



The following SDS references the products below:

BARREN

Vendor Item Number: 0320

Manufactured By:

Total Solutions

Distributed by Kimball Midwest with the KM product-  
identification number:

80-98231

# Barren Weed Killer

## Safety Data Sheet

### SECTION 1: Product and company identification

Product name : Barren Weed Killer  
Use of the substance/mixture : Herbicide  
Industrial use  
Product code : 0320  
Company : KIMBALL MIDWEST  
PO BOX 2470  
COLUMBUS, OH 43216 - US  
T 614-219-6100  
Emergency number : 614-219-6100

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

GHS-US classification  
Flam. Liq. 4 H227  
Acute Tox. 4 (Dermal) H312  
Acute Tox. 4 H332  
(Inhalation:dust,mist)  
Skin Irrit. 2 H315  
Eye Irrit. 2A H319  
Carc. 1B H350  
STOT SE 3 H336  
STOT RE 2 H373  
Asp. Tox. 1 H304

#### 2.2. Label elements

GHS US labelling  
Hazard pictograms (GHS US)



GHS07

GHS08

Signal word (GHS US)  
Hazard statements (GHS US)

: Danger  
: Combustible liquid  
May be fatal if swallowed and enters airways.  
Harmful in contact with skin or if inhaled  
Causes skin irritation.  
Causes serious eye irritation.  
May cause drowsiness or dizziness.  
May cause cancer.  
May cause damage to organs (liver, thymus, bone marrow) through prolonged or repeated exposure.  
: Obtain special instructions before use.  
Do not handle until all safety precautions have been read and understood.  
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
Do not breathe mist, spray, vapours.  
Avoid breathing mist, spray, vapours.  
Wash thoroughly after handling  
Use only outdoors or in a well-ventilated area.  
Wear protective clothing, eye protection, protective gloves.  
If swallowed: Immediately call a POISON CENTER, a doctor.  
If on skin: Wash with plenty of water.  
If inhaled: Remove person to fresh air and keep comfortable for breathing.  
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
If exposed or concerned: Get medical advice/attention.  
Call a doctor, a POISON CENTER if you feel unwell.  
Get medical advice/attention if you feel unwell.  
Specific treatment (see First aid measures on this label).  
Specific treatment (see First aid measures on this label)  
Do NOT induce vomiting.  
If skin irritation occurs: Get medical advice/attention.  
If eye irritation persists: Get medical advice/attention.  
Take off contaminated clothing and wash it before reuse.  
In case of fire: Use dry extinguishing powder, carbon dioxide (CO2), alcohol resistant foam to extinguish.  
Store in a well-ventilated place. Keep container tightly closed.  
Store in a well-ventilated place. Keep cool.

Precautionary statements (GHS US)

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Store locked up.  
Dispose of contents/container to comply with local/regional/national 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. Substances

Not applicable

### 3.2. Mixtures

Name	Product identifier	%	GHS-US classification
Fuels, Diesel, No. 2	(CAS-No.) 68476-34-6	60 - 100	Flam. Liq. 3, H226 Acute Tox. 4 (Dermal), H312 Acute Tox. 4 (Inhalation), H332 Acute Tox. 4 (Inhalation:dust,mist), H332 Skin Irrit. 2, H315 Carc. 2, H351 STOT SE 3, H336 STOT RE 2, H373 Asp. Tox. 1, H304
Butoxyethanol	(CAS-No.) 111-76-2	10 - 30	Flam. Liq. 4, H227 Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Eye Irrit. 2A, H319 Asp. Tox. 1, H304
2-Ethylhexyl 2,4-Dichlorophenoxyacetate	(CAS-No.) 1928-43-4	0.5 - 1.5	Acute Tox. 4 (Oral), H302
Naphthalene	(CAS-No.) 91-20-3	0.1 - 1	Flam. Liq. 4, H227 Acute Tox. 4 (Oral), H302 Carc. 1B, H350 Aquatic Acute 1, H400

All hazardous chemicals, as determined by 29 CFR 1910.1200 have been listed. A specific chemical identity and/or percentage of composition has been withheld as a trade secret. Any concentration shown as a range is to protect confidentiality or is due to batch variation.

