6270(FAX)	
Website	www.amvac.com		
E-mail	CustServ@amvac.com		
Emergency phone number	Medical	888-681-4261	
	CHEMTREC®	800-424-9300	
	(USA+Canada)		
	Product Use	888-462-6822	
	CHEMTREC® (Outside USA)	+1-703-527-3887	
Supplier	Not available.		

2. Hazard identification

Physical hazards	Not classified.	
Health hazards	Reproductive toxicity	Category 1B
Environmental hazards	Hazardous to the aquatic environment, acute hazard	Category 1
	Hazardous to the aquatic environment, long-term hazard	Category 1

Label elements



Signal word	Danger
Hazard statement	May damage fertility or the unborn child.
	Very toxic to aquatic life.
	Very toxic to aquatic life with long lasting effects.
Precautionary statement	
Prevention	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves/protective clothing/eye protection/face protection. Avoid release to the environment.
Response	If exposed or concerned: Get medical advice/attention. Collect spillage.
Storage	Store locked up.

Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.
Other hazards	None known.
Supplemental information	This is a pesticide product registered in Canada under the Pest Control Products Act and is subject to certain labeling requirements. These requirements differ from the classification criteria and hazard information required for GHS compliant safety data sheets (SDS), and for workplace labels of non-pesticide chemicals. The hazard information required on the pesticide label is reproduced in section 15. The pesticide label also includes other important information, including directions for use.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
Topramezone		210631-68-8	29.7 (336 g/L)

Additional components

Chemical name	Common name and synonyms	CAS number	%
Inert Ingredients		N/A	70.3

4. First-aid measures

Inhalation	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Oxygen or artificial respiration if needed. Call a POISON CENTER or doctor/physician if you feel unwell.
Skin contact	Remove contaminated clothing immediately and wash skin with soap and water. Wash contaminated clothing before reuse.
Eye contact	Rinse with water. Get medical attention if irritation develops and persists.
Ingestion	Rinse mouth. Get medical attention if symptoms occur.
Most important symptoms/effects, acute and delayed	Direct contact with eyes may cause temporary irritation.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. Keep victim warm. Keep victim under observation. Symptoms may be delayed.
General information	IF exposed or concerned: Get medical advice/attention. If you feel unwell, seek medical advice (show the label where possible). Show this safety data sheet to the doctor in attendance. Wash contaminated clothing before reuse.

5. Fire-fighting measures

Suitable extinguishing media	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO ₂).
Unsuitable extinguishing media	Not available.
Specific hazards arising from the chemical	During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Firefighters should wear full protective clothing including self contained breathing apparatus.
Fire fighting equipment/instructions	Move containers from fire area if you can do so without risk.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	No unusual fire or explosion hazards noted.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Local authorities should be advised if significant spillages cannot be contained.
Methods and materials for containment and cleaning up	Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Prevent product from entering drains. Siphon the majority of the liquid into drums for use or disposal, depending on the circumstances. Absorb in vermiculite, dry sand or earth and place into containers. Clean surface thoroughly to remove residual contamination.
Environmental precautions	Never return spills to original containers for re-use. Avoid release to the environment. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground. Inform appropriate managerial or supervisory personnel of all environmental releases. Contact local authorities in case of spillage to drain/aquatic environment.

7. Handling and storage

Precautions for safe handling	Do not handle until all safety precautions have been read and understood. Avoid contact with eyes, skin, and clothing. Pregnant or breastfeeding women must not handle this product. Wear appropriate personal protective equipment. Avoid release to the environment. Wash contaminated clothing before reuse. Observe good industrial hygiene practices.
Conditions for safe storage, including any incompatibilities	Store locked up. Store in original tightly closed container. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits	No exposure limits noted for ingredient(s).
Biological limit values	No biological exposure limits noted for the ingredient(s).
Appropriate engineering controls	General ventilation normally adequate. Ensure adequate ventilation, especially in confined areas.
Individual protection measures, such as personal protective equipment	
Eye/face protection	If contact is likely, safety glasses with side shields are recommended.
Skin protection	
Hand protection	Wear appropriate chemical resistant gloves. Suitable gloves can be recommended by the glove supplier.
Other	Long-sleeved shirt and long pants or coveralls, socks and closed toe shoes are required.
Respiratory protection	In case of insufficient ventilation, wear suitable respiratory equipment.
Thermal hazards	Not available.
General hygiene considerations	Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Contaminated work clothing should not be allowed out of the workplace.

