Assessment of regulatory needs

Authority: European Chemicals Agency (ECHA)

Date: 22 April 2020

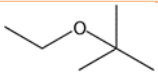
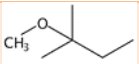
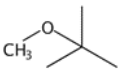
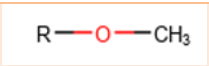
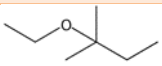
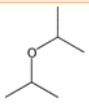
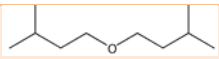
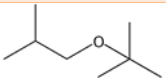
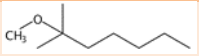
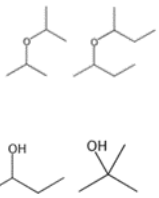
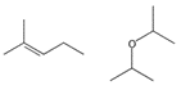
Group Name: Branched/cyclic dialiphatic ethers (excluding alpha, beta-unsaturated ethers)

General structure: -

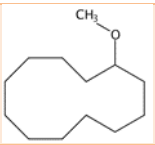
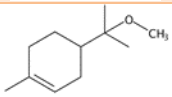
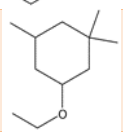
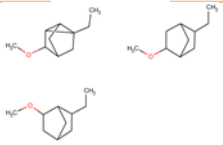
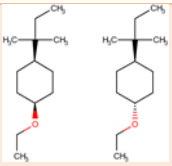
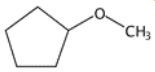
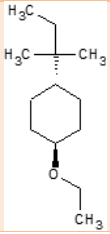
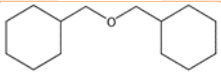
Revision history

Version	*Date*	*Description*
1.0	22 April 2020	

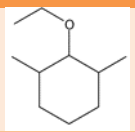
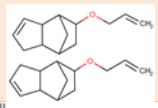
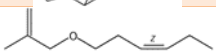
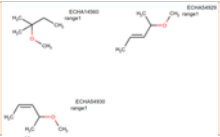
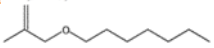
Substances within this group:

EC/List number	CAS number	Substance name [and Substance name acronyms]	Substance name acronyms and structures	Registration type (full, OSII or TII, NONS), highest tonnage band among all the registrations (t/y) [1]
Subgroup 1a				
211-309-7	637-92-3	2-ethoxy-2-methylpropane [ETBE]		Full, > 1000
213-611-4	994-05-8	2-methoxy-2-methylbutane [TAME]		Full, > 1000
216-653-1	1634-04-4	tert-butyl methyl ether [MTBE]		Full, > 1000
295-322-3	91995-60-7	Ethers, C5-6-branched alkyl Me		Full, not (publicly) available
618-804-0	919-94-8	Butane, 2-ethoxy-2-methyl- [TAEE]		Full, not (publicly) available
Subgroup 1b				
203-560-6	108-20-3	diisopropyl ether [DIPE]		Full, > 1000
208-857-4	544-01-4	diisopentyl ether		Full, not (publicly) available
251-347-1	33021-02-2	1-(1,1-dimethylethoxy)-2-methylpropane		Full, not (publicly) available
816-311-7	76589-16-7	2-methoxy-2-methylheptane		Full, not (publicly) available
903-919-3		Reaction mass of 2,2'-oxybisbutane and 2-methylpropan-2-ol and butan-2-ol and diisopropyl ether		Cease manufacture
906-484-8		Reaction mass of 2-methylpent-2-ene and diisopropyl ether		Cease manufacture

[1] Note that the total aggregated tonnage band may be available on ECHA's webpage at https://echa.europa.eu/information-on-chemicals/registered-substances

