

**Substance Name: 1,2-diethoxyethane**

**EC Number: 211-076-1**

**CAS Number: 629-14-1**

**SUPPORT DOCUMENT FOR IDENTIFICATION OF**

**1,2-DIETHOXYETHANE**

**AS A SUBSTANCE OF VERY HIGH CONCERN BECAUSE OF ITS  
CMR<sup>1</sup> PROPERTIES**

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<sup>1</sup> CMR means carcinogenic, mutagenic or toxic for reproduction

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**Substance Name(s): 1,2-diethoxyethane**

**EC Number(s): 211-076-1**

**CAS number(s): 629-14-1**

The substance is identified as substance meeting the criteria of Article 57 (c) of Regulation (EC) 1907/2006 REACH (EU, 2006) owing to its classification as toxic for reproduction category 1B<sup>2, 3</sup> which corresponds to classification as toxic for reproduction category 2; R61<sup>4</sup>.

### **Summary of how the substance meets the criteria as category 1B reproductive toxicant**

1,2-diethoxyethane is listed by Index number 603-208-00-5 in the 1<sup>st</sup> ATP to Regulation (EC) No 1272/2008 and classified in Annex VI, part 3, Table 3.1 (list of harmonised classification and labelling of hazardous substances) as toxic for reproduction category 1B (H360D: "May damage the unborn child."). The corresponding classification in Annex VI, part 3, Table 3.2 (list of harmonised classification and labelling of hazardous substances from Annex I to Directive 67/548/EEC) of the 1<sup>st</sup> ATP to Regulation (EC) No 1272/2008 is toxic for reproduction category 2, R61 ("May cause harm to the unborn child").

Therefore, this classification of 1,2-diethoxyethane in the 1<sup>st</sup> ATP to the Regulation (EC) No 1272/2008 (EU, 2009) shows that the substance meets the criteria for classification as toxic for reproduction in accordance with Article 57 (c) of REACH.

**Registration dossiers submitted for the substance? No.**

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<sup>2</sup> Classification in accordance with the 1<sup>st</sup> ATP to Regulation (EC) No 1272/2008 (Reg. (EC) No 790/2009) Annex VI, part 3, Table 3.1 (list of harmonised classification and labelling of hazardous substances)

<sup>3</sup> There is a mistake in the entry listed in Regulation (EC) No 1272/2008, Annex VI, part 3, Table 3.1, indicating the classification as 'Repr. 1A, H360Df'. The correct classification is Repr. 1B, H360Df, which corresponds to Repr. Cat. 2; R61 and Repr. Cat. 3; R62, that are correctly stated in Annex VI, Table 3.2 (list of harmonized classification and labelling of hazardous substances from Annex I of Council Directive 67/548/EEC) of Regulation (EC) No 1272/2008. The classification was agreed by the Technical Committee C&L on the Classification and Labelling of Dangerous Substances at its meeting in September 2004.

<sup>4</sup> Classification in accordance with the 1<sup>st</sup> ATP to the Regulation (EC) No 1272/2008 (Reg. (EC) No 790/2009), Annex VI, part 3, Table 3.2 (list of harmonised classification and labelling of hazardous substances from Annex I to Council Directive 67/548/EEC)

## Justification

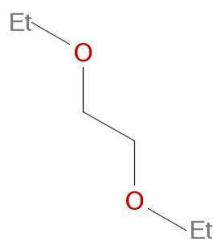
### 1 Identity of the substance and physical and chemical properties

#### 1.1 Name and other identifiers of the substance

Table 1: Substance identity

<b>EC number:</b>	211-076-1
<b>EC name:</b>	1,2-diethoxyethane
<b>CAS number (in the EC inventory):</b>	629-14-1
<b>CAS number:</b>	629-14-1
<b>CAS name:</b>	Ethane, 1,2- diethoxy-
<b>IUPAC name:</b>	1,2- diethoxyethane
<b>Molecular formula:</b>	C <sub>6</sub> H <sub>14</sub> O <sub>2</sub>
<b>Molecular weight range:</b>	118.18 gmol <sup>-1</sup>
<b>Synonyms:</b>	ethylene glycol diethyl ether, EGDEE, ethyl glyme, diethyl glycol, diethyl cellosolve

#### Structural formula:



## 1.2 Composition of the substance

**Name:** 1,2-diethoxyethane

**Description:** ---

**Degree of purity:** 99 – 100 % (w/w)

Table 2: Constituents

<b>Constituents</b>	<b>Typical concentration</b>	<b>Concentration range</b>	<b>Remarks</b>
1,2-diethoxyethane EC number: 211-076-1	≥ 99 % (w/w)	99 – 100 % (w/w)	Based on C&L notification

Table 3: Impurities

<b>Impurities</b>	<b>Typical concentration</b>	<b>Concentration range</b>	<b>Remarks</b>
			No information available

