

SAFETY DATA SHEET

Creation Date 13-Oct-2009

Revision Date 24-May-2017

Revision Number 5

1. Identification

Product Name Ethyl acetate

Cat No. : E196-4; E196-4LC; E196RS-28; E196RS-115; E196SK-4; E196SS-28; E196SS-50; E196SS-115; E196SS-200

Synonyms Acetic acid ethyl ester

Recommended Use Laboratory chemicals.

Uses advised against Not for food, drug, pesticide or biocidal product use

Details of the supplier of the safety data sheet

Company

Fisher Scientific
One Reagent Lane
Fair Lawn, NJ 07410
Tel: (201) 796-7100

Emergency Telephone Number

CHEMTREC®, Inside the USA: 800-424-9300
CHEMTREC®, Outside the USA: 001-703-527-3887

2. Hazard(s) identification

Classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

| | |
|--|------------|
| Flammable liquids | Category 2 |
| Serious Eye Damage/Eye Irritation | Category 2 |
| Specific target organ toxicity (single exposure) | Category 3 |
| Target Organs - Central nervous system (CNS). | |

Label Elements

Signal Word

Danger

Hazard Statements

Highly flammable liquid and vapor
Causes serious eye irritation
May cause drowsiness or dizziness



Precautionary Statements**Prevention**

Wash face, hands and any exposed skin thoroughly after handling
 Do not breathe dust/fume/gas/mist/vapors/spray
 Use only outdoors or in a well-ventilated area
 Keep away from heat/sparks/open flames/hot surfaces. - No smoking
 Keep container tightly closed
 Ground/bond container and receiving equipment
 Use explosion-proof electrical/ventilating/lighting/equipment
 Use only non-sparking tools
 Take precautionary measures against static discharge
 Wear protective gloves/protective clothing/eye protection/face protection
 Keep cool

Response

Get medical attention/advice if you feel unwell

Inhalation

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
 Call a POISON CENTER or doctor/physician if you feel unwell

Skin

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower

Eyes

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

Fire

In case of fire: Use CO₂, dry chemical, or foam for extinction

Storage

Store in a well-ventilated place. Keep container tightly closed
 Store locked up

Disposal

Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)

Repeated exposure may cause skin dryness or cracking

3. Composition / information on ingredients

| Component | CAS-No | Weight % |
|---------------|----------|----------|
| Ethyl acetate | 141-78-6 | >95 |

4. First-aid measures

| | |
|--|--|
| General Advice | If symptoms persist, call a physician. |
| Eye Contact | Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Obtain medical attention. |
| Skin Contact | Wash off immediately with plenty of water for at least 15 minutes. If skin irritation persists, call a physician. |
| Inhalation | Move to fresh air. If not breathing, give artificial respiration. Get medical attention if symptoms occur. |
| Ingestion | Clean mouth with water and drink afterwards plenty of water. |
| Most important symptoms/effects | Breathing difficulties. May cause central nervous system depression: Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting |

Notes to Physician Treat symptomatically

5. Fire-fighting measures

| | |
|---|---|
| Suitable Extinguishing Media | Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide. |
| Unsuitable Extinguishing Media | Water may be ineffective, Do not use a solid water stream as it may scatter and spread fire |
| Flash Point | -4 °C / 24.8 °F |
| Method - | Closed cup |
| Autoignition Temperature | 427 °C / 800.6 °F |
| Explosion Limits | |
| Upper | 11.5 vol % |
| Lower | 2.0 vol % |
| Oxidizing Properties | Not oxidising |
| Sensitivity to Mechanical Impact | No information available |
| Sensitivity to Static Discharge | No information available |

Specific Hazards Arising from the Chemical

Flammable. Risk of ignition. Vapors may form explosive mixtures with air. Vapors may travel to source of ignition and flash back. Containers may explode when heated.

Hazardous Combustion Products

Carbon monoxide (CO) Carbon dioxide (CO₂)

Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

NFPA

| | | | |
|---------------|---------------------|--------------------|-------------------------|
| Health | Flammability | Instability | Physical hazards |
| 2 | 3 | 0 | N/A |

6. Accidental release measures

| | |
|----------------------------------|--|
| Personal Precautions | Use personal protective equipment. Ensure adequate ventilation. |
| Environmental Precautions | Should not be released into the environment. See Section 12 for additional ecological information. |

Methods for Containment and Clean Up Soak up with inert absorbent material. Keep in suitable, closed containers for disposal.