9. Physical and chemical properties

Appearance	
Physical state	Liquid.
Form	Suspension concentrate.
Color	Grey to beige opaque
Odor	Faint odor.
Odor threshold	Not available
pH	3 - 3.5 (1% dispersion @ 20°C)
Melting point/freezing point	24.8 °F (-4 °C)
Initial boiling point and boiling range	212 °F (100 °C)
Flash point	Not available.
Evaporation rate	1 as water
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explosive limits	
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	Equal to water evaporation
Vapor density	Same as water
Relative density	1.13
Relative density temperature	68 °F (20 °C)
Solubility(ies)	
Solubility (water)	Dispersible
Solubility (solvents)	Not available
Partition coefficient (n-octanol/water)	-1.52 (log Kow, a.i.)
Auto-ignition temperature	700 °F (371 °C) estimated
Decomposition temperature	Not available.

Viscosity Not available.

Other information

Density 9.43 lb/gal

Percent volatile 70 %

10. Stability and reactivity

Reactivity The product is stable and non-reactive under normal conditions of use, storage and transport.

Chemical stability Material is stable under normal conditions.

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

Conditions to avoid Heat, flames and sparks. Contact with incompatible materials.

Incompatible materials Strong oxidizing agents.

Hazardous decomposition products No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure

Inhalation Prolonged inhalation may be harmful.

Skin contact Prolonged skin contact may cause temporary irritation.

Eye contact Direct contact with eyes may cause temporary irritation.

Ingestion May cause discomfort if swallowed.

Symptoms related to the physical, chemical and toxicological characteristics Direct contact with eyes may cause temporary irritation.

Information on toxicological effects

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

Components	Species	Test Results
Topramezone (CAS 210631-68-8)		
<u>Acute</u>		
Dermal		
LD50	Rat	> 2000 mg/kg
Inhalation		
LC50	Rat	> 5.4 mg/l
Oral		
LD50	Rat	> 2000 mg/kg

* Estimates for product may be based on additional component data not shown.

Skin corrosion/irritation Prolonged skin contact may cause temporary irritation.

Serious eye damage/eye irritation Direct contact with eyes may cause temporary irritation.

Respiratory or skin sensitization

Respiratory sensitization Not a respiratory sensitizer.

Skin sensitization This product is not expected to cause skin sensitization.

Germ cell mutagenicity This product is not considered to be mutagenic.

Topramezone: Not considered to be mutagenic from the range of genotoxicity studies that have been carried out in the laboratory.

Carcinogenicity Not classifiable as to carcinogenicity to humans.

Topramezone: Thyroid follicular cell adenomas were seen in the rat bioassay. However, in accordance with the EPA Guidelines for Carcinogen Risk Assessment (2005), EPA has classified topramezone as "not likely to be carcinogenic to humans at doses that do not alter rat thyroid hormone homeostasis".

Reproductive toxicity	May damage fertility or the unborn child. Topramezone: Developmental and maternal effects were seen in laboratory animals. A developmental NOAEL however was established at 0.5 mg/kg/day for alterations in skeletal ossification sites in the rabbit. Topramezone: Reproductive effects in the rat were seen in both parents and offspring with the NOAEL established at 0.4 mg/kg/day.
Specific target organ toxicity - single exposure	Not classified.
Specific target organ toxicity - repeated exposure	Not classified.
Aspiration hazard	Not an aspiration hazard.
Chronic effects	Prolonged inhalation may be harmful.

12. Ecological information

Ecotoxicity Very toxic to aquatic life. May cause long lasting harmful effects to aquatic life.

Components		Species	Test Results
Topramezone (CAS 210631-68-8)			
Aquatic			
Algae	EC50	Pseudokirchnerella subcapitata	17.2 mg/l
Other	EC50	Lemna gibba (fronds)	0.009 mg/l
Acute			
Crustacea	EC50	Mysidopsis bahia	2.7 mg/l, 96 hr
Fish	LC50	Bluegill (Lepomis macrochirus)	> 250 mg/l, 96 hr nominal concentration
		Oncorhynchus mykiss	> 100 mg/l, 96 hr nominal concentration
Chronic			
Crustacea	NOEC	Daphnia magna	50 mg/l, 21 d
Fish	NOEC	Oncorhynchus mykiss	3.2 mg/l
Other	NOEC	Lemna gibba (fronds)	0.001 mg/l, 7 d

Persistence and degradability No data is available on the degradability of this product.

