

**MATERIAL SAFETY DATA SHEET**

MSDS No.

M-02

Ethyl Acetate

Effective From

23-03-2023

According to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1. Product identifier**

Product form : Substance
Trade name : Ethyl Acetate (C₄H₈O₂)
Chemical name : Ethyl Acetate
EC Index-No. : 607-022-00-5
EC-No. : 205-500-4
CAS-No. : 141-78-6
REACH Registration No. : 01-2119475103-46-XXXX

1.2. Relevant identified uses of the substance or mixture and uses advised against**1.2.1. Relevant identified uses**

Use of the substance/mixture : Industrial solvent, solvent for coatings, films, perfumes and synthetic flavoring agents, extraction solvent for various products and laboratory procedures.

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet**Bloomchemag BV**

Sint-Antoniusstraat 16 b1

B-2400, Mol, Belgium.

info@bloomchemag.com

1.4. Emergency telephone number

+91 7291970499


SECTION 2: Hazards identification**2.1. Classification of the substance or mixture****Classification according to Regulation (EC) No. 1272/2008 [CLP]**

Flammable liquids, Category 2 H225
Serious eye damage/eye irritation, Category 2 H319
Specific target organ toxicity – Single exposure, Category 3, Narcosis H336

Full text of H- and EUH-statements: see section 16

Adverse physicochemical, human health and environmental effects

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

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2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



GHS02

GHS07

Signal word (CLP) :

Danger

Hazard statements (CLP) :

H225 - Highly flammable liquid and vapour.

H319 - Causes serious eye irritation.

H336 - May cause drowsiness or dizziness.

Precautionary statements (CLP) :

P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources.

No smoking.

P233 - Keep container tightly closed.

P235 - Keep cool.

P261 - Avoid breathing dust/fume/gas/mist/vapours/spray. P370+P378 - In case of fire: Use media other than water to extinguish. P403+P235 - Store in a well-ventilated place. Keep cool.

EUH-statements

: EUH066 - Repeated exposure may cause skin dryness or cracking.

2.3. Other hazards

Contains no PBT/vPvB substances $\geq 0.1\%$ assessed in accordance with REACH Annex XIII

The substance is not included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605

SECTION 3: Composition/information on ingredients

3.1. Substances

Name : Ethyl Acetate (C₄H₈O₂)

Name	Product identifier	%
Ethyl Acetate	CAS-No.: 141-78-6 EC-No.: 205-500-4 EC Index-No.: 607-022-00-5 REACH Registration No. 01-2119475103-46-XXXX	100%

3.2. Mixtures

Not applicable


SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible). Call a poison center or a doctor if you feel unwell.

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. Allow affected person to breathe fresh air. Allow the victim to rest.

First-aid measures after skin contact : Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse. Rinse skin with water/shower. Take off immediately all contaminated clothing.

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First-aid measures after eye contact	: Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persists. 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.
First-aid measures after ingestion	: Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention. Call a poison center or a doctor if you feel unwell.

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

Symptoms/effects	: Not expected to present a significant hazard under anticipated conditions of normal use. May cause drowsiness or dizziness.
Symptoms/effects after skin contact	: Repeated exposure may cause skin dryness or cracking.
Symptoms/effects after eye contact	: Eye irritation.

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	: Foam. Dry powder. Carbon dioxide. Water spray. Sand.
Unsuitable extinguishing media	: Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

Fire hazard	: On combustion forms: carbon oxides
Hazardous decomposition products in case of fire	: Toxic fumes may be released.

5.3. Advice for firefighters

Firefighting instructions	: Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire fighting water from entering the environment.
Protective equipment for firefighters	: Do not enter fire area without proper protective equipment, including respiratory protection. Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel


Protective equipment	: Wear recommended personal protective equipment. For further information refer to section 8: "Exposure controls/personal protection".
Emergency procedures	: Ventilate spillage area. Evacuate unnecessary personnel. No open flames, no sparks, and no smoking. Avoid breathing dust/fume/gas/mist/vapours/spray. Avoid contact with skin and eyes.

6.1.2. For emergency responders

Protective equipment	: Do not attempt to take action without suitable protective equipment. Equip cleanup crew with proper protection. For further information refer to section 8: "Exposure controls/personal protection".
Emergency procedures	: Ventilate area.

