



SAFETY DATA SHEET

1. Identification

Product identifier	IMPACT® Herbicide	
Other means of identification		
SDS number	323	
Product registration number	5481-524	
Synonyms	Topramezone SC Herbicide	
Recommended use	Herbicide. For postemergence weed control in all types of field corn, popcorn and seed corn.	
Recommended restrictions	Keep out of the Reach of Children!	
EPA Registration number	EPA: 5481-524	
Manufacturer/Importer/Supplier/Distributor information		
Manufacturer		
Company name	AMVAC Chemical Corporation	
Address	4685 MacArthur Court Suite 1200 Newport Beach, CA 92660	
Telephone	AMVAC Chemical Corp 949-260-1200 AMVAC Chemical Corp 949-260-6270(FAX)	
Website	www.Amvac-Chemical.com	
E-mail	CustServ@Amvac-Chemical.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	

2. Hazard(s) identification

Physical hazards	Not classified.	
Health hazards	Sensitization, skin	Category 1
	Reproductive toxicity	Category 2
Environmental hazards	Hazardous to the aquatic environment, acute hazard	Category 1
OSHA defined hazards	Not classified.	
Label elements		



Signal word Warning

Hazard statement

H317	May cause an allergic skin reaction.
H361	Suspected of damaging fertility or the unborn child.
H400	Very toxic to aquatic life.

Precautionary statement

Prevention

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.
P281	Use personal protective equipment as required.
P273	Avoid release to the environment.

Response

P302 + P350	If on skin: Wash with plenty of water.
P304 + P340	If inhaled: Remove person to fresh air and keep comfortable for breathing.
P308 + P313	If exposed or concerned: Get medical advice/attention.
P333 + P313	If skin irritation or rash occurs: Get medical advice/attention.
P363	Wash contaminated clothing before reuse.

Storage

P403 + P233	Store in a well-ventilated place. Keep container tightly closed.
P405	Store locked up.

Disposal

P501	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. 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. In case of eczema or other skin disorders: Seek medical attention and take along these instructions.

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

May cause an allergic skin reaction. Dermatitis. Rash.

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 (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 re-use.
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. Workplace Environmental Exposure Level (WEEL) Guides

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	Not available.
Solubility(ies)	
Solubility (water)	Dispersible
Solubility (solvents)	Not available
Partition coefficient (n-octanol/water)	1.52 (a.i.)
Auto-ignition temperature	700 °F (371 °C) estimated
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Bulk density	9.43 lb/gal
Density	1.03 g/cm3 estimated
Percent volatile	70 %
Specific gravity	1.13 @ 20°C

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	No adverse effects due to inhalation are expected.
Skin contact	May cause an allergic skin reaction.
Eye contact	Direct contact with eyes may cause temporary irritation.
Ingestion	Expected to be a low ingestion hazard.

Symptoms related to the physical, chemical and toxicological characteristics	Direct contact with eyes may cause temporary irritation. May cause an allergic skin reaction. Dermatitis. Rash.
---	---

Information on toxicological effects

Acute toxicity	May cause an allergic skin reaction.
-----------------------	--------------------------------------

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	May cause an allergic skin reaction.
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
Carcinogenicity	Not carcinogenic.
IARC Monographs. Overall Evaluation of Carcinogenicity	
Not listed.	
OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)	
Not regulated.	
US. National Toxicology Program (NTP) Report on Carcinogens	
Not listed.	
Reproductive toxicity	Suspected of damaging fertility or the unborn child. Reproductive effects in the rat were seen in both parents and offspring with 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	67.7 mg/l, 96 hr
Crustacea	EC50	Daphnia magna	> 100 mg/l, 48 hr
Fish	LC50	Oncorhynchus mykiss	> 100 mg/l, 96 hr nominal concentration
Other	EC50	Lemna gibba (fronds)	0.125 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		
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	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). 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

DOT

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
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Special provisions	8, 146, 335, IB3, T4, TP1, TP29
Packaging exceptions	155
Packaging non bulk	203
Packaging bulk	241

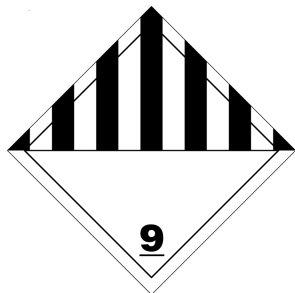
IATA

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	No.
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling. Read safety instructions, SDS and emergency procedures before handling.

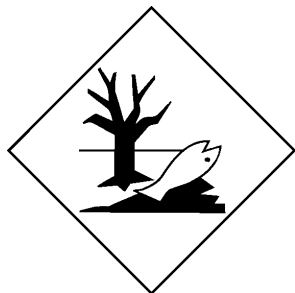
IMDG

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 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.

DOT; IATA; IMDG



Marine pollutant



General information

This product is not regulated when shipped by highway, rail, or air in non-bulk packaging (maximum capacity of 400 kg (880 lb) or less). When shipped by vessel or in bulk packaging this product is regulated according to the data shown.
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! Harmful if swallowed or absorbed through skin Causes moderate eye irritation. Avoid contact with eyes, skin, and clothing. Wash thoroughly with soap and water after handling.

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 or rinsate. Do not apply this product through any type of irrigation system. 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 1910.1001-1052)

Not regulated.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical

Yes

Classified hazard categories

Respiratory or skin sensitization
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

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

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-29-2018
Version #	4.0
HMIS® ratings	Health: 2* Flammability: 0 Physical hazard: 0
NFPA ratings	Health: 2 Flammability: 0 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.

©2018 AMVAC Chemical Corporation. All Rights Reserved. AMVAC and the AMVAC Logo are trademarks owned by AMVAC Chemical Corporation. Impact is a trademark owned by AMVAC Chemical Corporation.

ACGIH is a trademark of the American Conference of Governmental Industrial Hygienists.

CHEMTREC is a trademark of the American Chemistry Council, Inc.

HMIS is a trademark of the American Coatings Association.

NFPA is a trademark of the National Fire Protection Association, Inc.

Revision information

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