

Safety Data Sheet

according to 1907/2006/EC, Article 31

Printing date 12.11.2010

Revision: 10.11.2010

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

· **Product details**

· **Trade name:** ethyl acetate

· **Registration number** 01-2119475103-46-0012 (REACH Registration Number)

· **Application of the substance / the preparation**

Coating material

Epoxy coating

· **Manufacturer/Supplier:**

Laxmi Organics Industries Ltd.

Chandramukhi basement

Nariman point,

Mumbai 400 021

· **Further information obtainable from:**

Mr. B.K.Kabra

Telephone No.- +9122 22851316

Fax No.- + 9122 22853752

· **Information in case of emergency:**

Contact details of European importer

Emergency telephone number:

Telephone number of EU importer:

Opening hours:

Other Comments (e.g. language(s) of the phone service): English

2 Hazards identification

· **Classification of the substance or mixture**

· **Classification according to Regulation (EC) No 1272/2008**



GHS02 flame

Flam. Liq. 2 H225 Highly flammable liquid and vapour.



GHS07

Eye Irrit. 2 H319 Causes serious eye irritation.

STOT SE 3 H336 May cause drowsiness or dizziness.

· **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**



Xi; Irritant

R36: Irritating to eyes.



F; Highly flammable

R11: Highly flammable.

R66-67: Repeated exposure may cause skin dryness or cracking. Vapours may cause drowsiness and dizziness.

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- **Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**
- **Hazard pictograms**



GHS02 GHS07

- **Signal word** *Danger*
- **Hazard-determining components of labelling:** *Void*
- **Hazard statements**
 - H225 *Highly flammable liquid and vapour.*
 - H319+EUH066 *Causes serious eye irritation. Repeated exposure may cause skin dryness or cracking.*
 - H336 *May cause drowsiness or dizziness.*
- **Precautionary statements**
 - P210 *Keep away from heat/sparks/open flames/hot surfaces. - No smoking.*
 - P241 *Use explosion-proof electrical/ventilating/lighting/equipment.*
 - P303+P361+P353 *IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.*
 - P305+P351+P338 *IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.*
 - P405 *Store locked up.*
 - P501 *Dispose of contents/container in accordance with local/regional/national/international regulations.*

- **Labelling according to EU guidelines:**
The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials.
- **Code letter and hazard designation of product:**



Xi Irritant
F Highly flammable

- **Risk phrases:**
 - 11 *Highly flammable.*
 - 36 *Irritating to eyes.*
 - 66 *Repeated exposure may cause skin dryness or cracking.*
 - 67 *Vapours may cause drowsiness and dizziness.*
- **Safety phrases:**
 - 2 *Keep out of the reach of children.*
 - 16 *Keep away from sources of ignition - No smoking.*
 - 26 *In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.*
 - 33 *Take precautionary measures against static discharges.*
- **Additional information:**
EMERGENCY OVERVIEW:
Highly flammable. Repeated exposure may cause skin dryness or cracking.
Vapors may cause drowsiness and dizziness.

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3 Composition/information on ingredients

- **Chemical characterization:**
- **CAS No. Description**
141-78-6 ethyl acetate
- **Identification number(s)**
- **EINECS Number:** 205-500-4
- **Index number:** 607-022-00-5
- **Additional information:**
Molecular Formula : C₄H₈O₂
Molecular Weight : 88.11

4 First aid measures

- **General information:** Immediately remove any clothing soiled by the product.
- **After inhalation:**
If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention if symptoms appear.
Do NOT use mouth-to-mouth resuscitation
- **After skin contact:**
Wash with soap and water.
Cover the irritated skin with an emollient.
Get medical attention if irritation develops. Cold water may be used.
- **After eye contact:**
Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention.
- **After swallowing:**
Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention if symptoms appear.
- **Information for doctor:** Treat symptomatically and supportively.
- **The following symptoms may occur:**
May affect gastrointestinal tract (nausea, vomiting).
May affect behavior/central nervous system (mild central nervous system depression - exhilaration, talkativeness, boastfulness, belligerency, vertigo, diplopia, drowsiness, slurred speech, slowed reaction time, dizziness, lightheadedness, somnolence, ataxia, unconsciousness, irritability, fatigue, sleep disturbances, reduced memory and concentration, stupor, coma), cardiovascular system (peripheral vascular collapse (shock) - rapid pulse, hypotension, cold pale skin, hypothermia). Other symptoms may include: flushing of face and sweating.