6.2. Environmental precautions

Avoid release to the environment. Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

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6.3. Methods and material for containment and cleaning up

- Methods for cleaning up : Take up liquid spill into absorbent material. Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials. Notify authorities if product enters sewers or public waters.
- Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 8: "Exposure controls/personal protection". For disposal of residues refer to section 13 : "Disposal considerations".

SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Precautions for safe handling : Provide good ventilation in process area to prevent formation of vapour. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Ground/bond container and receiving equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Flammable vapours may accumulate in the container. Use explosion-proof equipment. Wear personal protective equipment. Use only outdoors or in a well-ventilated area. Avoid breathing dust/fume/gas/mist/vapours/spray. Avoid contact with skin and eyes.
- Hygiene measures : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

- Technical measures : Ground/bond container and receiving equipment.
- Storage conditions : Keep container tightly closed in a cool, well-ventilated place. Keep container closed when not in use. Store in a well-ventilated place. Keep cool. Keep container tightly closed. Store locked up.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values


ethyl acetate (141-78-6)

EU - Indicative Occupational Exposure Limit (IOEL)


Local name	Ethyl Acetate
IOEL TWA [ppm]	200 ppm
IOEL STEL	1468 mg/m ³
IOEL STEL [ppm]	400 ppm
Regulatory reference	COMMISSION DIRECTIVE (EU) 2017/164

Austria - Occupational Exposure Limits

Local name	Ethylacetat (Essigsäureethylester)
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MAK (OEL TWA)	734 mg/m ³
MAK (OEL TWA) [ppm]	200 ppm
MAK (OEL STEL)	1468 mg/m ³ (4x 15(Miw) min)
MAK (OEL STEL) [ppm]	400 ppm (4x 15(Miw) min)
Regulatory reference	BGBI. II Nr. 156/2021
Belgium - Occupational Exposure Limits	
Local name	Acétate D'éthyle # Ethylacetaat
OEL TWA	734 mg/m ³
OEL TWA [ppm]	200 ppm
OEL STEL	1468 mg/m ³
OEL STEL [ppm]	400 ppm
Regulatory reference	Koninklijk besluit/Arrêté royal 11/05/2021
Bulgaria - Occupational Exposure Limits	
Local name	Етилацетат
OEL TWA	734 mg/m ³
OEL TWA [ppm]	200 ppm
OEL STEL	1468 mg/m ³
OEL STEL [ppm]	400 ppm
Remark	• (Химични агенти, за които са определени гранични стойности във въздуха на работната среда за Европейската общност)
Regulatory reference	Наредба № 13 от 30.12.2003 г. за защита на работещите от рискове, свързани с експозиция на химични агенти при работа (изм. и доп. ДВ. бр. 47 от 2021 г., в сила от 04.06.2021 г.)
Croatia - Occupational Exposure Limits	
Local name	Etil-Acetat
GVI (OEL TWA) [1]	734 mg/m ³
GVI (OEL TWA) [2]	200 ppm
KGVI (OEL STEL)	1468 mg/m ³
KGVI (OEL STEL) [ppm]	400 ppm
Remark	Direktiva: 2017/164/EU
Regulatory reference	Pravilnik o zaštiti radnika od izloženosti opasnim kemikalijama na radu, граничним vrijednostima izloženosti i biološkim граничним vrijednostima (NN 1/2021)
Cyprus - Occupational Exposure Limits	
Local name	Οξικός αιθυλοακετάτης
OEL TWA	734 mg/m ³
OEL TWA [ppm]	200 ppm
OEL STEL	1468 mg/m ³