EC/List number	CAS number	Substance name [and Substance name acronyms]	Substance name acronyms and structures	Registration type (full, OSII or TII, NONS), highest tonnage band among all the registrations (t/y) [1]
Subgroup 2				
221-053-8	2986-54-1	methoxycyclododecane		Full, not (publicly) available
238-620-0	14576-08-0	4-(1-methoxy-1-methylethyl)-1-methylcyclohexene		Full, not (publicly) available
266-722-5	67583-77-1	3-ethoxy-1,1,5-trimethylcyclohexane		Full, 10-100
403-610-9	122795-41-9	Reaction Mass of 5-ethylbicyclo[2.2.1]hept-2-yl methyl ether and 6-ethylbicyclo[2.2.1]hept-2-yl methyl ether and 1-ethyl-3-methoxytricyclo[2.2.1.02,6]heptane		Full, not (publicly) available
426-530-6		1-(1,1-dimethylpropyl)-4-ethoxy-trans-cyclohexane; reaction mass of: 1-(1,1-dimethylpropyl)-4-ethoxy-cis-cyclohexane		Full, not (publicly) available
445-090-6 & 611-360-9[2]	5614-37-9	Cyclopentane, methoxy- [CPME]		Full, not (publicly) available
639-037-8	181258-89-9	Cyclohexane, 1-(1,1-dimethylpropyl)-4-ethoxy-, trans-		C&L notified
827-394-4	14315-63-0	bis(cyclohexylmethyl) ether		Full, not (publicly) available

[2] The two EC numbers refer to the same substance. In the REACH-IT Inventory, the identifier EC 445-090-6 is connected to the registration of this substance; however, it is not connected to any CAS number. When notifications with the identifier CAS 5614-37-9 were submitted to the Classification and Labelling Inventory under CLP, a new list number, EC 611-360-9 was assigned to the substance. Currently, the substance has two distinct lists of notified classifications: One for EC 445-090-6 / CAS 5614-37-9 / Cyclopentyl methyl ether and one for EC 611-360-9 / CAS 5614-37-9 / Cyclopentane, methoxy-.

EC/List number	CAS number	Substance name [and Substance name acronyms]	Substance name acronyms and structures	Registration type (full, OSII or TII, NONS), highest tonnage band among all the registrations (t/y) [1]
944-610-3	286472-48-8	2-ethoxy-1,3-dimethylcyclohexane		Full, not (publicly) available
Subgroup 3				
430-830-2	26912-64-1	9-(2-propenyloxy)tricyclo[5.2.1.0(2,6)]dec-3(or-4-)-ene		NONS
439-790-0	292605-05-1	(3Z)-hex-3-en-1-yl 2-methylprop-2-en-1-yl ether		Full, not (publicly) available
701-027-7		Reaction mass of 2-methoxy-2-methylbutane and 4-methoxypent-2-ene		Full, not (publicly) available
815-589-7	1093653-56-5	heptyl 2-methylprop-2-en-1-yl ether		Full, not (publicly) available

This table contains also group members that are only notified under the CLP Regulation. However, the list is currently non-exhaustive. Should further regulatory risk management action on one or more substances in the group be considered, ECHA will make an additional search for related C&L notified substances to be included in the group and develop an assessment of regulatory needs for them.

Contents

DISCLAIMER

The author does not accept any liability with regard to the use that may be made of the information contained in this document. Usage of the information remains under the sole responsibility of the user. Statements made or information contained in the document are without prejudice to any further regulatory work that ECHA, the Member States or other regulatory agencies may initiate at a later stage. Assessment of regulatory needs and their conclusions are compiled on the basis of available information and may change in light of newly available information or further assessment.

Foreword

The purpose of the assessment of regulatory needs of a group of substances is to help authorities conclude on the most appropriate way to address the identified concerns for a group of substances or a single substance, i.e. the combination of the regulatory risk management instruments to be used and any intermediate steps, such as data generation, needed to initiate and introduce these regulatory measures.

An assessment of regulatory needs can conclude that regulatory risk management at EU level is required for a (group of) substance(s) (e.g. harmonised classification and labelling, Candidate List inclusion, restriction, other EU legislation) or that no regulatory action is required at EU level. While the assessment is done for a group of substances, the (no) need for regulatory action can be identified for the whole group, a subgroup or for single substance(s).

