

## 1. Identification

<b>Product identifier</b>	<b>Ethyl Lactate:Ethanol Tincture</b>
<b>Other means of identification</b>	
<b>Synonyms</b>	Ethyl lactate blender * ethyl lactate extract * ethyl lactate flavour base * ethyl lactate flavour * ethyl lactate spirits * ethyl lactate concentrate * organic ethanol:ethyl lactate tincture
<b>Recommended use</b>	Food ingredient.
<b>Recommended restrictions</b>	Uses other than the recommended use.
<b>Manufacturer/Importer/Supplier/Distributor information</b>	
<b>Company name</b>	Greenfield Global Inc. (The technical data referenced below applies to products sold by Greenfield Global Inc., under the names Greenfield Global, Pharmco, and Commercial Alcohols.)
<b>Address</b>	6985 Financial Drive Mississauga, Ontario L5N 0G3 Canada
<b>Telephone</b>	(905) 790-7500
<b>Website</b>	<a href="http://www.greenfield.com">http://www.greenfield.com</a>
<b>24-Hour Emergency Contact:</b>	CHEMTREC: 1-800-424-9300

## 2. Hazard identification

<b>Physical hazards</b>	Flammable liquids	Category 2
<b>Health hazards</b>	Serious eye damage/eye irritation	Category 2
<b>Label elements</b>		



<b>Signal word</b>	Danger
<b>Hazard statement</b>	Highly flammable liquid and vapour. Causes serious eye irritation.
<b>Precautionary statement</b>	
<b>Prevention</b>	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Ground and bond container and receiving equipment. Wash hands thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection.
<b>Response</b>	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. IF IN EYES: 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.
<b>Storage</b>	Store in a well-ventilated place. Keep cool.
<b>Disposal</b>	Dispose of contents/container in accordance with local/regional/national/international regulations.
<b>Supplemental information</b>	None.
<b>Other hazards</b>	None known.

## 3. Composition/information on ingredients

### Mixtures

Chemical name	Common name and synonyms	CAS number	%
Ethanol		64-17-5	90 - <93

Chemical name	CAS number	%
Ethyl lactate	97-64-3	1 - <3

#### Composition comments

All concentrations are in percent by weight.  
 Note C: Some organic substances may be marketed either in a specific isomeric form or as a mixture of several isomers. In this case the supplier must state on the label whether the substance is a specific isomer or a mixture of isomers

## 4. First-aid measures

#### Inhalation

Move to fresh air. Call a physician if symptoms develop or persist.

#### Skin contact

Take off immediately all contaminated clothing. Rinse skin with water/shower. Get medical attention if irritation develops and persists.

#### Eye contact

Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.

#### Ingestion

Rinse mouth. Get medical attention if symptoms occur.

#### Most important symptoms/effects, acute and delayed

Headache. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Coughing.

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

Provide general supportive measures and treat symptomatically. Thermal burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Keep victim under observation. Symptoms may be delayed.

#### General information

Take off all contaminated clothing immediately. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Wash contaminated clothing before reuse.

## 5. Fire-fighting measures

#### Suitable extinguishing media

Water fog. Alcohol resistant foam. Dry chemical powder. Carbon dioxide (CO<sub>2</sub>).

#### Unsuitable extinguishing media

Do not use water jet as an extinguisher, as this will spread the fire.

#### Specific hazards arising from the chemical

Vapours may form explosive mixtures with air. Vapours may travel considerable distance to a source of ignition and flash back. During fire, gases hazardous to health may be formed.

#### Special protective equipment and precautions for firefighters

Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

#### Fire fighting equipment/instructions

In case of fire and/or explosion do not breathe fumes. 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

Highly flammable liquid and vapour.

## 6. Accidental release measures

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

Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Wear appropriate protective equipment and clothing during clean-up. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. 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

Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil etc) away from spilled material. Take precautionary measures against static discharge. Use only non-sparking tools. The product is completely soluble in water.

Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Following product recovery, flush area with water.

Small Spills: Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.

