

SECTION 1: Product and company identification

Product name : Barren™ Aerosol
 Use of the substance/mixture : Aerosol
 Herbicide
 Product code : 8320
 Company : Total Solutions
 P.O. Box 240014
 Milwaukee, WI 53224 - USA
 T (414) 354-6417
 Emergency number : Chemtec: (800) 424-9300

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (GHS-US)

Flam. Aerosol 1 H222
 Eye Irrit. 2A H319
 Asp. Tox. 1 H304

Full text of H-phrases: see section 16

2.2. Label elements

GHS-US labeling

Hazard pictograms (GHS-US) :



Signal word (GHS-US) :

Danger

Hazard statements (GHS-US) :

Extremely flammable aerosol
 May be fatal if swallowed and enters airways
 Causes serious eye irritation

Precautionary statements (GHS-US) :

Keep away from heat, sparks, open flames, hot surfaces. - No smoking
 Do not spray on an open flame or other ignition source
 Pressurized container: Do not pierce or burn, even after use
 Wash thoroughly after handling
 Wear protective gloves/protective clothing/eye protection/face protection
 If swallowed: Immediately call a POISON CENTER, a doctor, Do NOT induce vomiting
 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
 Do NOT induce vomiting
 If eye irritation persists: Get medical advice/attention
 Store locked up
 Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F
 Dispose of contents/container to comply with local/regional/national/international regulations

2.3. Other hazards

No additional information available

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

Full text of H-phrases: see section 16

3.2. Mixture

Name	Product identifier	%	Classification (GHS-US)
hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, < 2% aromatics	(CAS No) 64742-47-8	20 - 40	Flam. Liq. 4, H227 Asp. Tox. 1, H304
2-(2-butoxyethoxy)ethanol, diethylene glycol monobutyl ether	(CAS No) 112-34-5	10 - 20	Eye Irrit. 2A, H319
propane	(CAS No) 74-98-6	2.5 - 10	Flam. Gas 1, H220 Compressed gas, H280

Name	Product identifier	%	Classification (GHS-US)
bromacil	(CAS No) 314-40-9	1 - 2.5	Eye Irrit. 2A, H319

SECTION 4: First aid measures

4.1. Description of first aid measures

- First-aid measures general : Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.
- First-aid measures after inhalation : Move the affected person away from the contaminated area and into the fresh air. Respiratory problems: consult a doctor/medical service.
- First-aid measures after skin contact : Take off contaminated clothing. Rinse skin with water/shower. If skin irritation or rash occurs: Get medical advice/attention.
- First-aid measures after eye contact : Rinse immediately with plenty of water for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician immediately.
- First-aid measures after ingestion : Rinse mouth. Call a poison center or a doctor if you feel unwell. Do not induce vomiting.

4.2. Most important symptoms and effects, both acute and delayed

- Symptoms/injuries : May be fatal if swallowed and enters airways.
- Symptoms/injuries after inhalation : No effects known.
- Symptoms/injuries after skin contact : Repeated exposure may cause skin dryness or cracking.
- Symptoms/injuries after eye contact : Direct contact with the eyes is likely irritating.
- Symptoms/injuries after ingestion : May be fatal if swallowed and enters airways.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically. Symptoms may be delayed.

SECTION 5: Firefighting measures

5.1. Extinguishing media

- Suitable extinguishing media : Alcohol-resistant foam. Water fog. Dry chemical powder. Carbon dioxide.
- Unsuitable extinguishing media : Do not use a water jet since it may cause the fire to spread.

5.2. Special hazards arising from the substance or mixture

- Fire hazard : Under fire conditions closed containers may rupture or explode. Extremely flammable aerosol.
- Explosion hazard : Contents under pressure. Pressurized container: may burst if heated.
- Reactivity : The product is non-reactive under normal conditions of use, storage and transport. Upon combustion: CO and CO₂ are formed.