The assessment of regulatory needs is an important step under ECHA's Integrated Regulatory Strategy. However, it is not part of the formal processes defined in the legislation but aims to support them.

The assessment of regulatory needs can be applied to any group of substances or single substance, i.e., any type of hazards or uses and regardless of the previous regulatory history or lack of such. It can be done based on different level of information. A Member State or ECHA can carry out this case-by-case analysis. The starting point is available information in the REACH registrations and any other REACH and CLP information. However, more extensive set of information can be available, e.g. assessment done under REACH/CLP or other EU legislation, or can be generated in some cases (e.g. further hazard information under dossier evaluation). Uncertainties associated to the level of information used should be reflected in the documentation. It will be revisited when necessary. For example, after further information is generated and the hazard has been clarified or when new insights on uses are available. It can be revisited by the same or another authority.

The responsibility for the content of this assessment rests with the authority that developed it. It is possible that other authorities do not have the same view and may develop further assessment of regulatory needs. The assessment of regulatory needs does not yet initiate any regulatory process but any authority can consequently do so and should indicate this by appropriate means, such as the Registry of Intentions.

For more information on Assessment of regulatory needs please consult ECHA website[3].

[3] https://echa.europa.eu/understanding-assessment-regulatory-needs

Glossary

CCH	Compliance Check
CLH	Harmonised classification and labelling
CMR	Carcinogenic, mutagenic and/or toxic to reproduction
DEv	Dossier evaluation
ED	Endocrine disruptor
NONS	Notified new substances
OEL	Occupational exposure limit
OSII or TII	On-site isolated intermediate or transported isolated intermediate
PBT/vPvB	Persistent, bioaccumulative and toxic/very persistent and very bioaccumulative
RMOA	Regulatory management options analysis
RRM	Regulatory risk management
SEv	Substance evaluation
STOT RE	Specific target organ toxicity, repeated exposure
SVHC	Substance of very high concern

1 Overview of the group

ECHA has grouped together structurally similar substances based on the presence of the common ether group functionality, i.e. an oxygen atom connected to two alkyl groups. The general formula is R-O-R', where R and R' represent the alkyl groups. R and R' groups are linear, branched and/or cyclic alkyl groups, in some cases containing double bond. There are few examples of symmetric ethers, where R and R' groups are the same.

Based on the types of R groups attached to oxygen, the 24 substances of this group have been divided into 3 subgroups:

- Subgroup 1: Branched ethers
  - Subgroup 1a: MTBE and its closest structural analogues
  - Subgroup 1b: other branched ethers, containing longer R groups compared to subgroup 1a substances
- Subgroup 2: Cyclic ethers
- Subgroup 3: Unsaturated and cyclic ethers

Subgroup 1 has been further subdivided into Subgroup 1a and Subgroup 1b, as the assessment showed that the substances identified in Subgroup 1a are likely to be used as MTBE (EC 216-653-1) substitutes, either based on structure similarity (contain one branched chain C4 or C5, second group short chain C1 or C2) or based on use similarity, since they are all fuel additives with function to oxygenate gasoline (as for MTBE).

Substances included in the subgroups are listed in the table on pages 2 and 3.

Two substances in subgroup 1a, MTBE and TAME (EC 213-611-4) were assessed under EU RAR[4] (MTBE RAR, 2002; TAME RAR, 2006). MTBE has also been evaluated under Substance Evaluation (SEv) for potential ED effects, for which a conclusion is under preparation by the French Competent Authority (CA). The initial concern were (human health and environment) Endocrine Disruption; Mutagenicity; Biodegradability and persistency in the environment; and Exposure/Wide dispersive use and aggregated tonnage.

An overview of main past or ongoing regulatory risk management processes is provided in Annex 3.

4 Risk Assessment Report in accordance with Council Regulation (EEC) 793/931 on the evaluation and control of the risks of "existing" substances.

