

## Viridis Chemical Ethyl Acetate, Urethane Grade Safety Data Sheet

### SECTION 1: IDENTIFICATION AND COMPANY INFORMATION

**Product identifier:** ETHYL ACETATE

**Other identifiers:** Ethyl ethanoate; Acetoxyethane; Acetic acid ethyl ester; Acetic ether

**CAS Number:** 141-78-6

**Manufacturer:** Viridis Chemical Company  
3309 East 8<sup>th</sup> Street  
Columbus, NE 68601  
USA  
[info@viridiscochemical.com](mailto:info@viridiscochemical.com)  
[www.viridiscochemical.com](http://www.viridiscochemical.com)

**Exclusive distributor:** Helm U.S. Corporation  
11700 Katy Freeway  
Energy Tower - Suite 600  
Houston, TX 77079  
USA  
[info@helmusa.com](mailto:info@helmusa.com)  
[www.helmusa.com](http://www.helmusa.com)

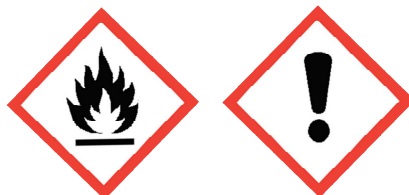


### SECTION 2: HAZARD IDENTIFICATION

**Physical Hazard:** Flammable Liquid: Category 2

**Health Hazard:** Serious eye damage/eye irritation: Category 2A  
Specific target organ toxicity, single exposure: Category 3

**Hazard symbols:**



**Signal Words:** **DANGER!**

**Hazard Statement(s):** H225: Highly flammable liquid and vapor.  
H319: Causes serious eye irritation  
H336: May cause drowsiness or dizziness

**Precautionary Statements:**

P210: Keep away from heat/sparks/open flames/hot surfaces.  
 P233: Keep containers tightly closed.  
 P240: Ground/bond containers and equipment.  
 P241: Use explosion-proof electrical/lighting/ventilation equipment.  
 P242: Use non-sparking tools.  
 P243: Take precaution against static discharge.  
 P280: Wear protective clothing/protective gloves/eye/face protection.  
 P264: Wash hands thoroughly after handling.  
 P261: Avoid breathing fumes/mist/vapors/spray.  
 P271: Use outdoors or in a well-ventilated area.  
 P370/P378: In case of fire: use water spray, CO<sub>2</sub>, dry chemical or foam.  
 P303/P361/P353: On skin: take off contaminated clothing and rinse with water.  
 P305/P351/P338: In eyes: rinse with water for at least 15 minutes.  
 P304/P340: Inhalation: remove to fresh air and keep comfortable for breathing.  
 P312: Call a Poison Control Center if feeling unwell.  
 P233: Keep container tightly closed.  
 P403/P235: Store in a well-ventilated place. Keep cool.  
 P405: Store locked up.  
 P501: Dispose content/containers to an appropriate treatment and disposal facility in accordance with applicable laws and regulations.

### **SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS**

Chemical Name	Identification	Concentration
Ethyl Acetate	CAS No.: 141-78-6 EC No.: 205-500-4	99.8 min. (by wt)

### **SECTION 4: FIRST AID MEASURES**

**General Information:** Remove contaminated, soaked clothing immediately and dispose safely. Pay attention to own safety. Show Safety Data Sheet to medical personnel.

**Skin Contact:** Wash off immediately with soap and water while removing all contaminated clothing. Get medical attention if symptoms occur.

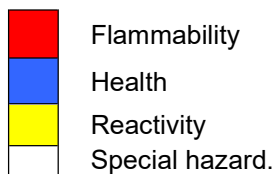
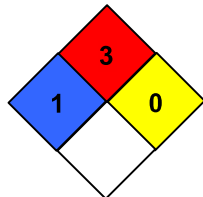
**Eye Contact:** Immediately flush with plenty of water for at least 15 minutes. If eye irritation persists, seek immediate medical advice attention.