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OEL STEL [ppm]	400 ppm
Regulatory reference	Κανονισμός του 2019 (Κ.Α.Π. 16/2019)
Czech Republic - Occupational Exposure Limits	
Local name	Ethylacetát
PEL (OEL TWA)	700 mg/m ³
PEL (OEL TWA) [ppm]	191 ppm
NPK-P (OEL C)	900 mg/m ³
NPK-P (OEL C) [ppm]	246 ppm
Remark	I - dráždí sliznice (očí, dýchací cesty), respektive kůže.
Regulatory reference	Nařízení vlády č. 361/2007 Sb. (Předpis 195/2021 Sb.)
Denmark - Occupational Exposure Limits	
Local name	Ethylacetat (Eddikesyreethylester)
OEL TWA [1]	540 mg/m ³
OEL TWA [2]	150 ppm
Remark	E (betyder, at stoffet har en EF-grænseværdi)
Regulatory reference	BEK nr 2203 af 29. november 2021
Estonia - Occupational Exposure Limits	
Local name	Etüületsetaat (etüületanaat)
OEL TWA	500 mg/m ³
OEL TWA [ppm]	150 ppm
OEL STEL	1100 mg/m ³
OEL STEL [ppm]	300 ppm
Regulatory reference	Vabariigi Valitsuse 20. märtsi 2001. a määruse nr 105 (RT I, 15.05.2021, 1)
Finland - Occupational Exposure Limits	
Local name	Etyyliasettaatti
HTP (OEL TWA) [1]	730 mg/m ³
HTP (OEL TWA) [2]	200 ppm
HTP (OEL STEL)	1470 mg/m ³
HTP (OEL STEL) [ppm]	400 ppm
Regulatory reference	HTP-ARVOT 2020 (Sosiaali- ja terveysministeriö)
France - Occupational Exposure Limits	
Local name	Acétate d'éthyle
VME (OEL TWA)	734 mg/m ³
VME (OEL TWA) [ppm]	200 ppm
VLE (OEL C/STEL)	1468 mg/m ³

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VLE (OEL C/STEL) [ppm]	400 ppm
Remark	Valeurs réglementaires contraignantes
Regulatory reference	Article R4412-149 du Code du travail (réf.: INRS ED 984, 2016; Décret n° 2019-1487; Décret n° 2020-1546; Décret n° 2021-434; Décret n° 2021-1849)

Germany - Occupational Exposure Limits (TRGS 900)

AGW (OEL TWA) [1]	730 mg/m ³
AGW (OEL TWA) [2]	200 ppm
Peak exposure limitation factor	2(I)
Remark	DFG - Senatskommission zur Prüfung gesundheitsschädlicher Arbeitsstoffe der DFG (MAK-Kommission); EU - Europäische Union (Von der EU wurde ein Luftgrenzwert festgelegt: Abweichungen bei Wert und Spitzenbegrenzung sind möglich); Y - Ein Risikoder Fruchtschädigung braucht bei Einhaltung des Arbeitsplatzgrenzwertes und des biologischen Grenzwertes (BGW) nicht befürchtet zu werden
Regulatory reference	TRGS900

Greece - Occupational Exposure Limits


Local name	Οξικός αιθυλεστέρας
OEL TWA	734 mg/m ³
OEL TWA [ppm]	200 ppm
OEL STEL	1468 mg/m ³
OEL STEL [ppm]	400 ppm
Regulatory reference	Π.Δ. 82/2018 - Προστασία της υγείας των εργαζομένων που εκτίθενται σε ορισμένους χημικούς παράγοντες κατά τη διάρκεια της εργασίας τους

Hungary - Occupational Exposure Limits


Local name	ETIL-ACETÁT
AK (OEL TWA)	734 mg/m ³
CK (OEL STEL)	1468 mg/m ³
Remark	i (ingerlő anyag, amely izgatja a bőrt, nyálkahártyát, szemet vagy mindhármat), sz (Túlerzékenységet okozó (szenzibilizáló) tulajdonságú anyag. Az anyagra érzékeny egyéneken „túlerzékenységen” alapuló bőr-, légzőrendszeri, esetleg más szervet/szervrendszert károsító megbetegedést okozhat); EU4 (2017/164 EU irányelvbenközölt érték); N (Irritáló anyagok, egyszerű fojtógázok, csekély egészségkárosító hatássalbíró anyagok)
Regulatory reference	5/2020. (II. 6.) ITM rendelet - A kémiai kóroki tényezők hatásának kitett munkavállalókegészségének és biztonságának védelméről

Ireland - Occupational Exposure Limits


Local name	Ethyl Acetate
OEL TWA [1]	734 mg/m ³
OEL TWA [2]	200 ppm
OEL STEL	1468 mg/m ³
OEL STEL [ppm]	400 ppm

