



SAFETY DATA SHEET

(according to (EC) 1907/2006)

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier Diethyl Oxalate

1.2. Relevant identified uses of the substance or mixture and uses advised against

Not provided.

1.3. Details of the supplier of the safety data sheet

Manufacturer Information: Vertellus LLC
201 North Illinois Street, Suite 1800,
Indianapolis, IN 46204

Non-Emergency Fax Number: 336-854-4058
E-Mail Address: msds@vertellus.com

Non-Emergency Phone Number: 336-292-1781

1.4. Emergency telephone number

Vertellus: 336-292-1781
CHEMTREC (USA): (800) 424-9300
(collect calls accepted); (Int'l): (703) 527-3887
(collect calls accepted; 011 prefix not needed)

SECTION 2: Hazards identification

HMIS Rating	
HEALTH	2
FLAMMABILITY	2
REACTIVITY	0

2.1. Classification of the substance or mixture

(According to Regulation (EC) No 1272/2008)

Serious Eye Damage/Eye Irritation Category 2
Acute Toxicity Oral Category 4

Signal Word:
Warning

Hazard Precautions:
H319 - Causes serious eye irritation.
H302 - Harmful if swallowed.

2.2. Label elements

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Hazard Symbols (Pictogram):



Prevention Precautions:

P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P270 - Do not eat, drink or smoke when using this product.
P264 - Wash hands thoroughly after handling.

First Aid Precautions:

P337+P313 - If eye irritation persists: Get medical advice/attention.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P330 - Rinse mouth.
P301+P312 - IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.

Storage Precautions:

Not required.

Disposal Precautions:

P501 - Dispose of contents/container in accordance with local/regional/national/international regulation for hazardous wastes.

Single Exposure Target Organs:

Not applicable

Repeated Exposure Target Organs:

Not applicable

(According to Directive 67/548/EEC)

Symbol: Xi, Xn
Risk Phrases: R36: Irritating to the eyes.
R22: Harmful if swallowed.
Safety Phrases: S2: Keep out of the reach of children.
S23: Do not breathe gas/fumes/vapour/spray.

2.3. Other hazards

Signs and Symptoms of Potential Overexposure: See Section 11 for further toxicological information.
Primary Route(s) of Exposure: Skin contact and absorption, eye contact, ingestion, inhalation.
Medical Conditions Aggravated by Exposure: No data found

SECTION 3: Composition/information on ingredients



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3.1. Substances or 3.2. Mixtures

Ingredient	CAS Number	Concentration (%)	EINECS / ELINCS	EU Symbol	Risk Phrases
Diethyl Oxalate	95-92-1	100	202-464-1	Xi, Xn	R36- R22

NOTE: See Section 8 of this MSDS for exposure limit data for these ingredients.
See Section 15 of this MSDS for trade secret information (where applicable).
See Section 16 of this MSDS for the full text of the R-phrases above.

SECTION 4: First aid measures

4.1. Description of first aid measures

Skin Contact:	Wash thoroughly after skin contact. Causes skin irritation.
Eye Contact:	Immediately flush the eyes with plenty of water for at least 15 minutes. Call a physician. Wash thoroughly after skin contact.
Inhalation:	Remove from exposure. If not breathing, give artificial respiration and call a physician. High gas vapor or mist concentrations may be harmful if inhaled
Ingestion:	If swallowed, do not induce vomiting. Get prompt medical attention. May be harmful if ingested in sufficient quantities

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

Acute:	See Section 11 for further toxicological information.
Delayed Effects:	None known.

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

Thermal Exposure:	Not applicable.
Note to Physician:	No additional first aid information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Appropriate Extinguishing Media:	Foam Dry chemical Water spray
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5.2. Special hazards arising from the substance or mixture

Hazardous Products of Combustion:	As with other organic materials, combustion will produce carbon monoxide and carbon dioxide.
Potential for Dust Explosion:	not available
Special Flammability Hazards:	Not applicable.

5.3. Advice for firefighters

Basic Fire Fighting Guidance:	As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.
Flammability Classification (OSHA):	Not applicable.

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NFPA Rating



SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Evacuation Procedures:	Isolate the hazard area and deny entry to unnecessary and unprotected personnel.
Special Instructions:	Remove all contaminated clothing to prevent further absorption. Decontaminate affected personnel using the first aid procedures in Section 4. Leather shoes that have been saturated must be discarded.

6.2. Environmental precautions

Prevent releases to soils, drains, sewers, and waterways.