**Inhalation:** Move immediately to fresh air and keep at rest in a position comfortable for breathing. Seek immediate medical attention.

**Ingestion:** Seek immediate medical attention. Do not induce vomiting. If vomiting occurs, keep head low so that stomach contents does not go into the lungs.

### **SECTION 5: Fire-Fighting Measures**

NFPA Hazard ID:



Hazard rating: 0 – Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe

**Extinguishing Media:** Water spray, dry chemical, carbon dioxide, foam.

**Special Hazards:** Vapors may cause flash fire or ignite explosively. Vapors may travel considerable distance to a source of ignition and flash back. Prevent buildup of vapors or gases to explosive concentrations.

**Special Procedures:** Water may be ineffective in fighting fire. Use water spray to keep exposed containers cool.

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

## **SECTION 6: ACCIDENTAL RELEASE MEASURES**

**Personal Precautions:** Avoid contact with skin and eyes. Keep away from heat and ignition sources. Provide proper ventilation. Wear proper protective personal protective equipment.

**Environmental Precautions:** Avoid release to the environment.

**Containment/Clean-up:** Eliminate sources of ignition. Keep unauthorized personnel away. Keep upwind. Use only spark free tools. Absorb spill with inert material, then place in a container for chemical waste. Dike far ahead of larger spill for later recovery and disposal. All equipment used when handling the product must be grounded. Prevent entry into waterways, sewer, basements or confined areas and stop the flow of material, if possible without risk.

**Notification Procedure:** Inform authorities as required by local, state and national laws.

## **SECTION 7: HANDLING AND STORAGE**

**Safe Handling:** Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Take precautionary measures against static discharges. Use personal protective equipment as required. Avoid breathing mists or vapors. Avoid contact with eyes, skin, and clothing. Do not taste or swallow. Use only with adequate ventilation. Wash hands thoroughly after handling. Check hazard prevention below.

**Hazard Prevention:** Keep away from extreme heat, sparks, open flames, and hot surfaces. No smoking. Keep container tightly closed. Ground container and receiving equipment. Use explosion-proof electrical, ventilating, lighting, equipment. Use only spark free tools. Take precautionary measures against static discharge. Avoid breathing dusts, fumes, gases, mists, vapors, or spray. Wear personal protective equipment. Wash hands thoroughly after handling. Use only outdoors or in a well-ventilated area. Good general ventilation of 10 changes per hour 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. An eye wash and safety shower must be available in the immediate work area.

**Personal Protection:** Use chemicals resistant gloves. 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. Respirator type: Chemical respirator with organic vapor cartridge. Use eye protection with splash guard or full-face mask when handling.

**Safe Storage:** Keep away from food, drink and animal feeding stuffs. Keep container tightly closed in a cool, well-ventilated place. Ground container and transfer equipment to eliminate static electric sparks. Comply with all national, state, and local codes pertaining to the storage, handling, dispensing, and disposal of flammable liquids.

**Disposal:** Follow local, state and national laws and regulation for the disposal of chemical products. Do not disperse in the environment. Since emptied containers retain product residues, follow label warning and precautionary measure even after the container is emptied.

## **SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

### **Occupational Exposure Limits:**

Component	Type	Exposure Limits	Source
Ethyl Acetate	TWA	400 ppm	US OSHA Table Z-1-A (29 CFR 1910.100) (1989)
Ethyl Acetate	PEL	400 ppm	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (2006)
Ethyl Acetate	TWA	400 ppm	US ACGIH Threshold Value Limits (2011)
Ethyl Acetate	IDHL	2000 ppm 10% LEL	US NIOSH Table of IDHL Values (1994)

**Engineering Controls:** Good general ventilation (typically 10 air changes per hour) should be used. Local ventilation is preferred. Explosion-proof equipment should be used in mechanical ventilation systems.