Bioaccumulative potential

Partition coefficient n-octanol / water (log Kow)

Topramezone -1.52, (log Pow, 20 °C)

Mobility in soil No data available.

Other adverse effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.
Local disposal regulations	Dispose in accordance with all applicable regulations.
Hazardous waste code	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Waste from residues / unused products	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal methods/information). Avoid discharge into water courses or onto the ground. Dispose of container and residues in accordance with all applicable regulations.
Contaminated packaging	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

TDG

UN number UN3082

UN proper shipping name Environmentally hazardous substances, liquid, n.o.s. (Topramezone 29.7%), MARINE POLLUTANT

Transport hazard class(es)

Class 9

Subsidiary risk -

Packing group III

Environmental hazards Yes

Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

IATA

UN number UN3082

UN proper shipping name Environmentally hazardous substances, liquid, n.o.s. (Topramezone 29.7%)

Transport hazard class(es)

Class 9

Subsidiary risk -

Label(s) 9

Packing group III

Environmental hazards Yes

Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

IMDG

UN number UN3082

UN proper shipping name Environmentally hazardous substances, liquid, n.o.s. (Topramezone 29.7%), MARINE POLLUTANT

Transport hazard class(es)

Class 9

Subsidiary risk -

Label(s) 9

Packing group III

Environmental hazards

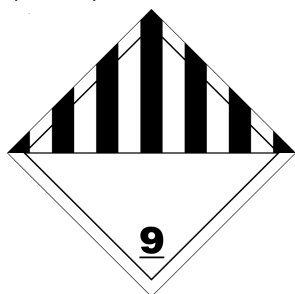
Marine pollutant Yes

EmS Not available.

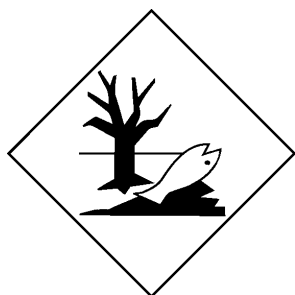
Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not established.

IATA; IMDG; TDG



Marine pollutant



General information

TDG Regulated Marine Pollutant. Marine Pollutants Exemption (TDG 1.45.1) applies to this product.

IMDG Regulated Marine Pollutant.

15. Regulatory information

Canadian regulations

CANADIAN REGULATIONS: This product is registered under the Pest Control Product Act of Canada. It is a violation of Canadian Law to use this product in any manner inconsistent with its labeling. Read and follow all label directions. This product has been classified according to the hazard criteria of the HPR and the SDS contains all the information required by the HPR.

This chemical is a pest control product registered [or regulated] 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:

PCP: 28141

Keep Out of Reach Of Children.
Warning, contains the allergen soy.

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

Symbols Required:
None known.

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

Controlled Drugs and Substances Act

Not regulated.

Export Control List (CEPA 1999, Schedule 3)

Not listed.

Greenhouse Gases

Not listed.

Precursor Control Regulations

Not regulated.

International regulations

Stockholm Convention

Not applicable.

Rotterdam Convention

Not applicable.

Kyoto protocol

Not applicable.

Montreal Protocol

Not applicable.

Basel Convention

Not applicable.

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Canada	Domestic Substances List (DSL)	No
Canada	Non-Domestic Substances List (NDSL)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	No

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information

Issue date Apr-07-2016
Revision date Mar-18-2022
Version # 4.0

References

ACGIH
ACGIH Documentation of the Threshold Limit Values and Biological Exposure Indices
EPA: AQUIRE database
HSDB® - Hazardous Substances Data Bank
IARC Monographs. Overall Evaluation of Carcinogenicity
National Toxicology Program (NTP) Report on Carcinogens
NLM: Hazardous Substances Data Base
US. IARC Monographs on Occupational Exposures to Chemical Agents

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Revision information

This document has undergone significant changes and should be reviewed in its entirety.