

1. Identification

Product identifier	IMPACT® Herbicide	
Other means of identification		
SDS number	323	
Product registration number	5481-524	
Synonyms	Topramezone SC Herbicide	
Recommended use	For control of emerged weeds in all types of field corn, seed corn, popcorn, and sweet corn, and weed control between crops.	
Recommended restrictions	See product label for restrictions. Keep out of the Reach of Children!	
EPA Registration number	EPA: 5481-524	
Manufacturer/Importer/Supplier/Distributor information		
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)	
Product Use	888-462-6822	
Website	www.amvac.com	
E-mail	CustServ@amvac.com	
Emergency phone number		
Medical	888-681-4261	
CHEMTREC® (USA+Canada)	800-424-9300	
CHEMTREC® (Outside USA)	+1-703-527-3887	

2. Hazard(s) 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
OSHA defined hazards	Not classified.	
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.
Hazard(s) not otherwise classified (HNOC)	None known.
Supplemental information	This is a pesticide product registered by the United States 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 (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. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a poison center or doctor/physician for further treatment advice.
Skin contact	Remove contaminated clothing. Wash off immediately with plenty of water for at least 15 minutes. Call the Poisons Information Center or a doctor for treatment advice.
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Hold the eyelids apart during the flushing to ensure rinsing of the entire surface of the eyes and lids with water. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eyes. Call a physician or poison control center for treatment advice.
Ingestion	Call a physician or poison control center immediately. Have person sip a glass of water if able to swallow. Never give anything by mouth to a victim who is unconscious or is having convulsions. Do not induce vomiting without advice from poison control center.
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 spray. Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).
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.

Never return spills to original containers for reuse.

Environmental precautions

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.

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. 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

US. OARS. Workplace Environmental Exposure Level (WEEL) Guide

Components	Type	Value	Form
TRADE SECRET	TWA	10 mg/m3	Aerosol.

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** Not available.**Decomposition temperature** Not available.**Viscosity** Not available.**Other information** The data presented in this section are typical values and should not be construed as a specification.**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** 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”.
IARC Monographs. Overall Evaluation of Carcinogenicity	
	Not listed.
OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)	
	Not listed.
US. National Toxicology Program (NTP) Report on Carcinogens	
	Not listed.
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 hours
Fish	LC50	Bluegill (Lepomis macrochirus)	> 250 mg/l, 96 hours nominal concentration
		Oncorhynchus mykiss	> 100 mg/l, 96 hours nominal concentration
Chronic			
Crustacea	NOEC	Daphnia magna	50 mg/l, 21 days
Fish	NOEC	Oncorhynchus mykiss	3.2 mg/l
Other	NOEC	Lemna gibba (fronds)	0.001 mg/l, 7 days
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, (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 all applicable 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 instructions).
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

DOT

Not regulated as dangerous goods.

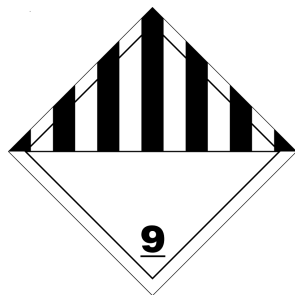
IATA

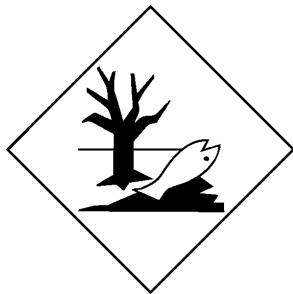
UN number	UN3082
UN proper shipping name	Environmentally hazardous substances, liquid, n.o.s. (Topramezone 29.7%)
Transport hazard class(es)	
Class	9
Subsidiary hazard	-
Label(s)	9
Packing group	III
Environmental hazards	Yes
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling. 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 hazard	-
Label(s)	9
Packing group	III
Environmental hazards	
Marine pollutant	Yes
EmS	Not assigned.
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





General information

IMDG Regulated Marine Pollutant.

15. Regulatory information

US federal regulations

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

This product is registered under EPA/FIFRA Regulations. It is a violation of Federal Law to use this product in any manner inconsistent with its labeling. Read and follow all label directions. This product is excluded from listing requirements under EPA/TSCA.

This chemical is a pesticide product registered by the United States 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 (SDS), and for workplace labels of non-pesticide chemicals. The hazard information required on the pesticide label is reproduced below. The pesticide label also includes other important information, including directions for use.

HAZARD TO HUMANS AND DOMESTIC ANIMALS.

CAUTION! Causes moderate eye irritation. Avoid contact with skin, eyes or clothing. Harmful if swallowed or absorbed through skin. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum using tobacco, or using the toilet. Remove and wash contaminated clothing before reuse.

ENVIRONMENTAL HAZARDS

Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwater.

Product must be used in a manner which will prevent back siphoning in wells, spills or improper disposal of excess pesticide, spray mixtures or rinsate.

Toxic Substances Control Act (TSCA)

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical

Yes

Classified hazard categories

Reproductive toxicity

SARA 313 (TRI reporting)

Not regulated.

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA)

Not regulated.

US state regulations**California Proposition 65**

WARNING: This product can expose you to ETHYLENE OXIDE, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

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, including date of preparation or last revision

Issue date Sep-01-2015

Revision date Nov-14-2023

Version # 5.1

HMIS® ratings Health: 0*
Flammability: 1
Physical hazard: 0

NFPA ratings Health: 0
Flammability: 1
Instability: 0

Disclaimer This information is provided for the limited guidance to the user. While AMVAC believes that the information is, as of the date hereof, reliable, it is the user's responsibility to determine the suitability of the information for its purposes. The user is advised not to construe the information as absolutely complete since additional information may be necessary or desirable when particular, exceptional, or variable conditions or circumstances exist (like combinations with other materials), or because of applicable regulations. No express or implied warranty of merchantability or fitness for a particular purpose or otherwise is made hereunder with respect to the information or the product to which the information relates.

AMVAC Chemical Corporation cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use.

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Revision information Identification: Recommended restrictions
Hazard(s) identification: Response
First-aid measures: Eye contact
First-aid measures: Ingestion
First-aid measures: Inhalation
First-aid measures: Skin contact
First-aid measures: General information
Fire-fighting measures: Suitable extinguishing media
Accidental release measures: Methods and materials for containment and cleaning up
Physical and chemical properties: Other information
Disposal considerations: Waste from residues / unused products
Other information, including date of preparation or last revision: Disclaimer