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Remark	IOELV (Indicative Occupational Exposure Limit Values)
Regulatory reference	Chemical Agents Code of Practice 2021
Italy - Occupational Exposure Limits	
Local name	Acetato di etile
OEL TWA	734 mg/m ³
OEL TWA [ppm]	200 ppm
OEL STEL	1468 mg/m ³
OEL STEL [ppm]	400 ppm
Regulatory reference	Allegato XXXVIII del D.Lgs. 9 aprile 2008, n. 81 e s.m.i.
Latvia - Occupational Exposure Limits	
Local name	Etiļskābes Etilēsteris (Etilacetāts)
OEL TWA	200 mg/m ³
OEL TWA [ppm]	54 ppm
OEL STEL	1468 mg/m ³
OEL STEL [ppm]	400 ppm
Regulatory reference	Ministru kabineta 2007. gada 15. maija noteikumiem Nr. 325 (Grozījumi Ministru kabineta 2018. gada 10. jūlijā noteikumiem Nr. 407)
Lithuania - Occupational Exposure Limits	
Local name	Etilo Acetatas
IPRV (OEL TWA)	500 mg/m ³
IPRV (OEL TWA) [ppm]	150 ppm
NRV (OEL C)	1100 mg/m ³
NRV (OEL C) [ppm]	300 ppm
Regulatory reference	LIETUVOS HIGIENOS NORMA HN 23:2011 (Nr. V-695/A1-272, 2018-06-12)
Luxembourg - Occupational Exposure Limits	
Local name	Acétate D'éthyle
OEL TWA	734 mg/m ³
OEL TWA [ppm]	200 ppm
OEL STEL	1468 mg/m ³
OEL STEL [ppm]	400 ppm
Regulatory reference	Mémorial A N° 226 de 2021 concernant la protection de la sécurité et de la santé dessalariés contre les risques liés à des agents chimiques sur le lieu de travail
Malta - Occupational Exposure Limits	
Local name	Ethyl Acetate
OEL TWA	734 mg/m ³
OEL TWA [ppm]	200 ppm

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OEL STEL	1468 mg/m ³
OEL STEL [ppm]	400 ppm
Regulatory reference	S.L.424.24 - Chemical Agents at Work Regulations (L.N.356 of 2021)
Netherlands - Occupational Exposure Limits	
Local name	Ethylacetaat
TGG-8u (OEL TWA)	734 mg/m ³
TGG-15min (OEL STEL)	1468 mg/m ³
Regulatory reference	Arbeidsomstandighedenregeling 2022
Poland - Occupational Exposure Limits	
Local name	Octan Etylu
NDS (OEL TWA)	734 mg/m ³
NDSCh (OEL STEL)	1468 mg/m ³
Regulatory reference	Dz. U. 2018 poz. 1286
Portugal - Occupational Exposure Limits	
Local name	Acetato De Etilo
OEL TWA [ppm]	400 ppm
Regulatory reference	Norma Portuguesa NP 1796:2014
Romania - Occupational Exposure Limits	
Local name	Acetat De Etil
OEL TWA	734 mg/m ³
OEL TWA [ppm]	200 ppm
OEL STEL	1468 mg/m ³
OEL STEL [ppm]	400 ppm
Regulatory reference	Hotărârea Guvernului nr. 1.218/2006 (Hotărârea nr. 53/2021)
Slovakia - Occupational Exposure Limits	
Local name	Etylacetát (Octan Etylový)
NPHV (OEL TWA) [1]	734 mg/m ³
NPHV (OEL TWA) [2]	200 ppm
NPHV (OEL STEL)	1468 mg/m ³
NPHV (OEL STEL) [ppm]	400 ppm
Regulatory reference	Nariadenie vlády č. 355/2006 Z. z. (236/2020 Z. z.)
Slovenia - Occupational Exposure Limits	
Local name	Etilacetat
OEL TWA	734 mg/m ³
OEL TWA [ppm]	200 ppm

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OEL STEL	1468 mg/m ³
OEL STEL [ppm]	400 ppm
Remark	Y (Snovi, pri katerih ni nevarnosti za zarodek ob upoštevanju mejnih vrednosti in bat vrednosti), EU
Regulatory reference	Uradni list RS, št. 72/2021 z dne 11.5.2021

