



# SAFETY DATA SHEET

This SDS complies with REACH 1907/2006 and 2001/58/EC, GHS REVISION 5, OSHA 29CFR 1910.1200

## Section 1: Chemical Product and Company Identification

PRODUCT NAME: **Terrene®**  
FORMULA: Preparation/Mixture  
PRODUCT USE: For use as a soil amendment

MANUFACTURER:  
Heliae Development, LLC  
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Gilbert, AZ 85297

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## Section 2: Hazards Identification

**GHS Hazard Class** Not Applicable. This product does not meet the physical, health, or environmental classification criteria of GHS (Globally Harmonized System).

Hazards not otherwise classified (HNOC) - None

**HAZARD CLASSIFICATION:** Not classified as hazardous based on IATA, IMDG, and DOT.

**FIRE AND EXPLOSION:** Not considered flammable or combustible.

**POTENTIAL HEALTH EFFECTS:** <0 % of mixture consists of ingredients of unknown acute toxicity

**APPEARANCE:** Green liquid

Estimated NFPA Rating:

Component	Health (Blue)	Flammability (Red)	Reactivity (Yellow)	Special (White)
Terrene®	0	0	0	----

## Section 3: Composition, Information on Ingredients

PRODUCT COMPOSITION	APPROX %	CAS NO.	EC NUMBER	CANADA DSL
Water	Balance	7732-18-5	231-791-2	Y
Organic Matter	9	--	--	N
Citric acid	0.5 – 1.5	77-92-9	201-069-1	Y
Acetic acid	1.0	64-19-7	200-580-7	Y



## **Section 4: First Aid Measures**

### **Description of First Aid Measures**

Inhalation	If inhaled, supply fresh air or oxygen. Adverse effects are not expected from this product.
Skin Contact	Wash skin with plenty of soap and water. Remove contaminated clothing.
Eye Contact	Immediately flush eyes with plenty of water for at least 15 minutes. Get immediate medical attention.
Ingestion	If swallowed do NOT induce vomiting. Rinse mouth with water. Never give anything to an unconscious person. Get immediate medical attention.

### **Most important symptoms and effects, both acute and delayed**

Symptoms/Injuries after Inhalation	May cause respiratory irritation.
Symptoms/Injuries after Skin Contact	May cause skin irritation. Symptoms may include redness, drying, defatting, and cracking of the skin.
Symptoms/Injuries after Eye Contact	May cause eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with possible redness and swelling.
Symptoms/Injuries after Ingestion	May be harmful if swallowed. May cause stomach distress, nausea, or vomiting.

### **Indication of any immediate medical attention and special treatment needed**

Symptoms may not appear immediately. In case of accident or if you feel unwell, seek medical advice immediately.

## **Section 5: Fire-fighting Measures**

Suitable extinguishing media	Use foam, dry chemical, carbon dioxide, or a suitable extinguishing media for the surrounding fire.
Special hazards arising from the substance or mixture	No data available.
Protective actions fire-fighters	Wear standard protective equipment and self-contained breathing apparatus for firefighting if necessary.
Further information	Use water spray to cool unopened containers.

## **Section 6: Accidental Release Measures**

### **Personal precautions, protective equipment, and emergency procedures**

Wear proper personal protective equipment.

### **Environmental precautions**

Prevent further leakage or spillage if safe to do so. Prevent spills or contaminated rinse water from entering sewers or watercourses.

### **Methods and materials for containment and cleaning up**

In case of small spills, absorb with inert materials and dispose of according to local regulations

In case of large spills, dike the spill, if possible. Absorb the liquid and dispose of according to local regulations.

**Reference to other Sections** For personal protection reference section 8. For disposal reference section 13.

## **Section 7: Handling and Storage**

### **Precautions for safe handling**

Wear proper protective equipment when handling this material.



Avoid contact with skin, eyes, or clothing.  
 Wash hands and face after handling this material.  
 Appropriate container should be used for disposal.  
 For precautions see section 2.

**Conditions for safe storage, including any incompatibilities**

Store upright in a cool, dry place.  
 Keep container closed when not in use.  
 Do not store with strong oxidizers.  
 Utilize chemical segregation.  
 Follow all applicable local regulations for handling and storage.

**Specific uses**

This product is intended for use as a soil amendment.

**Section 8: Exposure Controls/Personal Protection**

**Control Parameters**

Contains no substances with occupational exposure limit values.

**Exposure controls**

VENTILATION: Always provide good general, mechanical room ventilation where this chemical/material is used.

SPECIAL VENTILATION CONTROLS: None

RESPIRATORY PROTECTION: Follow the OSHA respirator regulations found in 29 CFR 1910.134 or the CEN European Standards (EU). Use a NIOSH/MSHA or European Standard (EN) approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

PROTECTIVE GLOVES: Neoprene, butyl, or nitrile rubber gloves are recommended.

EYE PROTECTION: Recommend eye protection using safety glasses or goggles.

SKIN PROTECTION: Suitable protective clothing to prevent skin contact

WORK/HYGIENE PRACTICES: Avoid contact with eyes. Wash hands after handling.

OTHER EQUIPMENT: Make safety shower, eyewash stations, and hand washing equipment available in the work area.