6.3. Methods and material for containment and cleaning up

Containment Techniques and Clean-up Procedures:	Isolate hazard area. Keep unnecessary and unprotected personnel from entering. Remove all ignition sources. Ventilate the area of spill or leak. Wear protective equipment during clean-up. For small spills, use suitable absorbent material and collect for later disposal. For large spills, the area may require diking to contain the spill. Material can then be collected (eg., suction) for later disposal. After collection of material, flush area with water. Dispose of the material in accordance with standard practice for disposal of potentially hazardous materials as required by applicable federal, state or local laws. Contain spilled liquid with sand or vermiculite and place in chemical waste container. Prevent runoff from entering drains, sewers, and streams.
Special Reporting Requirements:	Not applicable.

6.4. Reference to other sections

Refer to section 8 for information on selecting personal protective equipment. Refer to section 13 for information on spilled product, absorbent and clean up material disposal instructions.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for Unique Hazards:	Not applicable.
Practices to Minimize Risk:	Wear appropriate protective equipment when performing maintenance on contaminated equipment. Wash hands thoroughly before eating or smoking after handling this material.
Special Handling Equipment:	Avoid contact with eyes, skin, and clothing. Use with adequate ventilation. Wash thoroughly after handling.

7.2. Conditions for safe storage, including any incompatibilities

Storage Precautions &	This product should be stored at ambient temperature in a dry, well-ventilated location. Keep
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Recommendations: container closed when not in use. Inside storage should be in standard flammable liquids storage room or cabinet.

Dangerous Incompatibility Reactions: Incompatible with oxidizing materials.

Incompatibilities with Materials of Construction: none known

7.3. Specific end use(s)

If a chemical safety assessment has been completed an exposure scenario is attached as an annex to this Safety Data Sheet. Refer to this annex for the specific exposure scenario control parameters for uses identified in subsection 1.2.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure Limits (United States): OSHA PEL: Hazardous ACGIH TLV: Not established

8.2. Exposure controls

Also see the annex to this SDS (if applicable) for specific exposure scenario controls.

Personal Protective Equipment: Goggles or glasses with side shields. Clothing should be sufficient to minimize physical contact. The use of a NIOSH-approved organic vapor respirator is recommended whenever this product is used in a confined space or heated above ambient temperature.

Respirator Caution: Observe OSHA regulations for respirator use (29 CFR 1910.134). Air-purifying respirators must not be used in oxygen-deficient atmospheres.

Ventilation: All operations should be conducted in well-ventilated conditions. Local exhaust ventilation should be provided.

Other Engineering Controls: All appropriate engineering controls should be used to minimize exposure potential. Use exhaust ventilation to keep airborne concentrations below exposure limits.

Thermal Hazards: Not applicable.

Additive or Synergistic Effects: None known.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance, State & Odor (ambient temperature): Clear oily liquid

Molecular Formula: C₆H₁₀O₄

Molecular Weight:

Vapor Pressure: Not available. 1.00 mm Hg
47.00 °C

Evaporation Rate:

Specific Gravity or Density: 1.08
20.000

Vapor Density (air = 1): 5.04

Boiling Point: Not available. 185.4 °C 760
mm Hg

Freezing / Melting Point: Not available. - 40 °C - 40 °F

Solubility in Water:

Octanol / Water Coefficient: Not available.

pH: Not applicable

Odor Threshold: Characteristic

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Viscosity:	Not available.	Autoignition Temperature:	Not available.
Flash Point and Method:	165°F 165°F (74°C) ()	Flammable Limits:	Not established (LEL) – Not established (UEL)

9.2. Other information

Not applicable.

SECTION 10: Stability and reactivity

<u>10.1. Reactivity</u>	Not classified as dangerously reactive.
<u>10.2. Chemical stability</u>	Stable
<u>10.3. Possibility of hazardous reactions</u>	Will not occur.
<u>10.4. Conditions to avoid</u>	No data.
<u>10.5. Incompatible materials</u>	Incompatible with oxidizing materials.
<u>10.6. Hazardous decomposition products</u>	Carbon dioxide

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute Oral LD ₅₀ :	Oral LD ₅₀ (mouse) 2000 mg/kg Oral LD ₅₀ (rat) 400 mg/kg
Acute Dermal LD ₅₀ :	Not available.
Acute Inhalation LC ₅₀ :	Not available.
Skin Irritation:	Non-irritating to both intact and abraded skin.
Skin Sensitization:	No data available.
Eye Irritation:	Slight to moderate erythema observed in eyes in contact with material over 20 minutes to 3 hours.
Target Organs:	No data available.
Carcinogenicity:	No data available.
Teratogenicity:	Not listed
Reproduction:	This chemical is not listed by IARC, NTP or OSHA as a carcinogen.
Neurotoxicity:	No data available.
Mutagenicity:	Not listed