Spain - Occupational Exposure Limits

Local name	Acetato De Etilo
VLA-ED (OEL TWA) [1]	734 mg/m ³
VLA-ED (OEL TWA) [2]	200 ppm
VLA-EC (OEL STEL)	1468 mg/m ³
VLA-EC (OEL STEL) [ppm]	400 ppm
Remark	VLI (Agente químico para el que la U.E. estableció en su día un valor límite indicativo).
Regulatory reference	Límites de Exposición Profesional para Agentes Químicos en España 2022. INSHT

Sweden - Occupational Exposure Limits

Local name	Etylacetat
NGV (OEL TWA)	550 mg/m ³
NGV (OEL TWA) [ppm]	150 ppm
KTV (OEL STEL)	1100 mg/m ³
KTV (OEL STEL) [ppm]	300 ppm
Regulatory reference	Hygieniska gränsvärden (AFS 2018:1)

United Kingdom - Occupational Exposure Limits


Local name	Ethyl Acetate
WEL TWA (OEL TWA) [1]	734 mg/m ³
WEL TWA (OEL TWA) [2]	200 ppm
WEL STEL (OEL STEL)	1468 mg/m ³
WEL STEL (OEL STEL) [ppm]	400 ppm
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE

Iceland - Occupational Exposure Limits

Local name	Etylasetat (ediksúruetylester)
OEL TWA	540 mg/m ³
OEL TWA [ppm]	150 ppm
Regulatory reference	Reglugerð um mengunarmörk og aðgerðir til að draga úr mengun á vinnustöðum (Nr. 390/2009)

Norway - Occupational Exposure Limits

Local name	Etylacetat
Grenseverdi (OEL TWA) [1]	734 mg/m ³

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Grenseverdi (OEL TWA) [2]	200 ppm
Korttidsverdi (OEL STEL)	1468 mg/m ³
Korttidsverdi (OEL STEL) [ppm]	400 ppm
Remark	E: EU har en veiledende grenseverdi og/eller anmerkning for stoffet.
Regulatory reference	FOR-2021-06-28-2248

Switzerland - Occupational Exposure Limits

Local name	Acétate D'éthyle / Ethylacetat [Essigsäureethylester]
MAK (OEL TWA) [1]	730 mg/m ³
MAK (OEL TWA) [2]	200 ppm
KZGW (OEL STEL)	1460 mg/m ³
KZGW (OEL STEL) [ppm]	400 ppm
Critical toxicity	VRS, Yeux / OAW, Auge
Notation	SSc / SSc
Remark	INRS, NIOSH
Regulatory reference	www.suva.ch, 01.01.2021

8.1.2. Recommended monitoring procedures

No additional information available

8.1.3. Air contaminants formed

No additional information available

8.1.4. DNEL and PNEC

Ingredient	DNELs Exposure Pattern Worker	PNECs Compartment
Ethyl Acetate	Dermal 63 mg/kg bw/day (Systemic, Chronic)	0.24 mg/L (Water (Fresh))
	Inhalation 734 mg/m ³ (Systemic, Chronic)	0.024 mg/L (Water - Intermittent release)
	Inhalation 734 mg/m ³ (Local, Chronic) Inhalation	1.65 mg/L (Water (Marine))
	1 468 mg/m ³ (Systemic, Acute)	1.15 mg/kg sediment dw (Sediment (Fresh Water))
	Inhalation 1 468 mg/m ³ (Local, Acute)	0.115 mg/kg sediment dw (Sediment (Marine))
	Dermal 37 mg/kg bw/day (Systemic, Chronic) *	0.148 mg/kg soil dw (Soil)
	Inhalation 367 mg/m ³ (Systemic, Chronic) * Oral	650 mg/L (STP)
	4.5 mg/kg bw/day (Systemic, Chronic) * Inhalation	0.2 g/kg food (Oral)
	367 mg/m ³ (Local, Chronic) * Inhalation 734	
	mg/m ³ (Systemic, Acute) *	
Inhalation 734 mg/m ³ (Local, Acute) *		

* Values for General Population

8.1.5. Control banding


No additional information available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Appropriate engineering controls:

Ensure good ventilation of the work station.

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8.2.2. Personal protection equipment

Personal protective equipment:

Avoid all unnecessary exposure.

