

Safety Data Sheet

according to Regulation (EC) No 1907/2006

**Ethanol/Diethylether (1:1)**

Print date: 21.05.2015

Product code: E90

Page 1 of 10

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

Ethanol/Diethylether (1:1)

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

Use as laboratory reagent

1.3. Details of the supplier of the safety data sheet

Company name:	Waldeck GmbH & Co KG	
Street:	Havixbecker Str. 62	
Place:	D-48161 Münster	
Post-office box:	410180 D-48065 Münster	
Telephone:	+49(0)180/2247662	Telefax: +49(0)180/1247662
Responsible Department:	Labor Mo. – Do.: 08.00 – 17.00 Uhr, Fr.: 08.00 – 15.00 Uhr	

1.4. Emergency telephone number:

+49(0)180/2247662

SECTION 2: Hazards identification**2.1. Classification of the substance or mixture****Classification according to Directive 67/548/EEC or 1999/45/EC**

Indications of danger: F+ - Extremely flammable, Xn - Harmful

R phrases:

Extremely flammable.

Harmful if swallowed.

Repeated exposure may cause skin dryness or cracking.

Vapours may cause drowsiness and dizziness.

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

Hazard categories:

Flammable liquid: Flam. Liq. 1

Specific target organ toxicity - single exposure: STOT SE 3

Hazard Statements:

Extremely flammable liquid and vapour.

May cause drowsiness or dizziness.

2.2. Label elements

Safety Data Sheet



according to Regulation (EC) No 1907/2006

Ethanol/Diethylether (1:1)

Print date: 21.05.2015

Product code: E90

Page 2 of 10

Hazardous components which must be listed on the label

diethyl ether; ether

Signal word:

Danger

Pictograms:

GHS02-GHS07

**Hazard statements**

- H224 Extremely flammable liquid and vapour.
H336 May cause drowsiness or dizziness.

Precautionary statements

- P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P241 Use explosion-proof electrical/ventilating/lighting equipment.
P243 Take precautionary measures against static discharge.
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P312 Call a POISON CENTER/doctor if you feel unwell.
P370+P378 In case of fire: Use In case of fire, use sand, earth, powder or foam. to extinguish.
P235 Keep cool.
P403+P233 Store in a well-ventilated place. Keep container tightly closed.
P405 Store locked up.

2.3. Other hazards

No information available.

SECTION 3: Composition/information on ingredients**3.2. Mixtures****Hazardous components**

EC No	Chemical name	Quantity
CAS No	Classification according to Directive 67/548/EEC	
Index No	Classification according to Regulation (EC) No. 1272/2008 [CLP]	
REACH No		
200-467-2	diethyl ether; ether	
60-29-7	F+ - Extremely flammable, Xn - Harmful R12-19-22-66-67	50 - < 55 %
603-022-00-4	Flam. Liq. 1, Acute Tox. 4, STOT SE 3; H224 H302 H336 EUH019 EUH066	
200-578-6	ethanol, ethyl alcohol	50 - < 55 %
64-17-5	F - Highly flammable R11	
603-002-00-5	Flam. Liq. 2; H225	

Full text of R-, H- and EUH-phrases: see section 16.

SECTION 4: First aid measures**4.1. Description of first aid measures**

Safety Data Sheet



according to Regulation (EC) No 1907/2006

Ethanol/Diethylether (1:1)

Print date: 21.05.2015

Product code: E90

Page 3 of 10

General information

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

After inhalation

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible). Provide fresh air.

After contact with skin

Wash with plenty of water. Take off contaminated clothing and wash it before reuse. After contact with skin, wash immediately with plenty of water and soap. Remove contaminated, saturated clothing immediately.

After contact with eyes

Rinse immediately carefully and thoroughly with eye-bath or water. In case of eye irritation consult an ophthalmologist.

After ingestion

Rinse mouth immediately and drink plenty of water. Observe risk of aspiration if vomiting occurs. Call a physician immediately.

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

Respiratory complaints Drowsiness Unconsciousness

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

Treat symptomatically. No data available

SECTION 5: Firefighting measures**5.1. Extinguishing media****Suitable extinguishing media**

Carbon dioxide (CO₂), Foam, Extinguishing powder. Carbon dioxide (CO₂) Foam Extinguishing powder

Unsuitable extinguishing media

Water.

5.2. Special hazards arising from the substance or mixture

Flammable. Vapours can form explosive mixtures with air. Hazardous combustion products

5.3. Advice for firefighters

In case of fire: Wear self-contained breathing apparatus. In case of fire: Wear self-contained breathing apparatus.

Additional information

Use water spray jet to protect personnel and to cool endangered containers. Suppress gases/vapours/mists with water spray jet. Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

SECTION 6: Accidental release measures**6.1. Personal precautions, protective equipment and emergency procedures**

Remove all sources of ignition. Do not breathe gas/fumes/vapour/spray. Avoid contact with skin, eyes and clothes. Use personal protection equipment.

6.2. Environmental precautions

Do not allow uncontrolled discharge of product into the environment. Danger of explosion

6.3. Methods and material for containment and cleaning up

Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents). Treat the recovered material as prescribed in the section on waste disposal. Do not allow to enter into surface water or drains. Provide adequate ventilation.