5 Firefighting measures

- **Suitable extinguishing agents:**
For small fires, use water spray, dry chemical, carbon dioxide or chemical foam. Water may be ineffective. For large fires, use water spray, fog or alcohol-resistant foam. Do NOT use straight streams of water. Cool containers with flooding quantities of water until well after fire is out. DO NOT USE DRY CHEMICAL for fires involving nitromethane or nitroethanes.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **Special hazards caused by the substance, its products of combustion or resulting gases:**
Fire Hazards in Presence of Various Substances:
Highly flammable in presence of open flames and sparks, of heat. Slightly flammable to flammable in presence of oxidizing materials, of acids, of alkalis. Non-flammable in presence of shocks.

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Explosion Hazards in Presence of Various Substances:
Risks of explosion of the product in presence of static discharge. Slightly explosive in presence of heat. Nonexplosive in presence of shocks.
· **Protective equipment:** No special measures required.

6 Accidental release measures

- **Person-related safety precautions:**

Wear protective equipment. Keep unprotected persons away.
Avoid runoff into storm sewers and ditches which lead to waterways. Clean up spills immediately, observing precautions in the Protective

Equipment section. Remove all sources of ignition. Absorb spill using an absorbent, non-combustible material such as earth, sand, or vermiculite. Do not use combustible materials such as saw dust. Provide ventilation

- **Measures for environmental protection:** *Do not allow to enter sewers/ surface or ground water.*

- **Measures for cleaning/collecting:**

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Ensure adequate ventilation.

- **Additional information:**

IN CASE OF LEAKS: Avoid runoff into storm sewers and ditches which lead to waterways. Clean up spills immediately, observing precautions in the Protective Equipment section. Remove all sources of ignition. Absorb spill using an absorbent, non-combustible material such as earth, sand, or vermiculite. Do not use combustible materials such as saw dust. Provide ventilation.

SMALL SPILL: Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container.

LARGE SPILL: Flammable liquid. Keep away from heat. Keep away from sources of ignition. Stop leak if without risk. Absorb with DRY earth, sand or other non-combustible material. Do not touch spilled material. Prevent entry into sewers, basements or confined areas; dike if needed. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

7 Handling and storage

- **Handling:**

- **Information for safe handling:**

Wash thoroughly after handling. Use with adequate ventilation. Ground and bond containers when transferring material. Avoid contact with eyes, skin, and clothing.

Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Keep container tightly closed.

Avoid ingestion and inhalation. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose empty containers to heat, sparks or open flames.

- **Information about fire - and explosion protection:**

Keep ignition sources away - Do not smoke.

Protect against electrostatic charges.

- **Storage:**

- **Requirements to be met by storerooms and receptacles:** *Store in a cool location.*

- **Information about storage in one common storage facility:**

Store in a segregated and approved area. Keep container in a cool, well-ventilated area. Keep container tightly closed and sealed until ready for use. Avoid all possible sources of ignition (spark or flame). Moisture sensitive

- **Further information about storage conditions:**

Keep container tightly sealed.

Store in cool, dry conditions in well sealed receptacles.

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- **Specific applications** Used in Coating material and Epoxy coating

8 Exposure controls/personal protection

- **Additional information about design of technical facilities:**

Engineering Controls:

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location

- **Ingredients with limit values that require monitoring at the workplace:** Not required.

- **Additional Occupational Exposure Limit Values for possible hazards during processing:**

141-78-6 ethyl acetate

| | |
|---|---|
| TWA | 400 (ppm) from OSHA (PEL) [United States] |
| TWA | 400 from ACGIH (TLV) [United States] |
| TWA | 1400 (mg/m ³) from NIOSH [United States] |
| TWA | 400 (ppm) from NIOSH [United States] |
| TWA | 400 (ppm) [Canada] |
| TWA | 1440 (mg/m ³) [Canada] |
| TWA | 1400 (mg/m ³) from OSHA (PEL) [United States] |
| Consult local authorities for acceptable exposure limits. | |

- **Additional information:** The lists valid during the making were used as basis.