8.2.2.1. Eye and face protection

Eye protection:

Chemical goggles or safety glasses. Use eye protection according to EN 166. Safety glasses

8.2.2.2. Skin protection

Skin and body protection:

Wear suitable protective clothing

Hand protection:

Wear protective gloves. Wear suitable gloves tested to EN374

8.2.2.3. Respiratory protection

Respiratory protection:

Wear appropriate mask

8.2.2.4. Thermal hazards

No additional information available

8.2.3. Environmental exposure controls

Environmental exposure controls:

Avoid release to the environment.


Other information:

Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Colour	: colorless.
Odour	: varying odor
Odour threshold	: 50 ppm
Melting point	: -84 °C
Freezing point	: Not available
Boiling point	: 77 °C
Flammability	: Highly flammable.
Lower explosion limit	: 2.0 %
Upper explosion limit	: 11.5 %
Flash point	: -4 °C
Auto-ignition temperature	: 426 °C
Decomposition temperature	: Not available
pH	: Not available
Viscosity, kinematic	: Not available
Viscosity, dynamic	: 0.43 cP @20 °C
Solubility	: 8.7 % (water)
Partition coefficient n-octanol/water (Log Kow)	: Not available
Vapour pressure	: 73 mmHg 20 °C
Vapour pressure at 50 °C	: Not available
Density	: 0.8945 g/mL
Relative density	: 0.9003
Relative vapour density at 20 °C	: 3.04
Particle characteristics	: Not applicable

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9.2. Other information

9.2.1. Information with regard to physical hazard classes

No additional information available

9.2.2. Other safety characteristics

Relative evaporation rate (butylacetate=1) : 6.2

SECTION 10: Stability and reactivity

10.1. Reactivity

Will not polymerize. Vapors may form explosive mixture with air.

10.2. Chemical stability

The product is stable at normal handling and storage conditions.

10.3. Possibility of hazardous reactions

Will not polymerize. May decompose, exotherm or catch fire with mixed with incompatible materials.

10.4. Conditions to avoid

Avoid heat, flames, sparks and other sources of ignition. Minimize contact with material. Avoid inhalation of material or combustion by-products. Keep out of water supplies and sewers. Do not store at elevated temperatures.

10.5. Incompatible materials

Strong acids, strong bases, chlorosulfonic acid, strong oxidizers, nitrates, lithium tetrahydro aluminate.

10.6. Hazardous decomposition products

Carbon oxides.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity (oral) : Not classified
 Acute toxicity (dermal) : Not classified
 Acute toxicity (inhalation) : Not classified

Ethyl Acetate (C₄H₈O₂) (141-78-6)

LC0 Rat inhalation(vapour) >6000ppm (22.5mg/l) 6h
 LD50 rabbit > 20 000 mg/kg bw

Skin corrosion/irritation : No data available
 Serious eye damage/irritation : Causes serious eye irritation.
 Respiratory or skin sensitisation : Skin : guinea pig not sensitising [OECD 406]
 Germ cell mutagenicity : S. typhimurium TA 1535, TA 1537, TA 98 and TA 100: negative [OECD 471]
 hamster, Chinese: negative [OECD 474]
 Carcinogenicity : No data available

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Reproductive toxicity : Not classified

STOT-single exposure : May cause drowsiness or dizziness.

ethyl acetate (141-78-6)

STOT-single exposure : May cause drowsiness or dizziness.

STOT-repeated exposure : Oral(rat): NOAEL: 900 mg/kg bw/day [EPA OTS 795.2600 (Subchronic Oral Toxicity Test)]

Aspiration hazard : Not classified

11.2. Information on other hazards**11.2.1. Endocrine disrupting properties**

No additional information available

11.2.2. Other information

Other information : Likely routes of exposure: ingestion, inhalation, skin and eye

SECTION 12: Ecological information**12.1. Toxicity**

Hazardous to the aquatic environment, short-term (acute) : Not classified

Hazardous to the aquatic environment, long-term (chronic) : Not classified

Ethyl Acetate (C₄H₈O₂) (141-78-6)

LC50 fish 96h : 230 mg/L

NOEC algae 72h : > 100 mg/L

12.2. Persistence and degradability**Ethyl Acetate (C₄H₈O₂) (141-78-6)**

Persistence and degradability : Readily biodegradable 100% (OECD Test Guideline 301D , 28 day)

12.3. Bioaccumulative potential**Ethyl Acetate (C₄H₈O₂) (141-78-6)**

Bioaccumulative potential : Not expected (experimental log Pow: 0.73)

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

the substance is not PBT / vPvB

12.6. Endocrine disrupting properties

No additional information available

12.7. Other adverse effects

Additional information : Avoid release to the environment.

