

SAFETY DATA SHEET

1. Identification

Product identifier	IMPACT® Herbicide
Other means of identification	
SDS number	323
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!

Manufacturer/Importer/Supplier/Distributor information

Manufacturer

Company name	AMVAC Chemical Corporation		
Address	4100 E Washington Blvd Los Angeles, CA 90023 USA		
Telephone	AMVAC Chemical Corp	323-264-3910	
	AMVAC Chemical Corp	323-268-1028 (FAX)	
Website	www.Amvac-Chemical.com		
E-mail	CustServ@Amvac-Chemical.com		
Emergency phone number	Medical	888-681-4261	
	CHEMTREC® (USA+Canada)	800-424-9300	
	Product Use	888-462-6822	
	CHEMTREC® (Outside USA)	+1-703-527-3887	

Supplier Not available.

2. Hazard(s) identification

Physical hazards	Not classified.	
Health hazards	Sensitization, skin	Category 1
Environmental hazards	Hazardous to the aquatic environment, acute hazard	Category 2

Label elements



Signal word	Warning
Hazard statement	May cause an allergic skin reaction. Suspected of damaging fertility or the unborn child.
Precautionary statement	
Prevention	Do not handle until all safety precautions have been read and understood. Contaminated work clothing should not be allowed out of the workplace. Use personal protective equipment as required.
Response	If on skin: Wash with plenty of water. If inhaled: Remove person to fresh air and keep comfortable for breathing. If exposed or concerned: Get medical advice/attention. If skin irritation or rash occurs: Get medical advice/attention. Wash contaminated clothing before reuse.
Storage	Store in a well-ventilated place. Keep container tightly closed. Store locked up.
Disposal	Dispose of contents/container (in accordance with related regulations). Dispose of contents/container in accordance with local/regional/national/international regulations.
Other hazards	Harmful to aquatic life.
Supplemental information	None.

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

CLP: Regulation No. 1272/2008.
DSD: Directive 67/548/EEC.
M: M-factor
vPvB: very persistent and very bioaccumulative substance.
PBT: persistent, bioaccumulative and toxic substance.
*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret. #: This substance has been assigned Community workplace exposure limit(s).

Composition comments The full text for all R- and H-phrases is displayed in section 16.

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. 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. 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 (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. For personal protection, see section 8 of the SDS.
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. For waste disposal, see section 13 of the SDS. Avoid release to the environment. Prevent further leakage or spillage if safe to do so. Do not contaminate water. 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

CAUTION Store locked up. Keep away from heat, sparks and open flame. Store in a closed container away from incompatible materials. Store in original tightly closed container. Keep container tightly closed. Store in a well-ventilated place. Keep out of the reach of children. Use care in handling/storage. 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

Avoid contact with the skin. Wear appropriate chemical resistant clothing (see label). Wear chemical protective equipment that is specifically recommended by the manufacturer. Wear suitable protective clothing. 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

Liquid. 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

Partition coefficient (n-octanol/water)

1.52 (a.i.)

Auto-ignition temperature	700 °F (371.11 °C) estimated
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Bulk density	9.43 lb/gal
Density	1.03 g/cm ³ 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	Heat, flames and sparks. Contact with incompatible materials.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	No hazardous decomposition products are known. This product may emit hazardous fumes of hydrogen chloride, carbon oxides, and unidentified organic compounds when it is heated excessively or burned. WEAR SELF-CONTAINED BREATHING APPARATUS when these conditions are present.

11. Toxicological information

Information on likely routes of exposure

Inhalation	No adverse effects due to inhalation are expected.
Skin contact	No adverse effects due to skin contact are expected. May be harmful in contact with skin. May cause sensitization by skin contact. May cause an allergic skin reaction. Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis.
Eye contact	Irritating to eyes. Direct contact with eyes may cause temporary irritation.
Ingestion	May be harmful if swallowed. May cause discomfort if swallowed. Expected to be a low ingestion hazard. However, ingestion is not likely to be a primary route of occupational exposure.
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.
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Components	Species	Test Results
Topramezone (CAS 210631-68-8)		
Acute		
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	Due to partial or complete lack of data the classification is not possible. Prolonged skin contact may cause temporary irritation.
Serious eye damage/eye irritation	Irritating to eyes. Direct contact with eyes may cause temporary irritation. Due to partial or complete lack of data the classification is not possible. None known.
Respiratory or skin sensitization	
Respiratory sensitization	Due to partial or complete lack of data the classification is not possible. Not a respiratory sensitizer.

Skin sensitization	May cause sensitization by skin contact. May cause an allergic skin reaction. Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis. This product is not expected to cause skin sensitization.
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic. Due to partial or complete lack of data the classification is not possible.
Carcinogenicity	Not classifiable as to carcinogenicity to humans. Due to partial or complete lack of data the classification is not possible.
Reproductive toxicity	May damage fertility or the unborn child. Suspected of damaging fertility or the unborn child. Not classified. This product is not expected to cause reproductive or developmental effects. 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	Due to partial or complete lack of data the classification is not possible. Not classified.
Specific target organ toxicity - repeated exposure	Not classified. Due to partial or complete lack of data the classification is not possible.
Aspiration hazard	Due to partial or complete lack of data the classification is not possible. Not an aspiration hazard.
Chronic effects	Not expected to be hazardous by WHMIS criteria. Prolonged inhalation may be harmful.