Table 4: Additives

<b>Additives</b>	<b>Typical concentration</b>	<b>Concentration range</b>	<b>Remarks</b>
			No information available

### 1.3 Physico-chemical properties

Table 5: Overview of physicochemical properties

Property	Value	Remarks
Physical state at 20 °C and 101.3 kPa	liquid	
Melting point	-74 °C at 101,3 kPa	Hazardous Substances Data Bank, USA (HSDB, 2007)
Boiling point	121.4 °C at 1013 hPa	Hazardous Substances Data Bank, USA (HSDB, 2007)
Density	0.8484 g/cm <sup>3</sup> at 20 °C	Hazardous Substances Data Bank, USA (HSDB, 2007)
Vapour pressure	3.37 mm Hg at 25 °C	Hazardous Substances Data Bank, USA (HSDB, 2007)
Water solubility	83.7 g/l at 25 °C	Hazardous Substances Data Bank, USA (HSDB, 2007)
Partition coefficient n-octanol/water (log value)	Log Pow 0.66 (measured)	Hazardous Substances Data Bank, USA (HSDB, 2007)
Surface tension	0.026 N/m at 20 °C	Hazardous Substances Data Bank, USA (HSDB, 2007)
Flash point	35 °C (open cup)	Hazardous Substances Data Bank, USA (HSDB, 2007)
Auto-ignition temperature	208 °C	Hazardous Substances Data Bank, USA (HSDB, 2007)
Explosive properties	Forms explosive mixture with air	Hazardous Substances Data Bank, USA (HSDB, 2007)

## 2 Harmonised classification and labelling

1, 2-diethoxyethane is listed by Index number 603-208-00-5 in 1<sup>st</sup> ATP to the Regulation (EC) No 1272/2008 and classified in Annex VI as provided in tables 6 and 7.

Table 6: Classification according to part 3 of Annex VI, Table 3.1 (list of harmonised classification and labelling of hazardous substances) of Regulation (EC) No 1272/2008

Index No	International Chemical Identification	Classification		Labelling			Spec. Conc. Limits, M-factors	Notes
		Hazard Class and Category Code(s)	Hazard statement code(s)	Pictogram, Signal Word Code(s)	Hazard statement code(s)	Suppl. Hazard statement code(s)		
603-208-00-5	1,2,-diethoxyethane	Flam. Liq.2 Repr. 1B Eye Irrit. 2	H225 H360Df H319	GHS02 GHS08 GHS07 Dgr	H225 H360Df H319	EUH019		

Table 7: Classification according to part 3 of Annex VI, Table 3.2 (list of harmonized classification and labelling of hazardous substances from Annex I of Council Directive 67/548/EEC) of Regulation (EC) No 1272/2008

Index No	International Chemical Identification	Classification	Labelling	Concentration Limits	Notes
603-208-00-5	1,2,-diethoxyethane	F; R11 R19 Repr. Cat. 2; R61 Repr. Cat. 3; R62 Xi; R36	F; T R: 61-11-19-36-62 S: 53-45		



### **3 Environmental fate properties**

Not relevant.

### **4 Human health hazard assessment**

Not relevant.

### **5 Environmental hazard assessment**

Not relevant.

## **6 Conclusions on the SVHC Properties**

### **6.1 PBT, vPvB assessment**

Not relevant.

### **6.2 CMR assessment**

1, 2-diethoxyethane is listed by Index number 603-208-00-5 in the 1<sup>st</sup> ATP to the Regulation (EC) No 1272/2008 and classified in Annex VI, part 3, Table 3.1 (list of harmonised classification and labelling of hazardous substances) as toxic for reproduction category 1B (H360D: "May damage the unborn child."). The corresponding classification in Annex VI, part 3, Table 3.2 (list of harmonised classification and labelling of hazardous substances from Annex I to Directive 67/548/EEC) of the 1<sup>st</sup> ATP to the Regulation (EC) No 1272/2008 is as toxic for reproduction category 2, R61 ("May cause harm to the unborn child").

Therefore, this classification of 1,2-diethoxyethane in the 1<sup>st</sup> ATP to the Regulation (EC) No 1272/2008 shows that the substance meets the criteria for classification as toxic for reproduction in accordance with Article 57 (c) of REACH.

### **6.3 Substances of equivalent level of concern assessment**

Not relevant.

## 7 References

EU, 2006. Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC.

EU, 2009. Regulation (EC) No 790/2009 of the European Parliament and of the Council of 10 August 2009 amending, Regulation (EC) No 1272/2008 of the European Parliament and of the Council on classification, labelling and packaging of substances and mixtures

HSDB, 2007. Hazardous Substances Data Bank. Ethylene glycol diethyl ether.

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<http://toxnet.nlm.nih.gov>