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SECTION 13: Disposal considerations**13.1. Waste treatment methods**

Waste treatment methods	: Dispose of contents/container in accordance with licensed collector's sorting instructions.
Product/Packaging disposal recommendations	: Dispose in a safe manner in accordance with local/national regulations.
Additional information	: Flammable vapours may accumulate in the container.
Ecology - waste materials	: Avoid release to the environment.

SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / ADN / RID

ADR	IMDG	IATA	ADN	RID
14.1. UN number or ID number				
UN 1173	UN 1173	UN 1173	UN 1173	UN 1173
14.2. UN proper shipping name				
Ethyl Acetate	Ethyl Acetate	Ethyl Acetate	Ethyl Acetate	Ethyl Acetate
Transport document description				
UN 1173 Ethyl Acetate, 3,II, (D/E)	UN 1173 Ethyl Acetate, 3, II(- 4°C c.c.)	UN 1173 Ethyl Acetate, 3, II	UN 1173 Ethyl Acetate, 3, II	UN 1173 Ethyl Acetate, 3, II
14.3. Transport hazard class(es)				
3	3	3	3	3
				
14.4. Packing group				
II	II	II	II	II
14.5. Environmental hazards				
Dangerous for the environment: No	Dangerous for the environment: No Marine pollutant: No	Dangerous for the environment: No	Dangerous for the environment: No	Dangerous for the environment: No
No supplementary information available				

14.6. Special precautions for user**Overland transport**

Classification code (ADR)	: F1
Limited quantities (ADR)	: 11
Excepted quantities (ADR)	: E2
Packing instructions (ADR)	: P001, IBC02, R001
Mixed packing provisions (ADR)	: MP19
Portable tank and bulk container instructions (ADR)	: T4
Portable tank and bulk container special provisions (ADR)	: TP1
Tank code (ADR)	: LGBF
Vehicle for tank carriage	: FL
Transport category (ADR)	: 2
Special provisions for carriage - Operation (ADR)	: S2, S20

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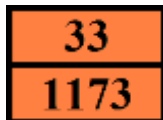
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Hazard identification number (Kemler No.) : 33
Orange plates :



Tunnel restriction code (ADR) : D/E

Transport by sea

Limited quantities (IMDG) : 1 L
Excepted quantities (IMDG) : E2
Packing instructions (IMDG) : P001
IBC packing instructions (IMDG) : IBC02
Tank instructions (IMDG) : T4
Tank special provisions (IMDG) : TP1
EmS-No. (Fire) : F-E
EmS-No. (Spillage) : S-D
Stowage category (IMDG) : B
Flash point (IMDG) : -4°C c.c.
Properties and observations (IMDG) : Colourless liquid with a fragrant odour. Flashpoint: -4°C c.c. Explosive limits: 2.18% to 11.5% Immiscible with water.

Air transport

PCA Excepted quantities (IATA) : E2
PCA Limited quantities (IATA) : Y341
PCA limited quantity max net quantity (IATA) : 1L
PCA packing instructions (IATA) : 353
PCA max net quantity (IATA) : 5L
CAO packing instructions (IATA) : 364
CAO max net quantity (IATA) : 60L
ERG code (IATA) : 3L

Inland waterway transport


Classification code (ADN) : F1
Limited quantities (ADN) : 1 L
Excepted quantities (ADN) : E2
Carriage permitted (ADN) : T
Equipment required (ADN) : PP, EX, A
Ventilation (ADN) : VE01
Number of blue cones/lights (ADN) : 1

Rail transport

Classification code (RID) : F1
Limited quantities (RID) : 1L
Excepted quantities (RID) : E2
Packing instructions (RID) : P001, IBC02, R001
Mixed packing provisions (RID) : MP19
Portable tank and bulk container instructions (RID) : T4
Portable tank and bulk container special provisions (RID) : TP1
Tank codes for RID tanks (RID) : LGBF
Transport category (RID) : 2
Colis express (express parcels) (RID) : CE7
Hazard identification number (RID) : 33

14.7. Maritime transport in bulk according to IMO instruments

Not applicable

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SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

15.1.1. EU-Regulations

No REACH Annex XVII restrictions

Ethyl Acetate (C₄H₈O₂) is not on the REACH Candidate List

Ethyl Acetate (C₄H₈O₂) is not on the REACH Annex XIV List

Ethyl Acetate (C₄H₈O₂) is not subject to Regulation (EU) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of hazardous chemicals.