7. Handling and storage

| | |
|-----------------|---|
| Handling | Ensure adequate ventilation. Wear personal protective equipment. Do not get in eyes, on skin, or on clothing. Avoid ingestion and inhalation. |
| Storage | Flammables area. Keep away from heat and sources of ignition. Keep container tightly closed in a dry and well-ventilated place. |

8. Exposure controls / personal protection

Exposure Guidelines

| Component | ACGIH TLV | OSHA PEL | NIOSH IDLH | Mexico OEL (TWA) |
|---------------|--------------|--|---|---|
| Ethyl acetate | TWA: 400 ppm | (Vacated) TWA: 400 ppm (Vacated) TWA: 1400 mg/m ³ TWA: 400 ppm TWA: 1400 mg/m ³ | IDLH: 2000 ppm TWA: 400 ppm TWA: 1400 mg/m ³ | TWA: 400 ppm TWA: 1400 mg/m ³ |

Legend

ACGIH - American Conference of Governmental Industrial Hygienists

OSHA - Occupational Safety and Health Administration

NIOSH IDLH: The National Institute for Occupational Safety and Health Immediately Dangerous to Life or Health

Engineering Measures Ensure adequate ventilation, especially in confined areas. Use explosion-proof electrical/ventilating/lighting/equipment. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal Protective Equipment

Eye/face Protection Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin and body protection Long sleeved clothing.

Respiratory Protection No protective equipment is needed under normal use conditions.

Hygiene Measures Handle in accordance with good industrial hygiene and safety practice.

9. Physical and chemical properties

| | |
|---|-----------------------------|
| Physical State | Liquid |
| Appearance | Colorless |
| Odor | sweet |
| Odor Threshold | 50 ppm |
| pH | No information available |
| Melting Point/Range | -83.5 °C / -118.3 °F |
| Boiling Point/Range | 75 - 78 °C / 167 - 172.4 °F |
| Flash Point | -4 °C / 24.8 °F |
| Method - | Closed cup |
| Evaporation Rate | 6.2 |
| Flammability (solid,gas) | Not applicable |
| Flammability or explosive limits | |
| Upper | 11.5 vol % |
| Lower | 2.0 vol % |
| Vapor Pressure | 103 mbar @ 20°C |
| Vapor Density | 3.04 |
| Specific Gravity | 0.902 |
| Solubility | Slightly soluble in water |
| Partition coefficient; n-octanol/water | No data available |
| Autoignition Temperature | 427 °C / 800.6 °F |
| Decomposition Temperature | No information available |
| Viscosity | 0.45 cP @ 20 °C |
| Molecular Formula | C4 H8 O2 |
| Molecular Weight | 88.11 |
| Surface tension | 24 mN/m @ 20°C |

10. Stability and reactivity

Reactive Hazard None known, based on information available

Stability Stable under normal conditions.

Conditions to Avoid Incompatible products. Keep away from open flames, hot surfaces and sources of ignition.

Incompatible Materials Strong oxidizing agents, Strong acids, Amines, Peroxides

Hazardous Decomposition Products Carbon monoxide (CO), Carbon dioxide (CO₂)

Hazardous Polymerization Hazardous polymerization does not occur.

Hazardous Reactions None under normal processing.

11. Toxicological information

Acute Toxicity

Product Information

Component Information

| Component | LD50 Oral | LD50 Dermal | LC50 Inhalation |
|---------------|----------------------|---|--------------------|
| Ethyl acetate | 10,200 mg/kg (Rat) | > 20 mL/kg (Rabbit) > 18000 mg/kg (Rabbit) | 58 mg/l (rat; 8 h) |

Toxicologically Synergistic Products No information available

Products

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Irritation Irritating to eyes

Sensitization No information available

Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen.

| Component | CAS-No | IARC | NTP | ACGIH | OSHA | Mexico |
|---------------|----------|------------|------------|------------|------------|------------|
| Ethyl acetate | 141-78-6 | Not listed | Not listed | Not listed | Not listed | Not listed |

Mutagenic Effects No information available

Reproductive Effects No information available.

Developmental Effects No information available.

Teratogenicity No information available.

STOT - single exposure Central nervous system (CNS)

STOT - repeated exposure None known

Aspiration hazard No information available

Symptoms / effects, both acute and delayed May cause central nervous system depression: Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting

Endocrine Disruptor Information No information available

Other Adverse Effects The toxicological properties have not been fully investigated.