5.3. Advice for firefighters

- Firefighting instructions : Move containers away from the fire area if this can be done without risk. Use water spray or fog for cooling exposed containers. For massive fire in cargo area, use unmanned hose holder or monitor nozzles, if possible. If not, withdraw and let fire burn out.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

- General measures : Evacuate unnecessary personnel. Stay upwind/keep distance from source. Gas is denser than air. May accumulate in low areas e.g. close to the ground. Eliminate every possible source of ignition. Isolate from fire, if possible, without unnecessary risk.

6.1.1. For non-emergency personnel

- Protective equipment : Do not enter without an appropriate protective equipment. DO NOT touch spilled material.
- Emergency procedures : Ventilate the area thoroughly, especially low lying areas (basements, work pits etc.). Advice local authorities if considered necessary.

6.1.2. For emergency responders

No additional information available

6.2. Environmental precautions

Prevent runoff from entering drains, sewers or waterways. Avoid discharge to the environment.

6.3. Methods and material for containment and cleaning up

- For containment : Eliminate every possible source of ignition. Keep combustibles (wood, paper, oil, etc.) away from spilled material. Stop leak if safe to do so. Move the cylinder to a safe and open area if the leak is irreparable. Isolate area until gas has dispersed. Prevent the product from entering drains or confined areas. For further information refer to section 8 : Exposure-controls/personal protection". Use water spray to disperse the vapors.
- Methods for cleaning up : Take up liquid spill into absorbent material.

6.4. Reference to other sections

No additional information available

SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Additional hazards when processed : Pressurized container: Do not pierce or burn, even after use.
- Precautions for safe handling : Do not use if spray button is missing or defective. Do not spray on a naked flame or any incandescent material. Do not smoke while handling product. Do not cut, weld, solder, drill, grind, or expose containers to heat, flame, sparks, or other sources of ignition. . Handling this product may result in electrostatic accumulation. Use proper grounding procedures. Do not re-use empty containers. Avoid breathing dust, fume, gas, mist, spray, vapors. Use only outdoors or in a well-ventilated area. Use personal protective equipment as required.
- Hygiene measures : Use good personal hygiene practices.

7.2. Conditions for safe storage, including any incompatibilities

- Technical measures : Pressurized container. Do not puncture, incinerate or crush. Take precautionary measures against static discharge.
- Storage conditions : Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F. Refrigerate.
- Incompatible products : Strong oxidizing agents.
- Incompatible materials : Heat sources. Sources of ignition.
- Heat-ignition : KEEP SUBSTANCE AWAY FROM: heat sources. ignition sources.
- Storage area : Aerosol 3.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

propane (74-98-6)		
ACGIH	ACGIH TWA (ppm)	1000 ppm
OSHA	OSHA PEL (TWA) (ppm)	1000 ppm
2-(2-butoxyethoxy)ethanol, diethylene glycol monobutyl ether (112-34-5)		
ACGIH	ACGIH TWA (ppm)	10 ppm
bromacil (314-40-9)		
ACGIH	ACGIH TWA (mg/m ³)	10 mg/m ³

8.2. Exposure controls

- Personal protective equipment : Gloves. Protective clothing. Safety glasses. Use appropriate personal protective equipment when risk assessment indicates this is necessary.



- Hand protection : Protective gloves.
- Eye protection : Chemical goggles or safety glasses.
- Skin and body protection : Wear suitable protective clothing.
- Respiratory protection : If permissible levels are exceeded use NIOSH mechanical filter / organic vapor cartridge or an air-supplied respirator.
- Thermal hazard protection : Use appropriate personal protective equipment when risk assessment indicates this is necessary.
- Consumer exposure controls : When using do not smoke. Use good personal hygiene practices. Take off contaminated clothing and wash before reuse. Wash hands and other exposed areas with mild soap and water before eat, drink or smoke and when leaving work.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

- Physical state : Gas
- Appearance : Aerosol. Liquid.
- Odor : mild Hydrocarbon odor
- Odor threshold : No data available
- pH : No data available
- Melting point : No data available
- Freezing point : No data available
- Boiling point : No data available

