

Substance Name: bis(2-(2-methoxyethoxy)ethyl) ether

EC Number: 205-594-7

CAS Number: 143-24-8

SUPPORT DOCUMENT FOR IDENTIFICATION
OF

BIS(2-(2-METHOXYETHOXY)ETHYL) ETHER

AS A SUBSTANCE OF VERY HIGH CONCERN
BECAUSE OF ITS TOXIC FOR REPRODUCTION
(ARTICLE 57C) PROPERTIES

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ABBREVIATIONS

C&L	Classification & Labelling
EAA	Ethoxyacetic acid
EGEE	2-ethoxyethanol
EGME	2-methoxyethanol
MAA	Methoxyacetic acid
RAC	Risk Assessment Committee
SVHC	Substance of very high concern

IDENTIFICATION OF A SUBSTANCE OF VERY HIGH CONCERN ON THE BASIS OF THE CRITERIA SET OUT IN REACH ARTICLE 57

Substance Name: bis(2-(2-methoxyethoxy)ethyl) ether;
(tetraglyme)

EC Number: 205-594-7

CAS number: 143-24-8

- The substance is identified as a substance meeting the criteria of Article 57 (c) of Regulation (EC) No 1907/2006 (REACH) owing to its classification in the hazard class toxic for reproduction category 1B, H360FD (May damage fertility. May damage the unborn child)¹.

Summary of how the substance meets the criteria set out in Article 57 of the REACH Regulation

Bis(2-(2-methoxyethoxy)ethyl) ether, referred to hereinafter as tetraglyme, is covered by index number 603-238-00-9 of Regulation (EC) No 1272/2008 in Annex VI, part 3, Table 3.1 (the list of harmonised classification and labelling of hazardous substances) and it is classified in the hazard class toxic for reproduction category 1B (H360FD: May damage fertility. May damage the unborn child).

Therefore, this classification of the substance in Regulation (EC) No 1272/2008 shows that it meets the criteria for classification in the hazard class:

- Toxic for reproduction category 1B (H360FD: May damage fertility. May damage the unborn child) in accordance with Article 57 (c) of the REACH Regulation.

Registration dossiers submitted for the substance? Yes

¹ Classification in accordance with section 3.7 of Annex I to Regulation (EC) No 1272/2008

Justification

1. Identity of the substance and physical and chemical properties

1.1 Name and other identifiers of the substance

Table 1: Substance identity

EC number:	205-594-7
EC name:	bis(2-(2-methoxyethoxy)ethyl) ether
CAS number (in the EC inventory):	143-24-8
CAS number: Deleted CAS numbers:	Deleted: 70992-84-6
CAS name:	2,5,8,11,14-pentaoxapentadecane
IUPAC name:	2,5,8,11,14-pentaoxapentadecane
Index number in Annex VI of the CLP Regulation	603-238-00-9
Molecular formula:	C ₁₀ H ₂₂ O ₅
Molecular weight range:	222.2787
Synonyms:	Tetraglyme Tetraethylene glycol dimethyl ether TetraEGDME

Bis(2-(2-methoxyethoxy)ethyl) ether equates to the common name tetraglyme, which is used throughout the document.

Structural formula²:



² Source: European Chemicals Agency, <https://echa.europa.eu/de/substance-information/-/substanceinfo/100.005.086> (accessed 08/2020)

1.2 Composition of the substance

Name: bis(2-(2-methoxyethoxy)ethyl) ether; (tetraglyme)

Description: liquid, colourless

Substance type: mono-constituent

The substance is registered as pure substance and as technical grade.

Impurities and/or additives are not relevant for SVHC identification of the substance.

1.3 Identity and composition of degradation products/metabolites relevant for the SVHC assessment

Not relevant for the identification of the substance as SVHC in accordance with Article 57 (c) REACH.

1.4 Identity and composition of structurally related substances (used in a grouping or read-across approach)

Not relevant for the identification of the substance as SVHC in accordance with Article 57 (c) REACH.

1.5 Physicochemical properties

Not relevant for the identification of the substance as SVHC in accordance with Article 57 (c) REACH.

2. Harmonised classification and labelling

Bis(2-(2-methoxyethoxy)ethyl) ether; (tetraglyme) is covered by Index number 603-238-00-9 in part 3 of Annex VI to the CLP Regulation as follows:

Table 2: Classification according to draft 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	EC No	CAS No	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)		
603-238-00-9	bis(2-(2-methoxyethoxy)ethyl) ether, tetraglyme	205-594-7	143-24-8	Repr. 1B	H360FD	GHS08 Dgr	H360FD	-	-	-

3. Environmental fate properties

Not relevant for the identification of the substance as SVHC in accordance with Article 57 (c) REACH.

4. Human health hazard assessment

Please see Chapter 2 Harmonised Classification and Labelling.

5. Environmental hazard assessment

Not relevant for the identification of the substance as SVHC in accordance with Article 57 (c) REACH.

6. Conclusions on the SVHC Properties

6.1 CMR assessment

Bis(2-(2-methoxyethoxy)ethyl) ether; (tetraglyme) is covered by index number 603-238-00-9 of Regulation (EC) No 1272/2008 in Annex VI, part 3, Table 3.1 (the list of harmonised classification and labelling of hazardous substances) and it is classified in the hazard class toxic for reproduction category 1B (H360FD: May damage fertility. May damage the unborn child).

Therefore, this classification of the substance in Regulation (EC) No 1272/2008 shows that it meets the criteria for classification in the hazard class:

- Toxic for reproduction category 1B (H360FD: May damage fertility. May damage the unborn child) in accordance with Article 57 (c) of the REACH Regulation.

6.2 PBT and vPvB assessment

Not relevant for the identification of the substance as SVHC in accordance with Article 57 (c) REACH.

6.3 Assessment under Article 57(f)

Not relevant for the identification of the substance as SVHC in accordance with Article 57 (c) REACH.

REFERENCES

- ECHA (2018). RAC Opinion proposing harmonised classification and labelling at EU level of bis(2-(2-methoxyethoxy)ethyl) ether; tetraglyme, available at <https://echa.europa.eu/documents/10162/8a9a02a0-498f-17e5-683a-f9f303a20c0e>
- 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. Official Journal of the European Union, L396: 1-849.
- EU (2008). Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packing of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006. Official Journal of the European Union, L353: 1-1355.