# Safety data sheet
## according to 1907/2006/EC, Article 31

Printing date 01.11.2012 Revision: 31.10.2012

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

· **Product identifier**

· **Trade name: Ethyl Acetate 99%**

· **Article number:** 20-5600-10
· **CAS Number:**
141-78-6
· **EC number:**
205-500-4
· **Index number:**
607-022-00-5
· **Registration number** 01-2119475103-46
· **Relevant identified uses of the substance or mixture and uses advised against**
Industrial use as an Extraction Solvent and/or Processing Aid; Industrial Application of Paints, Coatings and other Mixtures containing Ethyl Acetate by way of Spraying; Industrial Application of Paints and Coatings (non-spray application); Industrial and Professional (end) use of ethyl acetate as a laboratory reagent; Professional application of paints, coatings, adhesives and other mixtures/products containing ethyl acetate (indoors or outdoors, spray or non spray application); Industrial and Professional (end) use of ethyl acetate as a laboratory reagent; Use in agrochemicals; Consumer use of Ethyl Acetate in Adhesives and Coatings; Consumer use of ethyl acetate in cosmetic products
· **Sector of Use**
SU0 Other
SU8 Manufacture of bulk, large scale chemicals (including petroleum products)
SU9 Manufacture of fine chemicals
SU10 Formulation [mixing] of preparations and/or re-packaging (excluding alloys)
· **Product category**
PC1 Adhesives, sealants
PC9a Coatings and paints, thinners, paint removers
PC27 Plant protection products
PC28 Perfumes, fragrances
PC39 Cosmetics, personal care products
· **Process category**
PROC1 Use in closed process, no likelihood of exposure
PROC2 Use in closed, continuous process with occasional controlled exposure
PROC3 Use in closed batch process (synthesis or formulation)
PROC4 Use in batch and other process (synthesis) where opportunity for exposure arises
PROC5 Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact)
PROC7 Industrial spraying
PROC8a Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities
PROC8b Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities
PROC9 Transfer of substance or preparation into small containers (dedicated filling line, including weighing)
PROC10 Roller application or brushing
PROC11 Non industrial spraying
PROC13 Treatment of articles by dipping and pouring
PROC15 Use as laboratory reagent
PROC19 Hand-mixing with intimate contact and only PPE available
· **Environmental release category**
ERC1 Manufacture of substances
ERC2 Formulation of preparations
ERC4 Industrial use of processing aids in processes and products, not becoming part of articles
ERC8a Wide dispersive indoor use of processing aids in open systems
ERC8c Wide dispersive indoor use resulting in inclusion into or onto a matrix
ERC8d Wide dispersive outdoor use of processing aids in open systems
ERC8f Wide dispersive outdoor use resulting in inclusion into or onto a matrix

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· **Application of the substance / the preparation**
The substance has may industrial, professional and consumer applications.

· **Details of the supplier of the safety data sheet**
· **Manufacturer/Supplier:**
Severn Biotech Ltd.
Unit 2,
Park Lane,
Kidderminster,
Worcestershire.
DY11 6TJ
UK
Tel: 0044 1562 825286
Fax: 0044 1562 825284
email: info@severnbiotech.com

· **Further information obtainable from:** Product safety department.
· **Emergency telephone number:** Tel: 0044 1562 825286 (not 24 hours)

## 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.

· **Information concerning particular hazards for human and environment:**
At long or repeated contact with skin it may cause dermatitis due to the degreasing effect of the solvent.
Has a narcotizing effect.

· **Label elements**
· **Labelling according to Regulation (EC) No 1272/2008**
The substance is classified and labelled according to the CLP regulation.
· **Hazard pictograms** GHS02, GHS07
· **Signal word** Danger
· **Hazard statements**
H225 Highly flammable liquid and vapour.
H319-EUH066 Causes serious eye irritation. Repeated exposure may cause skin dryness or cracking.

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H336 May cause drowsiness or dizziness.

· **Precautionary statements**

P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P260 Do not breathe mist/vapours/spray.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P370+P378 In case of fire: Use for extinction: CO2, powder or water spray.

· **Other hazards**

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

## 3 Composition/information on ingredients

· **Chemical characterization: Substances**

· **CAS No. Description**

141-78-6 Ethyl acetate

· **Identification number(s)**

· **EC number:** 205-500-4

· **Index number:** 607-022-00-5

## 4 First aid measures

· **Description of first aid measures**

· **General information:** Immediately remove any clothing soiled by the product.

· **After inhalation:**

DO NOT DELAY!