Ethanol/Diethylether (1:1)

Print date: 21.05.2015

Product code: E90

Page 4 of 10

6.4. Reference to other sections

Safe handling: see section 7

Personal protection equipment: see section 8

Disposal: see section 13

SECTION 7: Handling and storage**7.1. Precautions for safe handling****Advice on safe handling**

If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe gas/fumes/vapour/spray.

Advice on protection against fire and explosion

Keep away from sources of ignition. - No smoking. Take precautionary measures against static discharges. Vapours can form explosive mixtures with air.

7.2. Conditions for safe storage, including any incompatibilities**Requirements for storage rooms and vessels**

Keep container tightly closed. Keep in a cool, well-ventilated place. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Advice on storage compatibility

Do not store together with: Oxidising agent. Pyrophoric or self-heating substances.

7.3. Specific end use(s)

Use as laboratory reagent

SECTION 8: Exposure controls/personal protection**8.1. Control parameters****Exposure limits (EH40)**

CAS No	Substance	ppm	mg/m ³	fibres/ml	Category	Origin
60-29-7	Diethyl ether	100	310		TWA (8 h)	WEL
		200	620		STEL (15 min)	WEL
64-17-5	Ethanol	1000	1920		TWA (8 h)	WEL
		-	-		STEL (15 min)	WEL

8.2. Exposure controls**Appropriate engineering controls**

If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe gas/fumes/vapour/spray.

Protective and hygiene measures

Remove contaminated, saturated clothing immediately. Draw up and observe skin protection programme. Wash hands and face before breaks and after work and take a shower if necessary. When using do not eat or drink.

Eye/face protection

Wear eye/face protection.

Ethanol/Diethylether (1:1)

Print date: 21.05.2015

Product code: E90

Page 5 of 10

Hand protection

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

Skin protection

Flame-retardant protective clothing. Wear anti-static footwear and clothing

Respiratory protection

In case of inadequate ventilation wear respiratory protection.

SECTION 9: Physical and chemical properties**9.1. Information on basic physical and chemical properties**

Physical state:	liquid
Colour:	colourless
Odour:	characteristic

Test method

pH-Value:	not determined
-----------	----------------

Changes in the physical state

Melting point:	not determined
Initial boiling point and boiling range:	not determined
Flash point:	< 0 °C

Flammability

Solid:	not applicable
Gas:	not applicable
Lower explosion limits:	not determined
Upper explosion limits:	not determined

Auto-ignition temperature

Solid:	not applicable
Gas:	not applicable
Decomposition temperature:	not determined

Oxidizing properties

Not oxidizing.

Vapour pressure:	not determined
Vapour pressure: (at 50 °C)	not determined
Density (at 20 °C):	0,75 g/cm ³
Water solubility:	insoluble

Solubility in other solvents

not determined

Partition coefficient:	not determined
Vapour density:	not determined
Evaporation rate:	not determined

9.2. Other information

Solid content:	not determined
----------------	----------------

Safety Data Sheet

according to Regulation (EC) No 1907/2006

**Ethanol/Diethylether (1:1)**

Print date: 21.05.2015

Product code: E90

Page 6 of 10

SECTION 10: Stability and reactivity**10.1. Reactivity**

Flammable, Ignition hazard.

10.2. Chemical stability

The product is stable under storage at normal ambient temperatures.

10.3. Possibility of hazardous reactions

No known hazardous reactions.

10.4. Conditions to avoid

Keep away from sources of heat (e.g. hot surfaces), sparks and open flames. Vapours can form explosive mixtures with air.

10.5. Incompatible materials

No information available.

10.6. Hazardous decomposition products

No known hazardous decomposition products.

SECTION 11: Toxicological information**11.1. Information on toxicological effects****Acute toxicity**

Based on available data, the classification criteria are not met.

CAS No	Chemical name				
	Exposure routes	Method	Dose	Species	Source
60-29-7	diethyl ether; ether				
	oral	LD50	1220 mg/kg	Rat	oral
	dermal	LD50	14300 mg/kg	Rabbit	dermal
64-17-5	ethanol, ethyl alcohol				
	oral	LD50	6200 mg/kg	Rat	IUCLID
	inhalative (4 h) vapour	LC50	95,6 mg/l	Rat	RTECS

Irritation and corrosivity

Based on available data, the classification criteria are not met.

Sensitising effects

Based on available data, the classification criteria are not met.

STOT-single exposure

May cause drowsiness or dizziness. (diethyl ether; ether)

Severe effects after repeated or prolonged exposure

Based on available data, the classification criteria are not met.

Carcinogenic/mutagenic/toxic effects for reproduction

Based on available data, the classification criteria are not met.

Aspiration hazard

Based on available data, the classification criteria are not met.

Additional information on tests

This mixture is classified as hazardous according to regulation (EC) No. 1272/2008 [CLP].

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

Safety Data Sheet



according to Regulation (EC) No 1907/2006

Ethanol/Diethylether (1:1)

Print date: 21.05.2015

Product code: E90

Page 7 of 10

The product is not: Ecotoxic.