**Environmental precautions** Avoid discharge into drains, water courses or onto the ground.

## 7. Handling and storage

**Precautions for safe handling** Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. When using do not smoke. Explosion-proof general and local exhaust ventilation. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Use non-sparking tools and explosion-proof equipment. Avoid contact with eyes. Avoid prolonged exposure. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.

**Conditions for safe storage, including any incompatibilities** Keep away from heat, sparks and open flame. Prevent electrostatic charge build-up by using common bonding and grounding techniques. Store in a cool, dry place out of direct sunlight. Store in tightly closed container. Store in a well-ventilated place. Keep in an area equipped with sprinklers. Store away from incompatible materials (see section 10 of the SDS).

## 8. Exposure controls/personal protection

### Occupational exposure limits

#### US. ACGIH Threshold Limit Values (TLV)

Components	Type	Value
Ethanol (CAS 64-17-5)	STEL	1000 ppm

#### Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2), as amended

Components	Type	Value
Ethanol (CAS 64-17-5)	TWA	1880 mg/m <sup>3</sup>
		1000 ppm

#### Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended)

Components	Type	Value
Ethanol (CAS 64-17-5)	STEL	1000 ppm

#### Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act), as amended

Components	Type	Value
Ethanol (CAS 64-17-5)	STEL	1000 ppm

#### Canada. New Brunswick OELs: Threshold Limit Values (TLVs) Based on the 1991 and 1997 ACGIH TLVs and BEIs Publication (New Brunswick Regulation 91-191)

Components	Type	Value
Ethanol (CAS 64-17-5)	STEL	1000 ppm

#### Canada - Northwest Territories

Components	Type	Value
Ethanol (CAS 64-17-5)	STEL	1250 ppm
	TWA	1000 ppm

#### Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended

Components	Type	Value
Ethanol (CAS 64-17-5)	STEL	1000 ppm

#### Canada. Quebec OELs. (Ministry of Labor - Regulation respecting occupational health and safety)

Components	Type	Value
Ethanol (CAS 64-17-5)	TWA	1000 ppm

#### Canada. Saskatchewan OELs (Occupational Health and Safety Regulations, 1996, Table 21), as amended

Components	Type	Value
Ethanol (CAS 64-17-5)	15 minute	1250 ppm
	8 hour	1000 ppm

**Biological limit values** No biological exposure limits noted for the ingredient(s).

<b>Appropriate engineering controls</b>	Explosion-proof general and local exhaust ventilation. Good general ventilation should be used. 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. If exposure limits have not been established, maintain airborne levels to an acceptable level. Provide eyewash station and safety shower.
<b>Individual protection measures, such as personal protective equipment</b>	
<b>Eye/face protection</b>	Chemical goggles are recommended.
<b>Skin protection</b>	
<b>Hand protection</b>	Wear appropriate chemical resistant gloves. Suitable gloves can be recommended by the glove supplier.
<b>Other</b>	Wear suitable protective clothing.
<b>Respiratory protection</b>	If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. Selection and use of respiratory protective equipment should be in accordance with CSA Standard Z94.4. Appropriate respirator selection should be made by a qualified professional.
<b>Thermal hazards</b>	Wear appropriate thermal protective clothing, when necessary.
<b>General hygiene considerations</b>	When using do not smoke. 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.