SECTION 12: Ecological information

<u>12.1. Toxicity</u>	Not established
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<u>12.2. Persistence and degradability</u>	No data Not established
<u>12.3. Bioaccumulative potential</u>	No data
<u>12.4. Mobility in soil</u>	No data
<u>12.5. Results of PBT and vPvB assessment</u>	Not available.
<u>12.6. Other adverse effects</u>	No data available. Not available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

US EPA Waste Number:	Not applicable
Waste Classification: (per US regulations)	Dispose of by incineration following Federal, State, Local, or Provincial regulations. NOTE: Generator is responsible for proper waste characterization. State (USA) hazardous waste regulations may differ substantially from federal (USA) regulations.
Waste Disposal:	Dispose of this material in accordance with standard practice for disposal of potentially hazardous materials as required by applicable international, national, regional, state or local laws. Do NOT dump into any sewers, on the ground, or into any body of water. For disposal within the EC, the appropriate code according to the European Waste Catalogue (EWC) should be used. Note that disposal regulations may also apply to empty containers and equipment rinsates.

SECTION 14: Transport information

<u>14.1. UN number</u>	UN2525
<u>14.2. UN proper shipping name</u>	Ethyl oxalate (Diethyl Oxalate)
<u>14.3. Transport hazard class(es)</u>	6.1
<u>14.4. Packing group</u>	PG III
<u>14.5. Environmental hazards</u>	Not applicable
<u>14.6. Special precautions for user</u>	Not available.
NA Emergency Guidebook Numbers: 156	IMDG EMS: S-A F-A
<u>14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</u>	Not applicable.

SECTION 15: Regulatory information

<u>15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture</u>	
OSHA Hazards:	Toxic. Irritant. Hazardous Combustible Liquid.



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WHMIS Classification:	Not Controlled
Chemical Inventory Lists:	Status
TSCA:	Listed
EINECS:	Listed
Canada(DSL/NDSL):	Listed
Japan:	Listed
Korea:	Unknown
Australia:	Listed
New Zealand:	Present
China:	Unknown
Philippines:	Present
Switzerland:	Not Listed
New Zealand GHS Classification:	6.1D oral, 6.4A, 9.3C (Approval number: HSR005019)
Japan GHS Classification:	Flammable liquids - Category 4: H227 Combustible liquid; Acute toxicity - Oral - Category 4: H302 Harmful if swallowed; Skin corrosion/irritation - Category 2: H315 Causes skin irritation
Korea (MOL) GHS Classification:	Non classificato da questo paese.
Australia GHS Classification:	Non classificato da questo paese.
Taiwan GHS Classification:	Flammable liquids - Category 4: H227 Combustible liquid; Acute toxicity - Oral - Category 4: H302 Harmful if swallowed; Serious eye damage/eye Irritation - Category 2A: H319 Causes serious eye irritation
Indonesia GHS Classification:	Non classificato da questo paese.
SARA 313:	Not applicable

15.2. Chemical safety assessment

Not applicable.

SECTION 16: Other information

Full text of R phrases in Section 3: R36: Irritating to the eyes.
R22: Harmful if swallowed.



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Legend of abbreviations:

ACGIH = American Conference on Governmental Industrial Hygienists.
CAS = Chemical Abstracts Service.
CERCLA = Comprehensive Environmental, Response, Compensation and Liability Act (1990).
CFR = Code of Federal Regulations.
DSL/NDSL = Domestic Substances List/Non-Domestic Substances List.
EC = European Community.
EEC = European Economic Community.
EINECS = European Inventory of Existing Commercial chemical Substances.
ELINCS = European List of Notified Chemical Substances.
EU = European Union.
GHS = Globally Harmonized System.
LC = Lethal concentration.
LD = Lethal dose.
MOL = Ministry of Labor.
NEMA = National Emergency Management Agency.
NFPA = National Fire Protection Association.
NIOSH = National Institute of Occupational Safety and Health.
NTP = National Toxicological Program.
OSHA = Occupational Safety and Health Administration
PEL = Permissible exposure limit.
RQ = Reportable quantity.
SARA = Superfund Amendments and Reauthorization Act of 1986.
TLV = Threshold limit value.
WHMIS = Workplace Hazardous Materials Information System.

Precautionary Statement: Please note that the information contained herein is furnished without warranty of any kind. Users should consider these data only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use and disposal of these materials and the safety and health of employees and customers.

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