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

- First-aid measures general : If you feel unwell, seek medical advice (show the label where possible). IF exposed or concerned: Get medical advice/attention.
- First-aid measures after inhalation : If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell.
- First-aid measures after skin contact : Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse. Wash contaminated clothing before reuse. If skin irritation or rash occurs: Consult a doctor/medical service.
- First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
- First-aid measures after ingestion : Do NOT induce vomiting. Immediately call a POISON CENTER/doctor.

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

- Symptoms/effects : May cause cancer. May be fatal if swallowed and enters airways. Harmful if inhaled. Harmful in contact with skin. Causes skin irritation. Causes serious eye irritation. May cause drowsiness or dizziness. May cause damage to organs (liver, thymus, bone marrow) through prolonged or repeated exposure.
- Symptoms/effects after inhalation : Harmful if inhaled. May cause drowsiness or dizziness.
- Symptoms/effects after skin contact : Causes skin irritation. Harmful in contact with skin.
- Symptoms/effects after eye contact : Causes serious eye irritation.
- Symptoms/effects after ingestion : May be fatal if swallowed and enters airways.

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

No additional information available

## SECTION 5: Firefighting measures

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### 5.1. Extinguishing media

- Suitable extinguishing media : Dry chemical powder. Carbon dioxide. Alcohol-resistant foam.  
Unsuitable extinguishing media : Solid water jet ineffective as extinguishing medium.

### 5.2. Special hazards arising from the substance or mixture

- Fire hazard : Combustible liquid.  
Explosion hazard : Explosion risk in case of fire. Heat may build pressure, rupturing closed containers, spreading fire and increasing risk of burns and injuries. May be ignited by sparks. May form flammable/explosive vapour-air mixture.  
Reactivity : On burning: release of toxic and corrosive gases/vapours (nitrous vapours, sulphur oxides, carbon monoxide - carbon dioxide). If the product is involved in a fire, it can release toxic chlorine gases. Reacts violently with (strong) oxidizers.

### 5.3. Advice for firefighters

- Firefighting instructions : Exercise caution when fighting any chemical fire. In case of fire: Evacuate area. Fight fire remotely due to the risk of explosion. Use water spray or fog for cooling exposed containers. Take account of environmentally hazardous firefighting water.  
Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

- General measures : Remove ignition sources. Use special care to avoid static electric charges.

#### 6.1.1. For non-emergency personnel

- Protective equipment : Protective goggles. Gloves. Protective clothing.  
Emergency procedures : Evacuate unnecessary personnel. No naked flames or sparks.

#### 6.1.2. For emergency responders

- Protective equipment : Equip cleanup crew with proper protection.  
Emergency procedures : Stop leak if safe to do so. Stop release. Ventilate area.

### 6.2. Environmental precautions

Avoid release to the environment. Prevent entry to sewers and public waters.

### 6.3. Methods and material for containment and cleaning up

- For containment : Contain released product, collect/pump into suitable containers.  
Methods for cleaning up : This material and its container must be disposed of in a safe way, and as per local legislation. Take up liquid spill into inert absorbent material, e.g.: sand/earth. Clean contaminated surfaces with a soap solution.

### 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 : Handle empty containers with care because residual vapours are flammable. Keep away from open flame, sparks, excessive heat. No smoking.  
Precautions for safe handling : Comply with the legal requirements. Do not handle until all safety precautions have been read and understood. Do not breathe vapours. Use personal protective equipment as required. Do not eat, drink or smoke when using this product. Do not get in eyes, on skin, or on clothing. Handle and open the container with care. Keep away from sources of ignition - No smoking. Take precautions against electrostatic charges. Obtain special instructions before use. Remove contaminated clothing immediately.  
Hygiene measures : Wash thoroughly after handling. Wash contaminated clothing before reuse.