Supply fresh air; consult doctor in case of complaints.

In case of unconsciousness place patient stably in side position for transportation.

· **After skin contact:**

Immediately wash with water and soap and rinse thoroughly.

If skin irritation continues, consult a doctor.

· **After eye contact:**

DO NOT DELAY!

Check for and remove any contact lenses.

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

· **After swallowing:**

Rinse out mouth and then drink plenty of water.

Do not induce vomiting; call for medical help immediately.

· **Information for doctor:** Treat symptomatically and supportively.

· **Most important symptoms and effects, both acute and delayed**

No further relevant information available.

· **Indication of any immediate medical attention and special treatment needed**

No further relevant information available.

## 5 Firefighting measures

· **Extinguishing media**

· **Suitable extinguishing agents:**

CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

· **For safety reasons unsuitable extinguishing agents:** Water with full jet

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· **Special hazards arising from the substance or mixture** Flammable liquid and vapour.
· **Advice for firefighters**
· **Protective equipment:**
Wear fully protective suit.
Wear self-contained respiratory protective device.
Do not inhale explosion gases or combustion gases.
· **Additional information**
Collect contaminated fire fighting water separately. It must not enter the sewage system.
Highly flammable liquid.
Vapours may form explosive mixtures with air.
Vapour may cause flash fires.
The vapour is heavier than air and may travel along the ground; distant ignition possible. Vapours may accumulate in low or confined areas, travel a considerable distance to a source of ignition and flash back.
Runoff to sewer may create a fire or explosion hazard. Containers may explode when heated.
Be aware of possibility of re-ignition.
Containers may explode in heat of fire. Use water to cool fire-exposed containers and to disperse vapour.

## 6 Accidental release measures

· **Personal precautions, protective equipment and emergency procedures**
Keep away from ignition sources.
Keep ignition sources away - no smoking.
Wear protective equipment. Keep unprotected persons away.
Eliminate all sources of ignition.
Wear appropriate protective clothing.
Avoid breathing vapours.
Keep unnecessary people away; isolate hazard area and deny entry.
Consider need for evacuation.
Stay up wind and keep out of low areas where vapour may accumulate and ignite.
Stop leak if this can be achieved without risk.
For small spills take up with a non-combustible absorbant.
For large spills, dike or dam for later disposal.
· **Environmental precautions:**
Do not allow to penetrate the ground/soil.
Do not allow to enter sewers/ surface or ground water.
· **Methods and material for containment and cleaning up:**
Send for recovery or disposal in suitable receptacles.
Ensure adequate ventilation.
SMALL SPILLS: Allow to evaporate if it is safe to do so or contain and absorb using earth, sand or other inert material then transfer into suitable containers for recovery or disposal. Ventilate contaminated area thoroughly.
LARGE SPILLS: Dike or dam to contain for later disposal. Contact emergency authorities.
· **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

## 7 Handling and storage

· **Handling:**
· **Precautions for safe handling**
Keep away from heat and direct sunlight.

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Avoid direct contact (skin contact, ingestion and/or inhalation of fume/mist/dust) with the product.
Suitable equipment for dealing with fires, spills and leaks must be readily available.
Earth all equipment. Use explosion protected electrical equipment and lighting.
Do not smoke eat or drink in areas of use and storage.
Use closed-system transfers wherever possible.
Earth (ground) lines and equipment used during transfer to reduce possibility of static spark initiated fire or explosion

· **Information about fire - and explosion protection:**
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.

· **Conditions for safe storage, including any incompatibilities**
· **Storage:**
· **Requirements to be met by storerooms and receptacles:**
Store in a cool location.
Storage area should be cool, dry, well ventilated, out of direct sunlight and separated from oxidants and strong mineral acids.
Store in original containers.
Store away from sources of heat or ignition.
Storage tanks should have equipotential electrical bonding and be earthed. Storage should be closed.
· **Information about storage in one common storage facility:** Store away from oxidizing agents.
· **Further information about storage conditions:**
Store in a bunded area.
Store in a cool place. Heat will increase pressure and may lead to the receptacle bursting.
Keep container tightly sealed.
Store in cool, dry conditions in well sealed receptacles.
· **Specific end use(s)** No further relevant information available.

## 8 Exposure controls/personal protection

· **Additional information about design of technical facilities:** No further data; see item 7.