**Personal Protection:** A safety shower and eyewash should be readily available. Wear safety glasses with side shield or goggles. Wear a full-face respirator, if needed. Wear chemical-resistant gloves. If engineering controls do not maintain airborne concentration below occupational exposure limits; an approved respirator must be worn: air-purifying respirators with appropriate government approved filter or cartridge. Contact health and safety professional for specific information.

## SECTION 9: PHYSICAL PROPERTIES

Formula	C <sub>4</sub> H <sub>8</sub> O <sub>2</sub>
Molecular weight	88.1051
Physical state:	Liquid
Form:	Liquid
Color:	Colorless
Odor:	Fruity
Odor threshold:	No data available.
pH:	No data available.
Freezing point:	-83 °C
Boiling point	77 °C
Flash Point:	-4 °C
Evaporation rate:	6 (butyl acetate=1)
Flammability (solid, gas):	Class IB Flammable Liquid
Vapor pressure:	12.4 kPa (25 °C)
Vapor density:	3.04 AIR=1
Relative density:	0.9 (20 °C)
Solubility in water	100 g/l (25 °C)
Partition coefficient (n-octanol/water):	0.73
Auto-ignition temperature:	426.7 °C
Lower Explosion Limit	2.2 %v
Upper Explosion Limit	11.0 %v
Decomposition temperature:	>800 °C
Viscosity:	0.46 cP (25 °C)

## SECTION 10: STABILITY, REACTIVITY AND CHEMICAL COMPATIBILITY

No dangerous reactions known under condition of normal use at room temperature and pressure. The material is chemically stable under these conditions. Avoid extreme heat, flames and sparks to prevent accidental ignition. **Incompatible with strong oxidizing agents, strong alkalis, strong acids and nitrates. May attack some plastics, rubbers and coatings.**

## SECTION 11: TOXICOLOGICAL INFORMATION

<b>Ingestion:</b>	Irritating. May cause nausea, stomach pain and vomiting.
<b>Inhalation:</b>	May cause irritation to the respiratory system. May cause drowsiness or dizziness
<b>Eye contact:</b>	Causes serious eye irritation.
<b>Skin contact:</b>	Causes mild skin irritation. Not know as a skin sensitizer.
<b>Specific target organ toxicity:</b>	None known.
<b>Acute Toxicity:</b>	

<b>Oral:</b>	LD50 (Rat): 5.6 g/kg
<b>Dermal:</b>	LD50 (Rabbit): >18,000 mg/kg
<b>Inhalation:</b>	LD50 (Mouse, 4 hr): 1,500 mg/l
<b>Repeated dose toxicity:</b>	No data available

### **Carcinogenicity:**

IARC Monographs on the Evaluation of Carcinogenic Risks to Humans, US. National Toxicology Program (NTP) Report on Carcinogens, and US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050): No known evidence of carcinogenic properties. No mutagenic effect identified in vivo or in vitro.

### **SECTION 12: ECOLOGICAL INFORMATION**

Hazard to the aquatic environment for single exposure

**Fish:** LC 50 (Fathead minnow (*Pimephales promelas*), 96 h): 220 - 250 mg/l Mortality  
LC 50 (Rainbow trout, Donaldson trout (*Oncorhynchus mykiss*), 96 h): 352 - 500 mg/l Mortality  
LC 50 (Carp (*Leuciscus idus melanotus*), 48 h): 270 mg/l Mortality

**Invertebrates:** No data available

Chronic hazard to the aquatic environment, no data available.

Expected to be readily biodegradable

BOD/COD ratio not available

No data on bioaccumulation

Partition coefficient n-octanol/water: 073

The product is water soluble and may spread into the water system if dispersed into the environment. 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.

### **SECTION 13: DISPOSAL CONSIDERATIONS**

Generation of waste should be avoided or minimized whenever possible. Dispose of spilled material in accordance with federal, state and local regulations for hazardous waste. Since empties containers retain product residue, follow all warnings and handling requirements. Residual vapors may explode on ignition; do not cut drill, grind or weld containers.