### 7.2. Conditions for safe storage, including any incompatibilities

- Technical measures : Comply with applicable regulations. Proper grounding procedures to avoid static electricity should be followed.  
Storage conditions : Keep container tightly closed. Keep only in the original container in a cool, well ventilated place away from: sparks, open flames, excessive heat.  
Incompatible products : Oxidizing agent.  
Incompatible materials : Sources of ignition.  
Heat and ignition sources : KEEP SUBSTANCE AWAY FROM: ignition sources. heat sources.  
Information on mixed storage : KEEP SUBSTANCE AWAY FROM: oxidizing agents.  
Storage area : Store away from heat. Store in a cool area. Store in a dry area. Store in a well-ventilated place. Keep locked up.  
Special rules on packaging : Keep only in original container. meet the legal requirements.

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### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

##### Naphthalene (91-20-3)

ACGIH	ACGIH OEL TWA [ppm]	10 ppm
ACGIH	Remark (ACGIH)	Hematologic eff; URT & eye irr; Skin; A3 (Confirmed Animal Carcinogen with Unknown Relevance to Humans: The agent is carcinogenic in experimental animals at a relatively high dose, by route(s) of administration, at site(s), of histologic type(s), or by mechanism(s) that may not be relevant to worker exposure. Available epidemiologic studies do not confirm an increased risk of cancer in exposed humans. Available evidence does not suggest that the agent is likely to cause cancer in humans except under uncommon or unlikely routes or levels of exposure)
OSHA	OSHA PEL TWA [1]	50 mg/m <sup>3</sup>
OSHA	OSHA PEL TWA [2]	10 ppm

##### 2-Ethylhexyl 2,4-Dichlorophenoxyacetate (1928-43-4)

Not applicable

##### Fuels, Diesel, No. 2 (68476-34-6)

Not applicable

##### Butoxyethanol (111-76-2)

ACGIH	ACGIH OEL TWA [ppm]	20 ppm
ACGIH	Remark (ACGIH)	Eye & URT irr
OSHA	OSHA PEL TWA [1]	240 mg/m <sup>3</sup>
OSHA	OSHA PEL TWA [2]	50 ppm

#### 8.2. Exposure controls

- Appropriate engineering controls : Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits.
- Personal protective equipment : Use appropriate personal protective equipment when risk assessment indicates this is necessary. Gloves. Protective clothing. Protective goggles. Safety glasses.



### SECTION 9: Physical and chemical properties

#### 9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Clear, red colored liquid
Odour	: Fuel oil odor
Odour threshold	: No data available
pH	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available
Flash point	: 145 °F
Relative evaporation rate (butylacetate=1)	: No data available
Flammability	: No data available
Explosive limits	: No data available
Explosive properties	: Heating may cause a fire or explosion.
Oxidising properties	: No data available
Vapour pressure	: No data available
Relative density	: No data available
Relative vapour density at 20°C	: No data available
Density	: 0.875 g/ml
Solubility	: Insoluble in water.
Partition coefficient n-octanol/water (Log Pow)	: No data available

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Partition coefficient n-octanol/water (Log Kow)	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity	: No data available
Viscosity, kinematic	: < 20 cSt
Viscosity, dynamic	: No data available
VOC content	: > 90 %

### SECTION 10: Stability and reactivity

#### 10.1. Reactivity

On burning: release of toxic and corrosive gases/vapours (nitrous vapours, sulphur oxides, carbon monoxide - carbon dioxide). If the product is involved in a fire, it can release toxic chlorine gases. Reacts violently with (strong) oxidizers.

#### 10.2. Chemical stability

Combustible liquid. Stable under normal conditions. Risk of explosion if heated under confinement. Heating may cause a fire or explosion.