· **Control parameters**

| · **Ingredients with limit values that require monitoring at the workplace:** | |
|---|---|
| **141-78-6 Ethyl acetate** | |
| WEL | Short-term value: 400 ppm<br>Long-term value: 200 ppm |

· **DNELs**
WORKERS
Acute / short-term exposure - systemic effects
Inhalation DN(M)EL
- DNEL (Derived No Effect Level): 1468 mg/m³

Acute / short-term exposure - local effects
Inhalation DN(M)EL
- DNEL (Derived No Effect Level): 1468 mg/m³

Long-term exposure - systemic effects
Dermal DN(M)EL
- DNEL (Derived No Effect Level): 63 mg/kg bw/day

Inhalation DN(M)EL
- DNEL (Derived No Effect Level): 734 mg/m³

Long-term exposure - local effects
Inhalation DN(M)EL

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- DNEL (Derived No Effect Level): 734 mg/m³

GENERAL POPULATION
Acute / short-term exposure - systemic effects
Inhalation DN(M)EL
- DNEL (Derived No Effect Level): 734 mg/m³

Acute / short-term exposure - local effects
Inhalation DN(M)EL
- DNEL (Derived No Effect Level): 734 mg/m³

Long-term exposure - systemic effects
Dermal DN(M)EL
- DNEL (Derived No Effect Level): 37 mg/kg bw/day

Inhalation DN(M)EL
- DNEL (Derived No Effect Level): 367 mg/m³

Oral DN(M)EL
- DNEL (Derived No Effect Level): 4.5 mg/kg bw/day

Long-term exposure - local effects
Inhalation DN(M)EL
- DNEL (Derived No Effect Level): 367 mg/m³

· **PNECs**
PNEC aqua (freshwater): 0.26 mg/L
PNEC aqua (marine water): 0.026 mg/L
PNEC aqua (intermittent releases): 1.65 mg/L
PNEC STP: 650 mg/L
PNEC sediment (freshwater): 1.25 mg/kg sediment dw
PNEC sediment (marine water): 0.125 mg/kg sediment dw
PNEC soil: 0.24 mg/kg soil dw
PNEC oral: 0.2 g/kg food
· **Additional information:** The lists valid during the making were used as basis.

· **Exposure controls**
· **Personal protective equipment:**
Select PPE appropriate for the operations taking place taking into account the product properties.
· **General protective and hygienic measures:**
Avoid close or long term contact with the skin.
Do not eat, drink, smoke or sniff while working.
A safe system of work must be formulated and followed to ensure safe working with this product.
Relevant workers must receive suitable and sufficient training and supervision.
Take note of assigned Workplace Exposure Limits.
Ensure that eyewash stations and safety showers are close to the workstation location.
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.
· **Respiratory protection:**
In case of insufficient local exhaust ventilation and/or handling with open equipment: Respiratory air fed breathing apparatus if there is a risk of exposure to high vapour concentrations. If using a half mask: organic vapour catridge Ax type.
· **Protection of hands:**
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

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· **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.
Gloves made from butyl rubber (breakthrough times >480 minutes), Neoprene, rubber, nitrile rubber (breakthrough times up to 480 minutes).
· **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

· **Body protection:**
Solvent resistant protective clothing
Neoprene apron. Rubber boots

## 9 Physical and chemical properties

| | |
|---|---|
| · **Information on basic physical and chemical properties** | |
| · **General Information** | |
| · **Appearance:** | |
| **Form:** | Fluid |
| **Colour:** | Colourless |
| · **Odour:** | Sweetish |
| · **Odour threshold:** | approx. 4ppm |
| · **pH-value:** | Not determined. |
| · **Change in condition** | |
| **Melting point/Melting range:** | <-70 °C |
| **Boiling point/Boiling range:** | 77 °C |
| · **Flash point:** | -4 °C |
| · **Flammability (solid, gaseous):** | Not applicable. |
| · **Ignition temperature:** | 426 °C |
| · **Decomposition temperature:** | Not determined. |
| · **Self-igniting:** | Not determined. |
| · **Danger of explosion:** | Product is not explosive. However, formation of explosive air/vapour mixtures are possible. |
| · **Explosion limits:** | |
| **Lower:** | 2.2 Vol % |
| **Upper:** | 11.5 Vol % |
| · **Vapour pressure at 20 °C:** | 97 hPa |
| · **Density at 20 °C:** | 0.9 g/cm³ |
| · **Relative density** | Not determined. |
| · **Vapour density** | Not determined. |
| · **Evaporation rate** | Not determined. |

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| | |
|---|---|
| · **Solubility in / Miscibility with water at 20 °C:** | 83 g/l |
| · **Partition coefficient (n-octanol/water):** | 0.68 log POW<br>Not determined. |
| · **Viscosity:** | |
| **Dynamic at 20 °C:** | 0.45 mPas |
| **Kinematic:** | Not determined. |
| · **Other information** | No further relevant information available. |