**Section 9: Physical and Chemical Properties**

	PRODUCT CRITERIA
APPEARANCE - COLOR:	Green
PHYSICAL STATE:	Liquid
ODOR:	Marine
ODOR THRESHOLD	No data available
PH	2.8 - 3.5
MELTING POINT/FREEZING POINT:	0 °C (32 °F)
INITIAL BOILING POINT AND BOILING RANGE:	100°C (212°F)
FLASH POINT:	No data available
EVAPORATION RATE:	No data available
FLAMMABILITY (Solid, gas)	No data available
UPPER/LOWER FLAMMABILITY OR EXPLOSIVE LIMITS	Not Measured
VAPOR PRESSURE	No data available
VAPOR DENSITY (AIR = 1)	No data available
RELATIVE DENSITY (@25 °C):	No data available
SOLUBILITY(IES)	No data available
OXIDIZING PROPERTIES	No data available
PARTITION COEFFICIENT: n-octanol/water	No data available
AUTO IGNITION TEMPERATURE	No data available
DECOMPOSITION TEMPERATURE	No data available

## Section 10: Stability and Reactivity

Reactivity:	Not reactive
Chemical Stability:	Stable under recommended conditions. However, high temperature and UV light decomposes the material.
Possibility of Hazardous Reactions:	Will not occur under normal temperatures and pressures.
Conditions to Avoid:	No data available.
Incompatibility (Materials to Avoid):	Oxidizing agents.
Hazardous Decomposition Products:	No data available.

## Section 11: Toxicological Information

**There is no toxicological information available for the product.**

GHS Required Criteria	Toxicity Criteria	Toxicity Information	Comments	Chemical Constituent
Acute Toxicity	LD50 (Oral/Rat):	3000 mg/kg		Citric acid
	LD50 (Oral/Rat):	3.53 g/kg		Acetic acid
Skin Corrosion/Irritation	LD50 (Dermal/Rabbit):	1060 mg/kg		Acetic acid
	May cause mild skin irritation at pH < 2			
Serious Eye Damage / Eye Irritation	Irritating to eyes at pH < 2			Citric acid Acetic acid
Respiratory or Skin Sensitization	Data not available			
Germ Cell Mutagenicity	Data not available			
Carcinogenicity	NTP	Not listed		
	IARC	Not listed		
	OSHA	Not listed		
Reproductive Toxicity	Data not available			
STOT -- Single Exposure	Data not available			
STOT -- Repeated Exposure	Data not available			
Aspiration Hazard	Data not available			

STOT = Specific Target Organ Toxicity

## Section 12: Ecological Information

		Chemical Constituent
Toxicity:	LC50: 160 mg/L, Carcinus maenas (Green or European shore crab); 48 hr	Citric acid
	LC50: 440 mg/L, Leuciscus idus melanotus; 48hr.	Citric acid
	EC50: 156 mg/L, Chlorococcales (Green Algae Order); freshwater static; 24 hr	Acetic acid
	LC50: 116mg/L, Crangon septemspinosa (Bay Shrimp, Sand Shrimp)	Acetic acid
Persistence and degradability:	Readily biodegradable	
Bioaccumulative potential	No information is available.	
Mobility in soil:	No information is available.	
PBT and vPvB assessment:	PBT/vPvB assessment not available as chemical assessment not required/not conducted	
Other adverse effects:	No information is available.	

## Section 13: Disposal Considerations

**Waste from residues/unused products:** Follow the waste disposal requirements of your country, state, or local authorities.

**Contaminated packaging:** Contaminated packaging material should be disposed of as stated above for residues and unused product.

**Rinsate:** Do not dispose of rinse water containing product in a sanitary sewer system or stormwater drainage system.

## Section 14: Transport Information



<b><u>DOT TRANSPORT:</u></b>		Not Regulated
<b><u>ADR = International Carriage of Dangerous Goods by Road</u></b>		Not Regulated
<b><u>SEA TRANSPORT:</u></b>	IMDG	Not Regulated
<b><u>AIR TRANSPORT:</u></b>	IATA/ICAO	Not Regulated

## **Section 15: Regulatory Information**

### TOXIC SUBSTANCE CONTROL ACT (TSCA) STATUS:

This product is in compliance with rules, regulations, and orders of TSCA. All components are either listed on a federal chemical inventory or are considered exempt.

### SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 (SARA) TITLE III SECTION 313 SUPPLIER NOTIFICATION:

This regulation requires submission of annual reports of toxic chemical(s) that appear in section 313 of the Emergency Planning and Community Right To Know Act of 1986 and 40 CFR 372. This information must be included in all SDS's that are copied and distributed for the material.

The Section 313 toxic chemicals contained in this product are: None

### CALIFORNIA PROPOSITION 65:

This regulation requires a warning for California Proposition 65 chemical(s) under the statute.

The California proposition 65 chemical(s) contained in this product are: None

### STATE RIGHT-TO-KNOW TOXIC SUBSTANCE OR HAZARDOUS SUBSTANCE LIST:

Massachusetts's hazardous substance(s):	Not listed
Pennsylvania hazardous substance code(s):	Not listed
New Jersey	Not listed

### CANADA:

WHMIS-2015: This SDS is in compliance with WHMIS 2015 (HPR / new HPA).

### EUROPEAN UNION:

This product has been reviewed for compliance with the following European Community Directives: REACH 1907/2006; Regulation (EC) No 1272/2008 on classification, labeling, and packaging (CLP) of substances and mixtures.

## **Section 16: Other Information**

Initial issue date:	April 27, 2016
Final revision date:	Feb 13, 2020
Revision Number:	4
Revision explanation	New formula with acetic acid
Information Sources:	RTECS, ECHA, REACH, OSHA 29CFR 1910.1200

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