Based on information reported in the REACH registration dossiers, substances in subgroup 1 (branched ethers) are mainly used as additives in fuels, while those in subgroup 2 (cyclic ethers) are used as fragrances in several consumer mixtures (cleaning, cosmetics, polishes and waxes, etc); subgroup 3 (unsaturated and cyclic ethers) contains substances used either in fuels or as fragrance in consumer mixtures; in all cases there is high potential for exposure for both human health and environment.

Note on the scope of ECHA's assessment of regulatory needs

Regarding hazards, the focus of ECHA's assessment is on CMR (carcinogenic, mutagenic and/or toxic to reproduction), sensitiser, ED (endocrine disruptor), PBT/vPvB or equivalent (e.g. substances being persistent, mobile and toxic), aquatic toxicity hazard endpoints and therefore only those are reflected in the table in section 3. This does not mean that the substances do not have other known or potential hazards. In some specific cases, where ECHA identifies a need for regulatory risk management action at EU level for other hazards (e.g. neurotoxicity, STOT RE), such additional hazards may be addressed in the assessment. An overview of classification is presented in Annex 1.

On the exposure side, ECHA is mainly using the information on uses reported in the registration dossiers (IUCLID) as a proxy for assessing the potential for exposure to humans and releases to the environment. The potential for release/exposure is generally considered high for "widespread" uses, i.e. professional and consumer uses and uses in articles. For these uses, normally happening at many places, the expected level of control is *à priori* considered limited. The chemical safety reports are not necessarily consulted and no quantitative exposure assessment is performed at this stage.

2 Justification for the (no) need for regulatory risk management action at EU level

Based on currently available information, there is a need for (further) EU regulatory risk management – authorisation due to potential mutagenicity and potential for exposure of the substance EC 208-857-4 of Subgroup 1b.

The substance EC 208-857-4 is suspected to be Mutagenic 1A/B (hazard to be clarified via compliance check); the substance is used in industrial settings only as solvent or intermediate in which potential for exposure is expected. Therefore, there is a need to address this concern and authorisation is proposed as the most appropriate measure to regulate the substance and in particular the use as solvent.

The first step of the regulatory risk management action proposed, should the hazard exist, is the confirmation of hazard via harmonised classification (CLH) as Muta. 1A/B.

CLH i) will trigger company level risk management measures (RMM) under OSH legislation for workers, ii) is needed or highly recommended for further regulatory processes under REACH such as authorisation and iii) is a prerequisite to restrict the presence of the substances in consumer mixtures, by means of the restriction entry 29 of REACH Annex XVII.

The CLH will be followed by SVHC identification and Authorisation. Intermediate uses are outside the scope of authorisation, but CLH would ensure that measures under OSH legislation will be applied. Setting an OEL has also been evaluated as potential regulatory risk management alternative to authorisation. However, OELs at national level do not exist. In addition, authorisation would provide more incentive to substitute to safer/non-muta alternatives available within the group. Restriction might also be considered as alternative EU regulatory risk management measure over Authorisation; although Restriction can address also the use as intermediate, Authorisation is considered as more appropriate to target the main use as solvent by the chemical and semiconductor industry.

Based on currently available information, it is not possible to assess the need for regulatory risk management as information on hazard is not sufficient to conclude on ED hazard of the subgroup 1a.

All substances in this subgroup are registered at Annex X and studies with the registered substances are available for almost all HH endpoints. Overall, based on information available, all substances in subgroup 1a are of low hazard potential. Some of the substances show potential for ED properties but it is currently deemed not sufficient to conclude on this hazard.

MTBE (EC 216-653-1) has been evaluated by the French CA under the SEv process and the evaluation addressed the potential concern for ED properties (for both environment and human health) and the potential risk for environment due to persistency, high tonnages and uses. The substance evaluation conclusion is under development. The current assessment of regulatory needs indicated that the substances identified in Subgroup 1a could likely be used as MTBE substitutes, either from structure similarity perspective (contain one branched chain C4 or C5, second group short chain C1 or C2) or from use similarity.