12. Ecological information

Ecotoxicity

Do not empty into drains.

| Component | Freshwater Algae | Freshwater Fish | Microtox | Water Flea |
|---------------|----------------------|--|--|---------------------|
| Ethyl acetate | EC50 = 3300 mg/L/48h | Fathead minnow: LC50: 230 mg/l/ 96h Gold orfe: LC50: 270 mg/L/48h | EC50 = 1180 mg/L 5 min EC50 = 1500 mg/L 15 min EC50 = 5870 mg/L 15 min EC50 = 7400 mg/L 2 h | EC50 = 717 mg/L/48h |

Persistence and Degradability Persistence is unlikely based on information available.

Bioaccumulation/ Accumulation No information available.

Mobility Will likely be mobile in the environment due to its volatility.

| Component | log Pow |
|---------------|---------|
| Ethyl acetate | 0.6 |

13. Disposal considerations

Waste Disposal Methods Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

| Component | RCRA - U Series Wastes | RCRA - P Series Wastes |
|--------------------------|------------------------|------------------------|
| Ethyl acetate - 141-78-6 | U112 | - |

14. Transport information

DOT

UN-No UN1173
 Proper Shipping Name ETHYL ACETATE
 Hazard Class 3
 Packing Group II

TDG

UN-No UN1173
 Proper Shipping Name ETHYL ACETATE
 Hazard Class 3
 Packing Group II

IATA

UN-No UN1173
 Proper Shipping Name ETHYL ACETATE
 Hazard Class 3
 Packing Group II

IMDG/IMO

UN-No UN1173
 Proper Shipping Name ETHYL ACETATE
 Hazard Class 3
 Packing Group II

15. Regulatory information

All of the components in the product are on the following Inventory lists: X = listed

International Inventories

| Component | TSCA | DSL | NDSL | EINECS | ELINCS | NLP | PICCS | ENCS | AICS | IECSC | KECL |
|---------------|------|-----|------|-----------|--------|-----|-------|------|------|-------|------|
| Ethyl acetate | X | X | - | 205-500-4 | - | | X | X | X | X | X |

Legend:

X - Listed

E - Indicates a substance that is the subject of a Section 5(e) Consent order under TSCA.

F - Indicates a substance that is the subject of a Section 5(f) Rule under TSCA.

N - Indicates a polymeric substance containing no free-radical initiator in its inventory name but is considered to cover the designated polymer made with any free-radical initiator regardless of the amount used.

P - Indicates a commenced PMN substance

R - Indicates a substance that is the subject of a Section 6 risk management rule under TSCA.

S - Indicates a substance that is identified in a proposed or final Significant New Use Rule

T - Indicates a substance that is the subject of a Section 4 test rule under TSCA.

XU - Indicates a substance exempt from reporting under the Inventory Update Rule, i.e. Partial Updating of the TSCA Inventory Data Base Production and Site Reports (40 CFR 710(B)).

Y1 - Indicates an exempt polymer that has a number-average molecular weight of 1,000 or greater.

Y2 - Indicates an exempt polymer that is a polyester and is made only from reactants included in a specified list of low concern reactants that comprises one of the eligibility criteria for the exemption rule.

U.S. Federal Regulations

TSCA 12(b) Not applicable

SARA 313 Not applicable

SARA 311/312 Hazard Categories

| | |
|-----------------------------------|-----|
| Acute Health Hazard | Yes |
| Chronic Health Hazard | Yes |
| Fire Hazard | Yes |
| Sudden Release of Pressure Hazard | No |
| Reactive Hazard | No |

CWA (Clean Water Act) Not applicable

Clean Air Act Not applicable

OSHA Occupational Safety and Health Administration
Not applicable

CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

| Component | Hazardous Substances RQs | CERCLA EHS RQs |
|---------------|--------------------------|----------------|
| Ethyl acetate | 5000 lb | - |

California Proposition 65 This product does not contain any Proposition 65 chemicals

U.S. State Right-to-Know Regulations

| Component | Massachusetts | New Jersey | Pennsylvania | Illinois | Rhode Island |
|---------------|---------------|------------|--------------|----------|--------------|
| Ethyl acetate | X | X | X | - | X |

U.S. Department of Transportation

| | |
|-----------------------------|---|
| Reportable Quantity (RQ): | Y |
| DOT Marine Pollutant | N |
| DOT Severe Marine Pollutant | N |

U.S. Department of Homeland Security

This product does not contain any DHS chemicals.

Other International Regulations

Mexico - Grade Serious risk, Grade 3

16. Other information

Prepared By Regulatory Affairs
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Email: EMSDS.RA@thermofisher.com

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Revision Summary This document has been updated to comply with the US OSHA HazCom 2012 Standard replacing the current legislation under 29 CFR 1910.1200 to align with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage,

transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

End of SDS