



# Annex 15 report

## Proposal for identification of a substance of very high concern (SVHC) under UK REACH

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

EC Number: 205-594-7

CAS Number: 143-24-8

**March 2026**



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# 1. Proposal

**Substance name:** Bis(2-(2-methoxyethoxy)ethyl) ether; (tetraglyme)

**EC number:** 205-594-7

**CAS number:** 143-24-8

The substance is proposed to be identified as a substance meeting the criteria of Article 57 (c) of UK REACH owing to its classification in the hazard class toxic for reproduction category 1B<sup>1</sup>.

## **Summary of how the substance meets the criteria set out in Article 57 of UK REACH**

Bis(2-(2-methoxyethoxy)ethyl) ether, referred to hereafter as tetraglyme, is included in the GB Mandatory Classification and Labelling (MCL) list. It is covered by the entry with index number 603-238-00-9 and classified in the hazard class toxic for reproduction category 1B (H360FD; May damage fertility. May damage the unborn child).

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<sup>1</sup> Classification in accordance with section 3.7 of Annex I to the retained Regulation (EC) No 1272/2008 as amended for Great Britain (hereinafter referred to as GB CLP).

## 2. Justification

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

#### 2.1.1 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 Deleted: 70992-84-6
IUPAC name:	2,5,8,11,14-pentaoxapentadecane
Index number in GB MCL List	603-238-00-9
Molecular formula:	C <sub>10</sub> H <sub>22</sub> O <sub>5</sub>
Molecular weight range:	222.2787 g/mol
Synonyms:	Tetraglyme; Tetraethylene glycol dimethyl ether; TetraEGDME
Structural formula:	
Substance type:	Mono-constituent

Data source: EU Annex 15 report ([ECHA, 2020](#))

### 2.1.2 Composition of the substance

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

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

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

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

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

### 2.1.5 Physicochemical properties

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

## 2.2 Mandatory classification and labelling

**Table 2: Mandatory classification in the GB MCL list**

Index No	International Chemical Identification	EC No	CAS No	GB MCL list Classification		Aligned with EU CLH <sup>a</sup>
				Hazard Class and Category Code(s)	Hazard statement code(s)	Y/N
603-238-00-9	bis(2-(2-methoxyethoxy)ethyl) ether, tetraglyme	205-594-7	143-24-8	Repr. 1B	H360FD	Y

<sup>a</sup> EU CLH is harmonised classification and labelling in accordance with Regulation (EC) 1272/2008

## **2.3 Human health hazard assessment**

Please see Section 2.2 (mandatory classification and labelling).

## **2.4 Conclusions on the SVHC properties**

### **2.4.1 CMR assessment**

Tetraglyme is covered by the entry with index number 603-238-00-9 in the GB MCL list and is classified in the hazard class toxic for reproduction category 1B (H360FD; May damage fertility. May damage the unborn child).

Therefore, the substance satisfies the criterion in Article 57 (c) of UK REACH.

## 3. Information on use, exposure and alternatives

### 3.1 UK and EU REACH registration status and tonnage

The substance is registered under UK REACH with an aggregated tonnage of 2 – 20 tonnes per annum (tpa).

In addition, a total of 73 Downstream User Import Notifications (DUINs<sup>2</sup>) have been submitted.

Under EU REACH, the substance is registered with an aggregated tonnage of  $\geq 100$  tpa<sup>3</sup>.

### 3.2 General description of uses and exposure

Tetraglyme is reported to have industrial and professional uses where it functions as a solvent and as an agent for adsorbing and absorbing gases or liquids ([ECHA, 2020](#)). Uses may include application in welding and soldering products, inks and toners and lithium-ion batteries. Consumer use is advised against in the registration.

### 3.3 Alternatives

The EU Annex 15 SVHC report ([ECHA, 2020](#)) suggests that tetraglyme could be substituted with a lower toxicity ethylene glycol ether (i.e., one with longer initial alkoxy groups) or propylene glycol ethers. Phenol ethers such as 2-phenoxyethanol and 2-(2-phenoxyethoxy)ethanol or cyclic ethers such as dimethyl isosorbide were also suggested as possible alternatives.

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<sup>2</sup> GB-based companies who imported substances from EU-based suppliers before UK REACH became law on 1 January 2021 had no EU REACH registration obligations as they were classed as Downstream Users (DUs). As they are now importers from outside of GB, they may have registration obligations under UK REACH. However, a transitional measure allows former DUs to suspend the registration until one of three deadlines (depending on tonnage and hazard). Where the identity of these imported substances was known, they could be included in a Downstream User Import Notification (DUIN) submitted to the Agency.

<sup>3</sup> ECHA CHEM: ECHA's public chemicals database (<https://chem.echa.europa.eu/>)

### 3.4 Additional information

The EU Annex 15 SVHC report ([ECHA, 2020](#)) notes that tetraglyme belongs to a group of ethylene glycol ethers which may lead to the formation of methoxyacetic acid (MAA, EC: 210-894-6) and/or 2-methoxyethanol (EGME, EC: 203-713-7) in the body. Both MA and EGME are considered as the likely active metabolites associated with reproductive toxicity and are themselves listed on the UK and EU REACH candidate lists.

Several other ethylene glycol ethers have already been identified as SVHCs and included on the UK and EU REACH candidate lists (EC numbers: 203-794-9, 203-924-4, 203-977-3, 203-804-1, 203-839-2 and 211-076-1). Diglyme (EC: 203-924-4), has also been included in Annex 14 (the authorisation list) of UK and EU REACH.

## References

ECHA (2020) PROPOSAL FOR IDENTIFICATION OF A SUBSTANCE OF VERY HIGH CONCERN ON THE BASIS OF THE CRITERIA SET OUT IN REACH ARTICLE 57.

Available at: <https://echa.europa.eu/documents/10162/b7275c5a-d641-3a4d-bec2-120a63f5d356> [Accessed: 08/2025]

ECHA Chemicals database; ECHA CHEM. Available at: <https://chem.echa.europa.eu/> [Accessed: 08/2025]

Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006 (Text with EEA relevance). Available at: <https://www.legislation.gov.uk/eur/2008/1272/contents> [Accessed 08/2025].

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 (Text with EEA relevance). Available at: <https://www.legislation.gov.uk/eur/2006/1907/contents> [Accessed 08/2025]

# Glossary of terms used in Agency Annex 15 report

## Agency, the HSE

<b>CLP</b>	Classification, labelling and packaging
<b>DUIN</b>	Downstream User Import Notifications
<b>ECHA</b>	European Chemicals Agency
<b>EU</b>	European Union
<b>HSE</b>	Health and Safety Executive
<b>MCL</b>	Mandatory Classification and Labelling
<b>REACH</b>	Registration, Evaluation, Authorisation and Restriction of Chemicals regulation
<b>SVHC</b>	Substance of very high concern
<b>tpa</b>	Tonnes per annum







## Further information

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