Following the finalisation of SEv on MTBE and any potential follow-up action, the available information on ED for the remaining substances in this subgroup will be reconsidered.

Based on currently available information, there is no need for (further) EU regulatory risk management for the remaining substances in subgroup 1b, for all the substances in subgroup 2 and subgroup 3.

- Subgroup 1b (remaining substances) and subgroup 2 (cyclic ethers)

EC 816-311-7 (subgroup 1b) and all the substances of subgroup 2 except for EC 238-620-0, are potential skin sensitisers and are used in consumer mixtures.

For industrial and professional uses, sufficient and consistent self-classification by registrants should trigger adequate risk management measures according to workplace legislation.

Adequate product labelling should in principle provide consumers with sufficient information to manage risks arising from the use of mixtures containing substance EC 816-311-7. However, there is a concern related to skin sensitisers (potentially) present in consumer mixtures and the need to further investigate whether further regulatory actions are needed and what would be the best options to address this concern.

Such concern has already been identified in other groups of substances and was brought for further discussion to Member States. Work is ongoing on this generic issue by both Member States and ECHA which may affect the regulatory actions on substances in this group.

The remaining two substances of subgroup 1 have low hazard (STOT SE, aquatic chronic 2) with intermediate use (negligible exposure/release) or professional and consumer use where on one hand sufficient and consistent (self)classification by registrants should trigger adequate risk management measures and on the other hand adequate product labelling should in principle provide consumers with sufficient information to manage risks.

Three substances of subgroup 2 (EC/List 221-053-8, 426-530-6, 827-394-4) screen as potential PBT/vPvB, but due to their low tonnage it is not possible to clarify P and B properties via CCH. Generating further data on persistency with a substance evaluation (SEv) would also be difficult to justify. Therefore, there is currently no possibility to act on those substances. However, in case of tonnage upgrade this would need to be reconsidered when the assessment will be revisited.

- Subgroup 3 (unsaturated and cyclic ethers)

Overall, based on the available data the subgroup 3 substances have low or unlikely hazard. One substance is a NONs; although available hazard data suggest potential mutagenic and ED concern, no data generation is possible to confirm these hazards, therefore no action is proposed. Uncertainty remains about the PBT/vPvB hazard of the subgroup 3 substances due to very low data density. Data generation via CCH is possible and suggested for one high tonnage substance (EC 701-027-7) to confirm low human health hazard and no PBT hazard.

3 Conclusions and actions

The conclusions and actions proposed in the table below are based on the REACH and CLP information available at the time of the assessment by ECHA. The main source of information is the registration dossiers. Relevant public assessments may also be considered. When new information (e.g. on hazards through evaluation processes, or on uses) will become available, the document will be updated and conclusions and actions revisited.

Subgroup name, EC/List number	Human Health Hazard	Environmental Hazard	Relevant use(s) & exposure potential	Last foreseen action	Action
Subgroup 1 (branched ethers)					
Subgroup 1a 216-653-1 **(MTBE)** 211-309-7 213-611-4 295-322-3 618-804-0	Inconclusive hazard for ED	Inconclusive hazard for ED	Use as additive in fuels. Exposure to workers and consumer is expected.	**Currently not possible to assess the regulatory needs** Justification: ongoing SEv.	No action
Subgroup 1b 203-560-6 251-347-1 816-311-7	No hazard or unlikely hazard Except for EC 816-311-7 for skin sensitisation	Known or potential hazard for aquatic toxicity	Use as intermediate and as additive in fuels EC 816-311-7 is used as fragrance in consumer products Exposure of workers and consumers is expected.	**Currently no need for EU RRM** Justification: For industrial and professional uses sufficient and consistent self-classification by registrants should trigger adequate risk management measures according	No action