**US EPA Hazardous Waste Code:** U112

### **SECTION 14: TRANSPORT INFORMATION**

#### **US DOT:**

UN number:	UN 1173
UN proper shipping name:	Ethyl acetate
Hazard Class:	3
Packing group:	II

Reportable Quantity (RQ) 5,000 lbs. / 2270 kg  
ERG No.: 129  
Marine Pollutant: No

**IMDG:**

UN number: UN 1173  
UN proper shipping name: Ethyl acetate  
Hazard Class: 3  
EmS Code: F-E, S-D  
Packing group: II  
Marine Pollutant: No

**IATA:**

UN number: UN 1173  
Proper Shipping Name: Ethyl acetate  
Hazard Class: 3  
Marine Pollutant: No  
Packing group: II

**SECTION 15: REGULATORY INFORMATION**

**US Federal Regulations:**

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D) US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050): None present or none present in regulated quantities.

CERCLA Hazardous Substance List (40 CFR 302.4): Reportable quantity: 5000 lbs.

SARA 302 Extremely hazardous substance None present, or none present in regulated quantities.

SARA 304 Emergency release notification: 5,000 lbs.

SARA 313 (TRI reporting): None present, or none present in regulated quantities.

Clean Water Act Section 311 Hazardous Substances (40 CFR 117.3): None present, or none present in regulated quantities.

**US State Regulations:**

California Proposition 65: No ingredient regulated by CA Prop 65 present.

New Jersey and Community Right to Know Act: Listed

Massachusetts Right to Know Act: Listed

Pennsylvania Right to Know Act: Listed

Rhode Island Right to Know Act: Listed

**Inventory Status**

Australia AICS: On or in compliance with the inventory  
Canada DSL Inventory List: On or in compliance with the inventory  
EINECS, ELINCS or NLP: On or in compliance with the inventory

Japan (ENCS) List:	On or in compliance with the inventory
China Inv. Existing Chemical Substances:	Not in compliance with the inventory.
Korea Existing Chemicals Inv. (KECI):	On or in compliance with the inventory
Canada NDSL Inventory:	Not in compliance with the inventory.
Philippines PICCS:	On or in compliance with the inventory
US TSCA Inventory:	On or in compliance with the inventory
New Zealand Inventory of Chemicals:	On or in compliance with the inventory
Japan ISHL Listing:	On or in compliance with the inventory
Japan Pharmacopoeia Listing:	Not in compliance with the inventory.

#### **SECTION 16: OTHER INFORMATION**

<b>NFPA:</b>	Health: 1	Flammability: 3	Instability: 0
<b>HMIS:</b>	Health: 1	Flammability: 3	Physical: 0

#### **DISCLAIMER**

The information presented in this Material Safety Data Sheet (MSDS) was prepared by technical personnel based on data that they deem accurate in their good faith and judgment. However, the information provided herein is provided "AS IS," and Viridis Chemical Company and its affiliates make and give **NO REPRESENTATIONS OR WARRANTIES WHATSOEVER**, and expressly disclaims all warranties regarding such information and the product to which it relates, whether express, implied, or statutory, including without limitation, warranties of accuracy, completeness, merchantability, non- infringement, performance, safety, suitability, stability, and fitness for a particular purpose, and any warranties arising from course of dealing, course of performance, or usage of trade. This MSDS is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person and is not intended to be comprehensive as to the manner and conditions of use, handling, storage, or disposal of the product. Individuals receiving this MSDS must always exercise their own independent judgment in determining the appropriateness of such issues. Accordingly, Viridis Chemical Company and its affiliates assume **NO LIABILITY** whatsoever for the use of or reliance upon this information. No suggestions for use are intended as, and nothing herein shall be construed as, a recommendation to infringe any existing patents or to violate any federal, state, local, or foreign laws. Viridis Chemical Company and its affiliates remind you that it is your legal duty to make all information in this MSDS available to your employees.