## 10 Stability and reactivity

· **Reactivity**
· **Chemical stability**
· **Thermal decomposition / conditions to be avoided:**
No decomposition if used and stored according to specifications.
· **Possibility of hazardous reactions**
Forms explosive gas mixture with air.
Heating may cause violent combustion or explosion.
Decomposes under the influence of UV light, acids and bases.
Reacts with strong oxidants, bases and acids.
Attacks aluminium and plastics.
· **Conditions to avoid** No further relevant information available.
· **Incompatible materials:**
Finely powdered metals.
Strong acids and oxidising agents
· **Hazardous decomposition products:** Carbon monoxide and carbon dioxide

## 11 Toxicological information

· **Information on toxicological effects**
· **Acute toxicity:**

| · **LD/LC50 values relevant for classification:** | | |
|---|---|---|
| Oral | LD50 | >2000 mg/kg (rabbit) |
| Dermal | LD50 | >20000 mg/kg (rabbit) |
| Inhalative | LC50/4 h | 33.5 mg/l (rat) |

· **Primary irritant effect:**
· **on the skin:** No irritant effect.
· **on the eye:** Irritating effect.
· **Sensitization:** No sensitizing effects known.
· **Other information (about experimental toxicology):**
Use of alcoholic beverages enhances the harmful effect of the substance.
· **Subacute to chronic toxicity:** Effects of long-term or repeated exposure: The liquid defats the skin.
· **Additional toxicological information:**

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Routes of exposure: The substance can be absorbed into the body by inhalation of its vapour.
Inhalation risk
A harmful contamination of the air can be reached rather quickly on evaporation of this substance at 20 degs. C.

Effects of short-term exposure: The substance is irritating to the eyes and respiratory tract. The substance may cause effects on the central nervous system. Exposure far above the WEL could cause death.

## 12 Ecological information

· **Toxicity**

| · **Aquatic toxicity:** | |
|---|---|
| EC50 | >2000 mg/kg (daphnia) |

· **Persistence and degradability** biodegradable
· **Behaviour in environmental systems:**
· **Bioaccumulative potential** Product is not expected to bioaccumulate.
· **Mobility in soil** No further relevant information available.
· **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**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.
· **Other adverse effects** No further relevant information available.

## 13 Disposal considerations

· **Waste treatment methods**
· **Recommendation**
Contact waste processors for recycling information.
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
Used, degraded or contaminated product may be classified as hazardous waste. Anyone classifying hazardous waste and determining its fate must be qualified in accordance with state and international legislation.
· **European waste catalogue**
Waste key numbers in accordance with the European Waste catalogue (EWC) are origin-referred defined. Since this product is used in several industries, no waste key can be provided by the supplier. The waste key number should be determined in arrangement with your waste disposal partner or the responsible authority.

· **Uncleaned packaging:**
· **Recommendation:**
Container remains hazardous when empty. Continue to observe all precautions.
Do not mix with other waste streams.
Container disposal: Drain container thoroughly. Empty containers may contain highly flammable residues. Do not cut, grind, drill, weld or dispose of containers unless adequate precautions have been taken against this hazard. Do not remove container labels until they are cleaned. Send to drum recover or metal reclaimer.



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## 14 Transport information

| | |
|---|---|
| · **UN-Number** | |
| · **ADR, IMDG, IATA** | UN1173 |
| · **UN proper shipping name** | |
| · **ADR** | 1173 ETHYL ACETATE |
| · **IMDG, IATA** | ETHYL ACETATE |
| · **Transport hazard class(es)** | |
| · **ADR, IMDG, IATA** | |


| | |
|---|---|
| · **Class** | 3 Flammable liquids. |
| · **Label** | 3 |
| · **Packing group** | |
| · **ADR, IMDG, IATA** | II |
| · **Environmental hazards:** | |
| · **Marine pollutant:** | No |
| · **Special precautions for user** | Warning: Flammable liquids. |
| · **Danger code (Kemler):** | 33 |
| · **EMS Number:** | F-E,S-D |
| · **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** | Not applicable. |
| · **Transport/Additional information:** | |
| · **ADR** | |
| · **Limited quantities (LQ)** | 1L |
| · **Transport category** | 2 |
| · **Tunnel restriction code** | D/E |
| · **UN "Model Regulation":** | UN1173, ETHYL ACETATE, 3, II |

## 15 Regulatory information

· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

## 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.