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Flash point	: -156 °F Propellant estimated
Relative evaporation rate (butyl acetate=1)	: No data available
Flammability (solid, gas)	: No data available
Explosion limits	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available
Vapor pressure	: No data available
Relative density	: No data available
Relative vapor density at 20 °C	: No data available
Specific gravity / density	: 0.788 g/ml estimated
Solubility	: Not determined.
Log Pow	: No data available
Log Kow	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
VOC content	: Not Determined

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport. Upon combustion: CO and CO₂ are formed.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

Hazardous polymerization does not occur.

10.4. Conditions to avoid

Aerosol containers are unstable at temperatures above 49°C. Avoid temperatures exceeding the flash point.

10.5. Incompatible materials

Oxidizing agents. Chlorine. Fluorine. Nitrates.

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, < 2% aromatics (64742-47-8)

LD50 dermal rabbit	> 5000 mg/kg body weight (Rabbit; Literature)
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bromacil (314-40-9)

LD50 oral rat	5200 mg/kg (Rat)
LD50 dermal rat	> 2500 mg/kg (Rat)
LD50 dermal rabbit	> 5000 mg/kg (Rabbit)
LC50 inhalation rat (mg/l)	> 4.8 mg/l/4h (Rat)
ATE CLP (oral)	5200.000 mg/kg body weight

Skin corrosion/irritation	: Not classified
Serious eye damage/irritation	: Causes serious eye irritation.
Respiratory or skin sensitization	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
Specific target organ toxicity (single exposure)	: Not classified

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Specific target organ toxicity (repeated exposure)	: Not classified
Aspiration hazard	: May be fatal if swallowed and enters airways.
Potential Adverse human health effects and symptoms	: Dizziness. Direct contact with the eyes is likely irritating.
Symptoms/injuries after inhalation	: No effects known.
Symptoms/injuries after skin contact	: Repeated exposure may cause skin dryness or cracking.
Symptoms/injuries after eye contact	: Direct contact with the eyes is likely irritating.
Symptoms/injuries after ingestion	: May be fatal if swallowed and enters airways.
Likely routes of exposure	: Skin and eyes contact.

SECTION 12: Ecological information

12.1. Toxicity

hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, < 2% aromatics (64742-47-8)	
LC50 fish 1	> 100 mg/l (Pisces)
EC50 Daphnia 1	> 100 mg/l (Invertebrata)
Threshold limit algae 1	> 100 mg/l (Algae)
bromacil (314-40-9)	
LC50 fish 1	75 mg/l 48 h; Salmo gairdneri (Oncorhynchus mykiss)
LC50 fish 2	71 mg/l (48 h; Leuciscus idus)
Threshold limit other aquatic organisms 1	1 mg/l (Pimephales promelas; Chronic)

12.2. Persistence and degradability

hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, < 2% aromatics (64742-47-8)	
Persistence and degradability	Readily biodegradable in water. Adsorbs into the soil.
bromacil (314-40-9)	
Persistence and degradability	Not readily biodegradable in water. Non degradable in the soil. Photodegradation in the air.

12.3. Bioaccumulative potential

hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, < 2% aromatics (64742-47-8)	
Log Pow	6 - 8.2
Bioaccumulative potential	High potential for bioaccumulation (Log Kow > 5).
bromacil (314-40-9)	
BCF fish 1	2.8 - 26.5 (672 h; Leuciscus idus; Fresh weight)
BCF fish 2	4.25 (388 h; Pimephales promelas; Fresh weight)
Log Pow	2.11
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods	: Collect and reclaim or dispose in sealed containers at licensed waste disposal site. . Contents under pressure. Do not puncture, incinerate or crush. Dispose of contents/container to comply with local/regional/national/international regulations.
Waste disposal recommendations	: Dispose in a safe manner in accordance with local/national regulations.
Additional information	: Empty containers should be taken for recycle, recovery or waste in accordance with local regulation. Handle empty containers with care because residual vapors are flammable. Handle unclean empty containers as full ones. Do not re-use empty containers.