- **Personal protective equipment:**

- **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

Avoid contact with the eyes and skin.

- **Respiratory protection:**

Follow the OSHA respirator regulations found in 29CFR 1910.134 or European Standard EN 149. Always use a NIOSH or European Standard EN 149 approved respirator when necessary.

- **Protection of hands:**



Protective gloves

- **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

- **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

- **Eye protection:**



Tightly sealed goggles

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.

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· **Body protection:** Lab coat.

9 Physical and chemical properties

| | |
|--|--|
| · General Information | Physical State: Liquid |
| · Appearance: | Clear, colorless |
| · Form: | Fluid |
| · Colour: | Colourless |
| · Odour: | Sweet,fruity odour |
| · Change in condition | |
| Melting point/Melting range: | -83.57°C |
| Boiling point/Boiling range: | 77-78°C |
| · Flash point: | -5°C |
| · Flammability (solid, gaseous): | Highly flammable |
| · Ignition temperature: | 460°C |
| · Danger of explosion: | Product is not explosive. However, formation of explosive air/vapour mixtures are possible. |
| · Explosion limits: | |
| Lower: | 2.1 Vol % |
| Upper: | 11.5 Vol % |
| · Vapour pressure at 20°C: | 97 hPa |
| · Density at 20°C: | 0.9 g/cm ³ |
| · Solubility in / Miscibility with water at 20°C: | 79 g/l |
| · Viscosity: | |
| Dynamic at 20°C: | 0.44 mPas |
| · Additional information: | Density 0.9003 g/m ³ Diffusivity in air (Dia) 0.082 Diffusivity in water (Diw) 9.7E-6 cm ² /s Henry's Law Constant (HLC) 1.34E-4 atm-m ³ /mole Soil organic carbon-water partition coefficient (Koc) 5.583 L/Kg Unitless Henry's Law Constant (H') 0.0055 Water Solubility Limit (S) 80000.0 mg/L |

10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:**
High temperatures, incompatible materials, ignition sources, excess heat.
- **Materials to be avoided:**
Chlorosulfonic acid, lithium aluminum hydride + 2-chloromethylfuran,lithium tetrahydroaluminate, oleum, potassium t-butoxide. Substance coming in contact with nitrates or strong acids/oxidizers/alkalies may cause fire.
- **Dangerous reactions** No dangerous reactions known.

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· **Dangerous decomposition products:** Carbon monoxide, irritating and toxic fumes and gases, carbon dioxide.

11 Toxicological information

· **Acute toxicity:**

· **LD/LC50 values relevant for classification:**

| | | |
|--------------------|----------|---------------------|
| Oral | LD50 | 4100 mg/kg (rabbit) |
| | | 4935 mg/kg (rat) |
| Inhalative | LC50 | 200 g/l (rat) |
| | LC50/2 h | 45 g/l (rat) |
| Irritation of skin | LD50 | >20 mL/kg (rabbit) |

· **Primary irritant effect:**

· **on the skin:** Slightly hazardous in case of skin contact (irritant, permeator).

· **on the eye:** May cause irritation of the conjunctiva.

· **Sensitization:** No sensitizing effects known.

· **Other information (about experimental toxicology):** Hazardous in case of ingestion, of inhalation.

· **Additional toxicological information:**

Inhalation: May cause respiratory tract and mucous membrane irritation. May affect respiration and may cause acute pulmonary edema.

Ingestion: Prolonged or repeated ingestion may affect the liver. *Inhalation:* Prolonged inhalation may affect behavior/central nervous system (symptoms similar to those of acute inhalation), and cause liver, kidney, lung, and heart damage. It may also affect metabolism, and blood (anemia, leukocytosis).

· **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**

Not listed as a carcinogen by ACGIH, IARC, NIOSH, NTP, OSHA, or CA Prop 65

12 Ecological information

· **Information about elimination (persistence and degradability):**

· **Other information:**

Products of Biodegradation:

Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation: The product itself and its products of degradation are not toxic.