12. Ecological information

Ecotoxicity	Very toxic to aquatic life with long lasting effects. Toxic to aquatic life. Harmful to aquatic life. Harmful to aquatic life with long lasting effects. Contains a substance which causes risk of hazardous effects to the environment. Not expected to be harmful to aquatic organisms. The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.
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Components	Species	Test Results
Topramezone (CAS 210631-68-8)		
Other	EC50 Activated sludge, industrial	> 1000 mg/l, 180 minutes
Aquatic		
Algae	EC50 Algae	0.125 mg/l, 7 days (Lemna Gibba)
	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

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

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 Contract with a disposal operator licensed by the Law on Disposal and Cleaning. Collect and reclaim or dispose in sealed containers at licensed waste disposal site. This material and its container must be disposed of as hazardous waste. Must be incinerated in a suitable incineration plant holding a permit delivered by the competent authorities. Do not discharge into drains, water courses or onto the ground. 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. Dispose in accordance with all applicable regulations. Dispose of contents/container (in accordance with related regulations). When your own wastewater treatment plant is not available, collect entire waste and then charge to a licensed industrial waste management professional with manifests for industrial waste.

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 instructions). 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

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

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

15. Regulatory information

Canadian regulations This product has been classified in accordance with the hazard criteria of the CPR and the SDS contains all the information required by the CPR. 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 CPR and the SDS contains all the information required by the CPR.

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 The product is classified and labelled in accordance with EC directives or respective national laws. This Safety Data Sheet complies with the requirements of Regulation (EC) No 1907/2006. Young people under 18 years old are not allowed to work with this product according to EU Directive 94/33/EC on the protection of young people at work. Regulation (EU) No 453/2010 amending Regulation (EC) No 1907/2006 on the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH). Regulation (EC) No 1272/2008 on classification, labeling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.

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	04-07-2016
Version #	01
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 Korea. Accidental Release Prevention Substances (Presidential Decree of Toxic Chemical Control Law, Executive Order No. 19203) Korea. Dangerous Substances Threshold Quantity (Presidential Decree of Dangerous Substances Safety Management Act No. 18406, Schedule 1) Korea. Harmful Substances Prohibited from Manufacturing (Presidential Decree on the Industrial Safety and Health Act (No. 13053), Article 29) Korea. Harmful Substances Requiring Permission for Manufacture or Use (Presidential Decree on the Industrial Safety and Health Act (No. 13053), Article 30) Korea. Non-Toxic Chemicals List (National Institute of Environment Research (NIER) Public Notice No. 1997-10, as amended) Korea. Observational Chemicals (Ministerial Decree of TCCL Article 6) Korea. OELs. Regulation for Permitted Concentration of Hazardous Substances (Ministry of Labor (MOL) Public Notice No. 1986-45, as amended) Korea. Prohibited Chemical Substances (TCCL Article 11) Korea. Regulated volatile organic compounds (VOCs) (MOE Notice No. 2001-36, March 8, 2001, as amended) Korea. Restricted Chemical Substances (TCCL Article 11) Korea. Toxic Chemical Control Law (TCCL), Existing Chemicals Inventory (KECI) Korea. Toxic Chemical Control Law (TCCL), pre-1997 List Korea. Toxic Chemicals (TCCL Article 10) Korea. Toxic Release Inventory (TRI) Chemicals (TCCL Article 14) Taiwan. Dangerous Materials (Rules on Hazard Communication of Dangerous Materials and Toxic Materials) Taiwan. Industrial Precursor Chemicals (Categories and Regulations Governing Inspection and Declaration of Industrial Precursor Chemicals, MOEA Decree No. 87, as amended) Taiwan. OELs. (Standards on Workplace Atmosphere of Dangerous and Hazardous Materials) Taiwan. Toxic Chemical Substances (TCS) (List of Toxic Chemical Substances announced by the Environmental Protection Administration) Taiwan. Toxic Materials (Rules on Hazard Communication of Dangerous Materials and Toxic Materials) Japan Society for Occupational Health, Recommendation of Occupational Exposure Limits Japan Chemical Industry Association (JCIA) GHS Guideline, June 2012 JIS Z 7252:2014 Classification of chemicals based on "Globally Harmonized System of Classification and Labelling of Chemicals (GHS)" JIS Z 7253:2012 Hazard communication of chemicals based on GHS – Labelling and Safety Data Sheet (SDS) GOST 30333-2007 Chemical production safety passport. General requirements. GOST 31340-2013 Labeling of chemicals. General requirements. GOST 32419-2013 Classification of chemical products. General requirements. GOST 32424-2013 Classification of chemicals for environmental hazards. General principles. GOST 12.1.007-76 Occupational safety standard system. Noxious substances. Classification and general safety requirements. GOST 12.1.044-89. Occupational safety standards system. Fire and explosion hazard of substances and materials. Nomenclature of substances and materials. Nomenclature of indices and methods of their determination. GOST 19433-88. Dangerous goods. Classification and marking. GOST 12.1.004-91. Occupational safety standards system. Fire safety. General requirements. GOST 32425-2013 Mixtures classification of hazard for environmental. GOST 32423-2013 Mixtures classification of hazard for health. ACGIH®: American Conference of Governmental Industrial Hygienists CERCLA: Comprehensive Environmental Response, Compensation, and Liability Act EPA: Environmental Protection Agency FIFRA: Federal Insecticide, Fungicide, and Rodenticide Act IARC: International Agency for Research on Cancer NTP: National

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Revision information

Product and Company Identification: Synonyms

Composition / Information on Ingredients: Ingredients

Physical & Chemical Properties: Multiple Properties

Toxicological Information: Toxicological Property Data

Ecological Information: Ecotox Property Data

Transport Information: Material Transportation Information

HazReg Data: International Inventories

GHS: Classification