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT :	Not regulated for transport
Transport document description	: UN1950 Aerosols (flammable, (each not exceeding 1 L capacity)), 2.1
UN-No.(DOT)	: UN1950
Proper Shipping Name (DOT)	: Aerosols flammable, (each not exceeding 1 L capacity)
Transport hazard class(es) (DOT)	: 2.1 - Class 2.1 - Flammable gas 49 CFR 173.115

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Hazard labels (DOT) : 2.1 - Flammable gas



DOT Packaging Non Bulk (49 CFR 173.xxx) : None
DOT Packaging Bulk (49 CFR 173.xxx) : None
DOT Special Provisions (49 CFR 172.102) : N82
DOT Packaging Exceptions (49 CFR 173.xxx) : 306
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : 75 kg
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) : 150 kg
DOT Vessel Stowage Location : A
DOT Vessel Stowage Other : 25 - Shade from radiant heat, 87 - Stow "separated from" Class 1 (explosives) except Division 14, 126 - Segregation same as for Class 9, miscellaneous hazardous materials

Additional information

Other information : This product may be eligible to be shipped as a Limited Quantity or Consumer Commodity ORM-D utilizing the exception found at 49 CFR 173.306.

ADR

No additional information available

Transport by sea

UN-No. (IMDG) : UN1950
Proper Shipping Name (IMDG) : Aerosols
Class (IMDG) : 2.1 - Flammable gases

Air transport

UN-No. (IATA) : UN1950
Proper Shipping Name (IATA) : Aerosols, flammable
Class (IATA) : 2.1 - Gases : Flammable

SECTION 15: Regulatory information

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

This product or mixture contains the following chemicals subject to the reporting requirements of SARA Title III, Section 313 and 40 CFR 372:

bromacil	CAS No 314-40-9	1 - 2.5
2-(2-butoxyethoxy)ethanol, diethylene glycol monobutyl ether	(CAS No) 112-34-5	10 - 20

propane (74-98-6)
Not listed on SARA Section 313 (Specific toxic chemical listings)

bromacil (314-40-9)
Listed on SARA Section 313 (Specific toxic chemical listings)

California Proposition 65 - This product does not contain substances known to the state of California to cause cancer and/or reproductive toxicity.

This chemical is a pesticide product registered by the 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, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label:

CAUTION Harmful if absorbed through skin. Avoid contact with eyes, skin, or clothing.

SECTION 16: Other information

Training advice : Normal use of this product shall imply use in accordance with the instructions on the packaging.

Full text of H-phrases:

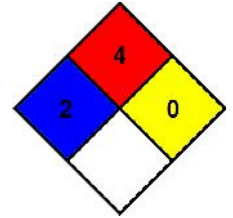
Asp. Tox. 1 Aspiration hazard Category 1

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Compressed gas	Gases under pressure Compressed gas
Eye Irrit. 2A	Serious eye damage/eye irritation Category 2A
Flam. Aerosol 1	Flammable aerosol Category 1
Flam. Gas 1	Flammable gases Category 1
Flam. Liq. 4	Flammable liquids Category 4
H220	Extremely flammable gas
H222	Extremely flammable aerosol
H227	Combustible liquid
H280	Contains gas under pressure; may explode if heated
H304	May be fatal if swallowed and enters airways
H319	Causes serious eye irritation

- NFPA health hazard : 2 - Intense or continued exposure could cause temporary incapacitation or possible residual injury unless prompt medical attention is given.
- NFPA fire hazard : 4 - Will rapidly or completely vaporize at normal pressure and temperature, or is readily dispersed in air and will burn readily.
- NFPA reactivity : 0 - Normally stable, even under fire exposure conditions, and are not reactive with water.



Prepared by: Technical Department

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