#### 10.3. Possibility of hazardous reactions

Refer to section 10.1 on Reactivity.

#### 10.4. Conditions to avoid

Refer to Section 10 on Incompatible Materials. Open flame. Overheating. Sparks.

#### 10.5. Incompatible materials

Oxidizing agents.

#### 10.6. Hazardous decomposition products

Thermal decomposition produces: CO, CO<sub>2</sub>, Oxides of nitrogen and other potentially toxic fumes.

### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects

Acute toxicity : Not classified

##### Naphthalene (91-20-3)

LD50 dermal rat	> 16000 mg/kg bodyweight (Equivalent or similar to OECD 402, 24 h, Rat, Male / female, Experimental value, Dermal, 14 day(s))
LC50 Inhalation - Rat	> 0.4 mg/l (Equivalent or similar to OECD 403, 4 h, Rat, Male / female, Experimental value, (maximum achievable concentration), Inhalation (vapours), 14 day(s))
ATE CLP (oral)	500 mg/kg bodyweight

##### 2-Ethylhexyl 2,4-Dichlorophenoxyacetate (1928-43-4)

LD50 oral rat	896 mg/kg (Rat, Oral)
LD50 dermal rabbit	> 2000 mg/kg (Rabbit, Dermal)
LC50 Inhalation - Rat	> 5.4 mg/l (4 h, Rat, Inhalation)
ATE CLP (oral)	896 mg/kg bodyweight

##### Fuels, Diesel, No. 2 (68476-34-6)

LD50 oral rat	> 7600 mg/kg
LD50 dermal rat	> 4300 mg/kg
LC50 Inhalation - Rat	4.1 mg/l

##### Butoxyethanol (111-76-2)

LD50 oral rat	1300 mg/kg
LD50 dermal rat	> 2000 mg/kg
ATE CLP (oral)	1300 mg/kg bodyweight
ATE CLP (dermal)	1100 mg/kg bodyweight
ATE CLP (dust,mist)	1.5 mg/l/4h

Skin corrosion/irritation	: Causes skin irritation.
Serious eye damage/irritation	: Causes serious eye irritation.
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: May cause cancer.

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<b>Naphthalene (91-20-3)</b>	
IARC group	2B - Possibly carcinogenic to humans
National Toxicology Program (NTP) Status	3 - Reasonably anticipated to be Human Carcinogen

<b>Butoxyethanol (111-76-2)</b>	
IARC group	3 - Not classifiable

Reproductive toxicity	: Not classified
STOT-single exposure	: May cause drowsiness or dizziness.
STOT-repeated exposure	: May cause damage to organs (liver, thymus, bone marrow) through prolonged or repeated exposure.

<b>Butoxyethanol (111-76-2)</b>	
NOAEL (oral, rat, 90 days)	see comments
NOAEL (dermal, rat/rabbit, 90 days)	see comments

Aspiration hazard	: May be fatal if swallowed and enters airways.
Symptoms/effects after inhalation	: Harmful if inhaled. May cause drowsiness or dizziness.
Symptoms/effects after skin contact	: Causes skin irritation. Harmful in contact with skin.
Symptoms/effects after eye contact	: Causes serious eye irritation.
Symptoms/effects after ingestion	: May be fatal if swallowed and enters airways.
Likely routes of exposure	: Skin and eyes contact;Ingestion;Inhalation

## SECTION 12: Ecological information

### 12.1. Toxicity

Naphthalene (91-20-3)	
LC50 - Fish [1]	0.96 ppm (Oncorhynchus gorboscha, Flow-through system, Salt water, Experimental value, Lethal)
EC50 - Crustacea [1]	2.16 mg/l (Equivalent or similar to OECD 202, 48 h, Daphnia magna, Static system, Fresh water, Experimental value, Locomotor effect)