## 9. Physical and chemical properties

<b>Physical state</b>	Liquid.
<b>Form</b>	Liquid.
<b>Colour</b>	Colourless, clear.
<b>Odour</b>	Alcoholic.
<b>Melting point/freezing point</b>	-100 °C (-148 °F) estimated
<b>Boiling point or initial boiling point and boiling range</b>	78.3 - 100 °C (172.94 - 212 °F) estimated
<b>Flammability</b>	Highly flammable liquid
<b>Upper/lower flammability or explosive limits</b>	
<b>Explosive limit - lower (%)</b>	19 (for Ethanol)
<b>Explosive limit – upper (%)</b>	3.3 (for Ethanol)
<b>Flash point</b>	16 °C (60.8 °F) (Closed cup)
<b>Auto-ignition temperature</b>	370 °C (698 °F)
<b>Decomposition temperature</b>	Property has not been measured.
<b>pH</b>	Property has not been measured.
<b>pH concentration</b>	Property has not been measured.
<b>Kinematic viscosity</b>	Property has not been measured.
<b>Kinematic viscosity temperature</b>	Property has not been measured.
<b>Solubility</b>	
<b>Solubility (water)</b>	100 % Completely soluble
<b>Partition coefficient (n-octanol/water) (log value)</b>	Not applicable, the product is a mixture.
<b>Vapour pressure</b>	44 mmHg (Ethanol)
<b>Vapour pressure temp.</b>	20 °C (68 °F)
<b>Density and/or relative density</b>	
<b>Density</b>	Property has not been measured.
<b>Relative density</b>	0.85 - 0.865

<b>Relative density temperature</b>	20 °C (68 °F)
<b>Vapour density</b>	Property has not been measured.
<b>Vapour density temp.</b>	Property has not been measured.
<b>Particle characteristics</b>	Not applicable, material is a liquid.
<b>Other information</b>	
<b>Dynamic viscosity</b>	1.35 cP
<b>Dynamic viscosity temperature</b>	20 °C (68 °F)
<b>Explosive properties</b>	Not explosive.
<b>Oxidising properties</b>	Not oxidising.

## 10. Stability and reactivity

<b>Reactivity</b>	The product is stable and non-reactive under normal conditions of use, storage and transport.
<b>Chemical stability</b>	Material is stable under normal conditions.
<b>Possibility of hazardous reactions</b>	No dangerous reaction known under conditions of normal use.
<b>Conditions to avoid</b>	Avoid heat, sparks, open flames and other ignition sources. Avoid temperatures exceeding the flash point. Contact with incompatible materials.
<b>Incompatible materials</b>	Strong oxidising agents.
<b>Hazardous decomposition products</b>	No hazardous decomposition products are known.

## 11. Toxicological information

### Information on likely routes of exposure

<b>Inhalation</b>	Prolonged inhalation may be harmful.
<b>Skin contact</b>	Prolonged skin contact may cause temporary irritation.
<b>Eye contact</b>	Causes serious eye irritation.
<b>Ingestion</b>	May cause discomfort if swallowed.

**Symptoms related to the physical, chemical and toxicological characteristics** Headache. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Coughing.

### Information on toxicological effects

**Acute toxicity** Not known.

Components	Species	Test Results
Ethanol (CAS 64-17-5)		
<b><u>Acute</u></b>		
<b>Dermal</b>		
LD50	Rat	> 2000 mg/kg
<b>Inhalation</b>		
<i>Vapour</i>		
LC50	Mouse	39 g/m <sup>3</sup> , 4 Hours
<b>Oral</b>		
LD50	Rat	7000 - 11000 mg/kg

**Skin corrosion/irritation** Prolonged skin contact may cause temporary irritation.

**Serious eye damage/eye irritation** Causes serious eye irritation.

### Respiratory or skin sensitisation

<b>Respiratory sensitisation</b>	Not a respiratory sensitiser.
<b>Skin sensitisation</b>	This product is not expected to cause skin sensitisation.

<b>Germ cell mutagenicity</b>	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
<b>Carcinogenicity</b>	Not classifiable as to carcinogenicity to humans.
<b>ACGIH Carcinogens</b>	
Ethanol (CAS 64-17-5)	A3 Confirmed animal carcinogen with unknown relevance to humans.
<b>Canada - Manitoba OELs: carcinogenicity</b>	
Ethanol (CAS 64-17-5)	Confirmed animal carcinogen with unknown relevance to humans.
<b>Canada - New Brunswick OELs: Carcinogen category</b>	
Ethanol (CAS 64-17-5)	A3: Confirmed animal carcinogen
<b>Reproductive toxicity</b>	This product is not expected to cause reproductive or developmental effects.
<b>Specific target organ toxicity - single exposure</b>	Not classified.
<b>Specific target organ toxicity - repeated exposure</b>	Not classified.
<b>Aspiration hazard</b>	Not an aspiration hazard.
<b>Chronic effects</b>	Prolonged inhalation may be harmful.