Subgroup name, EC/List number	Human Health Hazard	Environmental Hazard	Relevant use(s) & exposure potential	Last foreseen action	Action
				to workplace and environmental legislation. The concern related to skin sensitisers (potentially) present in consumer mixtures will be further investigated.	
Subgroup 1b 208-857-4	Known or potential hazard for mutagenicity for skin sensitisation	Known or potential hazard for aquatic toxicity	Use as solvent or intermediate in industrial setting with expected exposure to workers	**Need for EU RRM: Authorisation** <u>Justification</u>: Available safer/non-mutagenic alternatives within the group and the absence of any existing OEL at national level support Authorisation over the OEL option.	**First step:** CCH **Next steps (if hazard confirmed):** CLH SVHC identification Authorisation
Subgroup 2 (cyclic ethers)					
266-722-5 445-090-6 & 611-360-9 944-610-3	Known or potential hazard for skin sensitisation	Known or potential hazard for aquatic toxicity	Use as fragrance in consumer products with potential exposure for	**Currently no need for EU RRM** <u>Justification:</u>	CCH for 403-610-9 and 827-394-4

Subgroup name, EC/List number	Human Health Hazard	Environmental Hazard	Relevant use(s) & exposure potential	Last foreseen action	Action
238-620-0 403-610-9 221-053-8 426-530-6 827-394-4	Except for 238-620-0	for 403-610-9; 221-053-8; 426-530-6; 827-394-4 Known or potential hazard for PBT/vPvB for 221-053-8; 426-530-6; 827-394-4	workers and consumers	Self-classification considered as sufficient for workers. The concern related to skin sensitisers (potentially) present in consumer mixtures will be further investigated. P and B properties cannot be investigated for low tonnage substances.	
Subgroup 3 (unsat. and cyclic ethers)					
439-790-0 701-027-7 815-589-7	No hazard or unlikely hazard	Known or potential hazard for aquatic toxicity	Use as fragrance in consumer products and as additive in fuels with potential exposure for workers and consumers	**Currently no need for EU RRM** <u>Justification:</u> low human health hazard and no PBT hazard (to be confirmed via CCH).	CCH For 701-027-7
430-830-2			NONs – No use information		No action

Annex 1: Overview of classifications

Data extracted on 22/04/2020

EC/ List No	Substance name	Harmonised classification	Classification in registrations	Classification in C&L notifications
203-560-6	diisopropyl ether	Flam. Liq. 2 H225 STOT SE 3 H336	Flam. Liq. 2 H225 Eye Irrit. 2 H319 Eye Dam. 1 H318 STOT SE. 3 H336	Repr. 2 H361 STOT SE 3 H336 STOT SE 2 H371, Aquatic Chronic 3 H412
208-857-4	diisopentyl ether	-	Flam. Liq. 3 H226 Acute Tox. 3 H331 Skin Sens. 1 H317 Aquatic Chronic 2 H411	Skin Sens. 1B H317
211-309-7	2-ethoxy-2-methylpropane	-	Flam. Liq. 2 H225 STOT SE 3 H336	Flam. Liq. 1 H224 Acute Tox. 3 H331 Acute Tox. 4 H332 Skin Irrit. 2 H315 Eye Irrit. 2 H319 Asp. Tox. 1 H304 Aquatic Acute 1 H400 STOT SE 3 H336 STOT SE 3 H335 Aquatic Chronic 3 H412
213-611-4	2-methoxy-2-methylbutane	Flam. Liq. 2 H225 STOT SE 3 H336 Acute Tox. 4* H302	Flam. Liq. 2 H225 Acute Tox. 4 H302 STOT SE 3 H336	Carc. 1B H350 Acute Tox. 3 H331 Skin Irrit. 2 H315 Eye Irrit. 2 H319 STOT SE 3 H335 STOT SE 3 H336
216-653-1	tert-butyl methyl ether	Flam. Liq. 2 H225 Skin Irrit. 2 H315	Flam. Liq. 2 H225 Skin Irrit. 2 H315	-
221-053-8	methoxycyclododecane	-	Skin Irrit. 2 H315 Skin Sens. 1B H317 Aquatic Acute 1 H400 Aquatic Chronic 1 H410	Skin Sens. 1 H317
238-620-0	4-(1-methoxy-1-methylethyl)-1-methylcyclohexene	-	Skin Irrit. 2 H315 Aquatic Chronic 3 H412	Not classified
251-347-1	1-(1,1-dimethylethoxy)-2-	-	Flam. Liq. 2 H225 Skin Irrit. 2 H315 Eye Dam. 1 H318	Eye Irrit. 2A H319 STOT SE 3 H335