· **Ecotoxicological effects:**

· **Acquatic toxicity:**

| | |
|------|--------------------------|
| LC50 | 230mg/L (Fathead Minnow) |
| | 2500 mg/L/96H (daphnia) |

· **Additional ecological information:**

· **General notes:**

Water hazard class 1 (German Regulation) (Assessment by list): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

· **Results of PBT and vPvB assessment TO BE PROVIDED IN THE REGISTRATION DOSSIER**

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13 Disposal considerations

- **Product:**
- **Recommendation**
Waste must be disposed of in accordance with federal, state and local environmental control regulations
- **Uncleaned packaging:**
- **Recommendation:** Dispose off according to Federal, State and Local Regulations.

14 Transport information

- **Land transport ADR/RID (cross-border)**



- **ADR/RID class:** 3 Flammable liquids.
- **Danger code (Kemler):** 33
- **UN-Number:** 1173
- **Packaging group:** II
- **Hazard label:** 3
- **Description of goods:** 1173 ETHYL ACETATE
- **Tunnel restriction code** D/E

- **Maritime transport IMDG:**



- **IMDG Class:** 3
- **UN Number:** 1173
- **Label** 3
- **Packaging group:** II
- **EMS Number:** F-E,S-D
- **Marine pollutant:** No
- **Proper shipping name:** ETHYL ACETATE

- **Air transport ICAO-TI and IATA-DGR:**



- **ICAO/IATA Class:** 3
- **UNID Number:** 1173
- **Label** 3
- **Packaging group:** II
- **Proper shipping name:** ETHYL ACETATE

- **UN "Model Regulation":** UN1173, ETHYL ACETATE, 3, II

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15 Regulatory information

- **Labelling according to Regulation (EC) No 1272/2008**
- **Hazard pictograms** Please refer section 2
- **Signal word** Danger
- **Hazard statements** Please refer section 2
- **Precautionary statements** Please refer section 2
- **Labelling according to EU guidelines:**
- **Risk phrases:**
R11- Highly flammable.
R36- Irritating to eyes.
- **Safety phrases:**
S2- Keep out of the reach of children.
S16- Keep away from sources of ignition.
S26- In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S33-Take precautionary measures against static discharges.
S46- If swallowed, seek medical advice immediately and show this container or label.
- **Chemical safety assessment** A Chemical Safety Assessment has not been carried out.
- **National regulations:**
- **Other regulations, limitations and prohibitive regulations**
OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).
EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances.
- **Substances of very high concern (SVHC) according to REACH, Article 57**
The substance is not listed as SVHC.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Department issuing MSDS:** Product safety department.
- **Abbreviations and acronyms:**
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association"
(IATA) ICAO: International Civil Aviation Organization
ICAO-TI: Technical Instructions by the "International Civil Aviation Organization"
(ICAO) GHS: Globally Harmonized System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society) LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
- **Sources**
REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006
Data from Sigma-Aldrich MSDS:
<http://www.sigmaldrich.com/catalog/DisplayMSDSContent.do>
Toxicological data:
http://www.chemcas.com/msds_archive/part2/cas/gr_msds/sirchie_com---290p1.asp

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*Data from ESIS Webpage:**<http://ecb.jrc.ec.europa.eu/esis/index.php?GENRE=CASNO&ENTREE=141-78-6>**Data from ACToR Webpage:**<http://actor.epa.gov/actor/faces/GenericChemical.jsp>**Data from Toxnet database:**<http://toxnet.nlm.nih.gov/cgi-bin/sis/search/f?./temp/~CCQ9n3:1:FULL>**** Data compared to the previous version altered.****SECTION 2 - COMPOSITION, INFORMATION ON INGREDIENTS****SECTION 4 - FIRST AID MEASURES****SECTION 5 - FIRE FIGHTING MEASURES****SECTION 6 - ACCIDENTAL RELEASE MEASURES****SECTION 7 - HANDLING and STORAGE****SECTION 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION****SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES****SECTION 10 - STABILITY AND REACTIVITY****SECTION 11 - TOXICOLOGICAL INFORMATION****SECTION 12 - ECOLOGICAL INFORMATION****SECTION 13 - DISPOSAL CONSIDERATIONS****SECTION 15 - REGULATORY INFORMATION****SECTION 16 - ADDITIONAL INFORMATION**

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