Butoxyethanol (111-76-2)	
LC50 - Fish [1]	1474 mg/l Oncorhynchus mykiss
EC50 - Crustacea [1]	100 mg/l Water flea
ErC50 algae	1840 mg/l Pseudokirchneriella subcapitata
NOEC chronic fish	> 100 mg/l
NOEC chronic crustacea	100 mg/l daphnid

### 12.2. Persistence and degradability

Naphthalene (91-20-3)	
Persistence and degradability	Readily biodegradable in the soil. Readily biodegradable in water.
Biochemical oxygen demand (BOD)	0 g O <sub>2</sub> /g substance
Chemical oxygen demand (COD)	0.22 g O <sub>2</sub> /g substance
ThOD	2.99 g O <sub>2</sub> /g substance

### 12.3. Bioaccumulative potential

Naphthalene (91-20-3)	
BCF - Fish [1]	23 – 168 (OECD 305: Bioconcentration: Flow-Through Fish Test, 8 week(s), Cyprinus carpio, Flow-through system, Fresh water, Experimental value)
Partition coefficient n-octanol/water (Log Pow)	3.4 (Experimental value, OECD 107: Partition Coefficient (n-octanol/water): Shake Flask Method, 25 °C)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

2-Ethylhexyl 2,4-Dichlorophenoxyacetate (1928-43-4)	
Partition coefficient n-octanol/water (Log Pow)	5.78 (Experimental value)

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

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Product/Packaging disposal recommendations	: Dispose of contents/container to comply with local/regional/national regulations.
Additional information	: Clean up even minor leaks or spills if possible without unnecessary risk. Handle empty containers with care because residual vapours are flammable.

### SECTION 14: Transport information

#### Department of Transportation (DOT)

Transport document description (DOT)	: NA1993 Combustible liquid, n.o.s. (Aliphatic Hydrocarbon), 3, III
UN-No.(DOT)	: NA1993
Proper Shipping Name (DOT)	: Combustible liquid, n.o.s.
Class (DOT)	: 3 - Class 3 - Flammable and combustible liquid 49 CFR 173.120
Packing group (DOT)	: III - Minor Danger
DOT Packaging Non Bulk (49 CFR 173.xxx)	: 203
DOT Packaging Bulk (49 CFR 173.xxx)	: 241
DOT Symbols	: D - Proper shipping name for domestic use only, or to and from Canada,G - Identifies PSN requiring a technical name
DOT Special Provisions (49 CFR 172.102)	: IB3,T1,T4,TP1
DOT Packaging Exceptions (49 CFR 173.xxx)	: 150
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27)	: 60 L
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75)	: 220 L
DOT Vessel Stowage Location	: A

#### Additional information

Emergency Response Guide (ERG) Number	: 128
Other information	: When transported by ground in non-bulk containers, this product utilizes the exception found under 49 CFR 173.150. If any alteration of packaging, product, or mode of transportation is further intended, different shipping names and labeling may be required.

#### ADR

No additional information available

#### Transport by sea

No additional information available

#### Air transport

No additional information available

### SECTION 15: Regulatory information

EPA Registration Number: 10088-68

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 the skin. Avoid contact with skin, eyes or clothing.

All components of this product are present and listed as Active on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

Chemical(s) subject to the reporting requirements of Section 313 or Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR Part 372.

Naphthalene	(91-20-3)	CERCLA RQ100 lb
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#### WARNING

This product can expose you to Benzene, 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](http://www.P65Warnings.ca.gov).

### SECTION 16: Other information

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

NFPA health hazard : 2 - Materials that, under emergency conditions, can cause temporary incapacitation or residual injury.



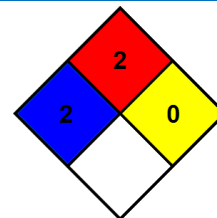
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NFPA fire hazard : 2 - Materials that must be moderately heated or exposed to relatively high ambient temperatures before ignition can occur.

NFPA reactivity : 0 - Material that in themselves are normally stable, even under fire conditions.



Prepared by: Technical Department

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