EC/ List No	Substance name	Harmonised classification	Classification in registrations	Classification in C&L notifications
	methylpropane		Aquatic Chronic 2 H411	Aquatic Chronic 3 H412
266-722-5	3-ethoxy-1,1,5-trimethylcyclohexane	-	Flam. Liq. 3 H226 Skin Sens. 1B H317 Aquatic Chronic 2 H411	Skin Irrit. 2 H315 Eye Irrit. 2 H319
295-322-3	Ethers, C5-6-branched alkyl Me	-	Flam. Liq. 2 H225 Acute Tox. 4 H302 STOT SE 3 H336	-
403-610-9	-	-	Aquatic Chronic 2 H411	-
426-530-6	-	Skin Irrit. 2 H315 Aquatic Acute 1 H400 Aquatic Chronic 1 H410	Skin Irrit. 2 H315 Aquatic Acute 1 H400 Aquatic Chronic 1 H410	-
430-830-2	9-(2-propenyloxy)tricyclo[5.2.1.0(2,6)]dec-3(or-4-)-ene	Skin Irrit. 2 H315 Aquatic Chronic 2 H411	-	-
439-790-0	-	-	Flam. Liq. 3 H226 Aquatic Chronic 2 H411	Skin Irrit. 2 H315
445-090-6[5]	-	-	Flam. Liq. 2 H225 Acute Tox. 4 H302 Skin Irrit. 2 H315 Eye Irrit. 2 H319	Aquatic Chronic 3 H412
611-360-9	-	-	Not classified	Flam. Liquid 2 H225 Acute Tox. 4 H302 Acute Tox. 4 H312 Skin Irrit. 2 H315 Eye Irrit. 2 H319 Aquatic Chronic 3 H412
618-804-0	-	-	Flam. Liq. 2 H225 Skin Irrit. 2 H315 Eye Irrit. 2 H319 Asp. Tox. 2 H305 STOT SE 3 H336	Not classified

[5] As mentioned below the first table of the report, EC numbers 445-090-6 and 611-360-9 refer to the same substance. Currently, the substance has two distinct lists of notified classifications: One for EC 445-090-6 / CAS 5614-37-9 / Cyclopentyl methyl ether and one for EC 611-360-9 / CAS 5614-37-9 / Cyclopentane, methoxy-.

EC/ List No	Substance name	Harmonised classification	Classification in registrations	Classification in C&L notifications
639-037-8	-	-	-	Skin Irrit. 2 H315 Aquatic Acute 1 H400 Aquatic Chronic 1 H410
701-027-7	Reaction mass of 2-methoxy-2-methylbutane and 4-methoxypent-2-ene	-	Flam. Liq. 2 H225 Acute Tox. 4 H302 STOT SE 3 H336	-
815-589-7	1-[(2-methylprop-2-en-1-yl)oxy]heptane	-	Not classified	Not classified
816-311-7	2-methoxy-2-methylheptane	-	Flam. Liq. 3 H226 Skin Sens. 1B H317 Aquatic Chronic 3 H412	-
827-394-4	1,1'-[oxybis(methylene)]dicyclohexane	-	Skin Sens. 1B H317 Aquatic Acute 1 H400, M-factor: 10 Aquatic Chronic 1 H410, M-factor: 1	-
903-919-3	Reaction mass of 2,2'-oxybisbutane and 2-methylpropan-2-ol and butan-2-ol and diisopropyl ether	-	Flam. Liq. 2 H225 Skin Irrit. 2 H315 Eye Irrit. 2 H319 STOT SE 3 H336 Aquatic Chronic 3 H412	-
906-484-8	Reaction mass of 2-methylpent-2-ene and diisopropyl ether	-	Aquatic Chronic 2 H411 Asp. Tox. 1 H304 Flam. Liq. 2 H225 STOT SE 3 H336	-
944-610-3	2-ethoxy-1,3-dimethylcyclohexane	-	Flam. Liq. 3 H226 Skin Sens. 1B H317 Aquatic Chronic 2 H411	-