## 12. Ecological information

**Ecotoxicity** 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.

<b>Components</b>	<b>Species</b>	<b>Test Results</b>
Ethanol (CAS 64-17-5)		
<b>Aquatic</b>		
<i>Acute</i>		
Crustacea	LC50	Ceriodaphnia dubia 5012 mg/l, 48 hours
		Daphnia magna 454 mg/l, 11 days
Fish	LC50	Pimephales promelas 13480 mg/l, 96 hours
<i>Chronic</i>		
Crustacea	NOEC	Ceriodaphnia dubia 9.6 mg/l, 10 days

**Persistence and degradability** No data is available on the degradability of this product.

**Bioaccumulative potential** No data available.

**Partition coefficient n-octanol / water (log Kow)**

Ethanol (CAS 64-17-5) -0.31

**Mobility in soil** No data available.

**Other adverse effects** No data available.

## 13. Disposal considerations

**Disposal instructions** Collect and reclaim or dispose in sealed containers at licensed waste disposal site. 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** 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.

**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

**UN number** UN1987

**UN proper shipping name** ALCOHOLS, N.O.S. (Ethanol)  
**Transport hazard class(es)**  
**Class** 3  
**Subsidiary hazard** -  
**Packing group** II  
**Environmental hazards** No.  
**Special precautions for user** Read safety instructions, SDS and emergency procedures before handling.

#### IATA

**UN number** UN1987  
**UN proper shipping name** Alcohols, n.o.s. (Ethanol)  
**Transport hazard class(es)**  
**Class** 3  
**Subsidiary hazard** -  
**Packing group** II  
**Environmental hazards** No.  
**ERG Code** 3L  
**Special precautions for user** Read safety instructions, SDS and emergency procedures before handling.

#### IMDG

**UN number** UN1987  
**UN proper shipping name** ALCOHOLS, N.O.S. (Ethanol)  
**Transport hazard class(es)**  
**Class** 3  
**Subsidiary hazard** -  
**Packing group** II  
**Environmental hazards**  
**Marine pollutant** No.  
**EmS** F-E, S-D  
**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.

## 15. Regulatory information

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

### **Canada Controlled Drugs and Substances Act, Schedule I**

Not regulated.

### **Canada Controlled Drugs and Substances Act, Schedule II**

Not regulated.

### **Canada Controlled Drugs and Substances Act, Schedule III**

Not regulated.

### **Canada Controlled Drugs and Substances Act, Schedule IV**

Not regulated.

### **Canada Controlled Drugs and Substances Act, Schedule V**

Not regulated.

### **Canada Controlled Drugs and Substances Act, Schedule VI**

Not regulated.

### **Canada Controlled Drugs and Substances Act, Schedule VII**

Not regulated.

### **Canada Controlled Drugs and Substances Act, Schedule VIII**

Not regulated.

### **Export Control List (CEPA 1999, Schedule 3)**

Not listed.

### **Greenhouse Gases**

Not listed.

## Precursor Control Regulations

Not regulated.

## International regulations

### Stockholm Convention

Not listed.

### Rotterdam Convention

Not listed.

### Kyoto Protocol

Not listed.

### Montreal Protocol

Not listed.

### Basel Convention

Not listed.

## International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Industrial Chemicals (AICIS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
Taiwan	Taiwan Chemical Substance Inventory (TCSI)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

\*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** 01-November-2021

**Revision date** 04-March-2026

**Version No.** 02

**Disclaimer** This product is subject to Greenfield Global Inc.'s terms and conditions, which can be found at <http://www.greenfield.com/tc-po-can/>. Greenfield cannot anticipate all conditions under which this information and this product, or the products of other manufacturers in combination with this product, may be used. The user is responsible for the proper and safe use, handling, storage and disposal of the product, and assumes liability for any loss, injury, damage or expense arising from any failure to do so. The data in this sheet is based on information and experience available at the time of writing.