Ethyl Acetate (C₄H₈O₂) is not subject to Regulation (EU) No 2019/1021 of the European Parliament and of the Council of 20 June 2019 on persistent organic pollutants

Ethyl Acetate (C₄H₈O₂) is not subject to REGULATION (EU) No 1005/2009 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 September 2009 on substances that deplete the ozone layer.

Contains no substance subject to Regulation (EU) 2019/1148 of the European Parliament and of the Council of 20 June 2019 on the marketing and use of explosives precursors.

Contains no substance subject to Regulation (EC) 273/2004 of the European Parliament and of the Council of 11 February 2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances.

15.1.2. National regulations


France

Occupational diseases

Code	Description
RG 84	Conditions caused by liquid organic solvents for professional use: saturated or unsaturated aliphatic or cyclic liquid hydrocarbons and mixtures thereof; liquid halogenated hydrocarbons; nitrated derivatives of aliphatic hydrocarbons; alcohols; glycols, glycol ethers; ketones; aldehydes; aliphatic and cyclic ethers, including tetrahydrofuran; esters; dimethylformamide and dimethylacetamide; acetonitrile and propionitrile; pyridine; dimethylsulfone and dimethylsulfoxide
Germany	
Employment restrictions	: Observe restrictions according Act on the Protection of Working Mothers (MuSchG) Observe restrictions according Act on the Protection of Young People in Employment (JArbSchG)
Water hazard class (WGK)	: WGK 1, Slightly hazardous to water (Classification according to VwVwS, Annex 1 or 2; ID No. 95)
Hazardous Incident Ordinance (12. BImSchV)	: Is not subject of the Hazardous Incident Ordinance (12. BImSchV)
Netherlands	
SZW-lijst van kankerverwekkende stoffen	: The substance is not listed
SZW-lijst van mutagene stoffen	: The substance is not listed
SZW-lijst van reprotoxische stoffen – Borstvoeding	: The substance is not listed
SZW-lijst van reprotoxische stoffen – Vruchtbaarheid	: The substance is not listed
SZW-lijst van reprotoxische stoffen – Ontwikkeling	: The substance is not listed
Denmark	
Danish National Regulations	: Young people under 18 years are not allowed to use the product
Switzerland	
Storage class (LK)	: LK 3 - Flammable liquids

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

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SECTION 16: Other information

Abbreviations and acronyms:

ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
BLV	Biological limit value
BOD	Biochemical oxygen demand (BOD)
COD	Chemical oxygen demand (COD)
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC-No.	European Community number
EC50	Effective concentration for 50 percent of test population (median effective concentration)
EN	European Standard
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Lethal concentration for 50 percent of test population (median lethal concentration)
LD50	Lethal dose for 50 percent of test population (median lethal dose)
LOAEL	Lowest Observed Adverse Effect Level
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
OECD	Organisation for Economic Co-operation and Development
OEL	Occupational Exposure Limit
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
RID	Regulation concerning the International Carriage of Dangerous Goods by Railways
SDS	Safety Data Sheet
STP	Sewage treatment plant
ThOD	Theoretical oxygen demand (ThOD)
TLM	Median Tolerance Limit
VOC	Volatile Organic Compounds
CAS-No.	Chemical Abstract Service number
N.O.S.	Not Otherwise Specified
vPvB	Very Persistent and Very Bioaccumulative

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Abbreviations and acronyms:

ED	Endocrine disrupting properties
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Full text of H- and EUH-statements:

EUH066	Repeated exposure may cause skin dryness or cracking.
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Flam. Liq. 2	Flammable liquids, Category 2
H225	Highly flammable liquid and vapour.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.
STOT SE 3	Specific target organ toxicity – Single exposure, Category 3, Narcosis