CAS No	Chemical name					
	Aquatic toxicity	Method	Dose	[h] [d]	Species	Source
60-29-7	diethyl ether; ether					
	Acute fish toxicity	LC50	2560 mg/l	96 h	Pimephales promelas (fathead minnow)	Source
64-17-5	ethanol, ethyl alcohol					
	Acute crustacea toxicity	EC50 mg/l	9268 - 14221	48 h	Daphnia magna	IUCLID

12.2. Persistence and degradability

The product has not been tested.

12.3. Bioaccumulative potential

The product has not been tested.

Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
60-29-7	diethyl ether; ether	0,89
64-17-5	ethanol, ethyl alcohol	-0,31

12.4. Mobility in soil

The product has not been tested.

12.5. Results of PBT and vPvB assessment

The product has not been tested.

12.6. Other adverse effects

No information available.

Further information

Avoid release to the environment.

SECTION 13: Disposal considerations**13.1. Waste treatment methods****Advice on disposal**

Do not allow to enter into surface water or drains. Dispose of waste according to applicable legislation.

Contaminated packaging

Wash with plenty of water. Completely emptied packages can be recycled.

SECTION 14: Transport information**Land transport (ADR/RID)****14.1. UN number:**

UN 1993

14.2. UN proper shipping name:FLAMMABLE LIQUID, N.O.S.
(ETHANOL; DIETHYLEETHER)**14.3. Transport hazard class(es):**

3

14.4. Packing group:

II

Hazard label:

3



Classification code:

F1

Safety Data Sheet



according to Regulation (EC) No 1907/2006

Ethanol/Diethylether (1:1)

Print date: 21.05.2015

Product code: E90

Page 8 of 10

Special Provisions: 274 601 640D
 Limited quantity: 1 L
 Excepted quantity: E2
 Transport category: 2
 Hazard No: 33
 Tunnel restriction code: D/E

Inland waterways transport (ADN)

14.1. UN number: UN 1993
14.2. UN proper shipping name: FLAMMABLE LIQUID, N.O.S.
 (ETHANOL; DIETHYLEETHER)
14.3. Transport hazard class(es): 3
14.4. Packing group: II
 Hazard label: 3



Classification code: F1
 Special Provisions: 274 601 640D
 Limited quantity: 1 L
 Excepted quantity: E2

Marine transport (IMDG)

14.1. UN number: UN 1993
14.2. UN proper shipping name: FLAMMABLE LIQUID, N.O.S.
 (ETHANOL; DIETHYLEETHER)
14.3. Transport hazard class(es): 3
14.4. Packing group: II
 Hazard label: 3



Special Provisions: 274
 Limited quantity: 1 L
 Excepted quantity: E2
 EmS: F-E, S-E

Air transport (ICAO)

14.1. UN number: UN 1993
14.2. UN proper shipping name: FLAMMABLE LIQUID, N.O.S.
 (ETHANOL; DIETHYLEETHER)
14.3. Transport hazard class(es): 3
14.4. Packing group: II
 Hazard label: 3



Special Provisions: A3
 Limited quantity Passenger: 1 L
 Passenger LQ: Y341

Safety Data Sheet



according to Regulation (EC) No 1907/2006

Ethanol/Diethylether (1:1)

Print date: 21.05.2015

Product code: E90

Page 9 of 10

Excepted quantity:	E2	
IATA-packing instructions - Passenger:		353
IATA-max. quantity - Passenger:		5 L
IATA-packing instructions - Cargo:		364
IATA-max. quantity - Cargo:		60 L

14.6. Special precautions for user

Warning: Combustible liquid.

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

not applicable

SECTION 15: Regulatory information**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****EU regulatory information**

2010/75/EU (VOC): 100 % (750 g/l)

2004/42/EC (VOC): 100 % (750 g/l)

Additional information

To follow: 850/2004/EC, 79/117/EEC, 689/2008/EC Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers. Observe restrictions to employment for juvenils according to the 'juvenile work protection guideline' (94/33/EC).

National regulatory information

Employment restrictions: Observe employment restrictions for young people.
Water contaminating class (D): 1 - slightly water contaminating

15.2. Chemical safety assessment

Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information**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)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonized System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service
LC50: Lethal concentration, 50%
LD50: Lethal dose, 50%

Relevant R-phrases (Number and full text)

11	Highly flammable.
12	Extremely flammable.
19	May form explosive peroxides.
22	Harmful if swallowed.
66	Repeated exposure may cause skin dryness or cracking.
67	Vapours may cause drowsiness and dizziness.

Relevant H- and EUH-phrases (Number and full text)

H224	Extremely flammable liquid and vapour.
H225	Highly flammable liquid and vapour.
H302	Harmful if swallowed.
H336	May cause drowsiness or dizziness.
EUH019	May form explosive peroxides.

Safety Data Sheet

according to Regulation (EC) No 1907/2006



Ethanol/Diethylether (1:1)

Print date: 21.05.2015

Product code: E90

Page 10 of 10

EUH066

Repeated exposure may cause skin dryness or cracking.

Further Information

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)