Annex 2: Overview of uses based on information available in registration dossiers

Data extracted on 04/11/2020

Subgroup 1 (branched ethers)

Main types of applications structured by product or article types	EC/List 216-653-1	EC/List 213-611-4	EC/List 211-309-7	EC/List 816-311-7	EC/List 251-347-1	EC/List 618-804-0	EC/List 203-560-6	EC/List 208-857-4	EC/List 295-322-3
Use in Fuels	F, I, **P, C**	F, I, **P, C**	F, I, **P, C**			F, I, **P, C**	F, I, **P, C**		F, I, **P, C**
Use in Cleaning and Washing products	F, I, **P, C**			F, I, **P, C**					
Use in Polishes and Wax				F, **P, C**					
Use in Air care products				F, **C**					
Use in Cosmetics				F, **C**					
Use in Biocides				F, **C**					
Use in Coatings	F, I, **P**						F, I, **P, C**		
Use in rubber production / processing	F, I								
Use in Pharmaceutical / Fine Chemicals	F, I								
Use as solvent extraction agent	F, I	F, I					F, I	F, I	
Use as laboratory agent							F, I, **P**		
Use in Functional Fluids							F, I, **P, C**		
Use in Mining industry							F, I		
Use as intermediate	M, I	I			I			M, I	

F: formulation, I: industrial use, P: professional use, C: consumer use, A: article service life; P, C and A are highlighted in red to indicate widespread use with potential for exposure/release

Subgroup 2 (cyclic ethers)

Main types of applications structured by product or article types	EC/ List 944-610-3	EC/ List 266-722-5	EC/ List 445-090-6	EC/ List 238-620-0	EC/ List 221-053-8	EC/ List 827-394-4	EC/ List 403-610-9	EC/ List 426-530-6
Use in Fuels								
Use in Cleaning and Washing products	F, I, **P, C**	F, I, **P, C**		F, I, **P, C**	F, I, **P, C**	F, I, **P, C**	F, I, **P, C**	F, I, **P, C**
Use in Polishes and Wax	F, **P, C**	F, **P, C**		F, **P, C**	F, **P, C**	F, **P, C**	F, **P, C**	F, **P, C**
Use in Air care products	F, **C**	F, **C**		F, **C**	F, **C**	F, **C**	F, **C**	F, **C**
Use in Cosmetics	F, **P, C**	F, **C**		F, **C**	F, **C**	F, **C**	F, **C**	F, **C**
Use in Biocides	F, **C**	F, **C**		F, **C**	F, **C**	F, **C**	F, **C**	F, **C**
Use in Coatings								
Use in rubber production / processing								
Use in Pharmaceutical / Fine Chemicals			I					
Use as solvent extraction agent								
Use as laboratory agent								
Use in Functional Fluids								
Use in Mining industry								
Use as intermediate								

F: formulation, I: industrial use, P: professional use, C: consumer use, A: article service life; P, C and A are highlighted in red to indicate widespread use with potential for exposure/release

Subgroup 3 (unsaturated and cyclic ethers)

Main types of applications structured by product or article types	EC/ List 439-790-0	EC/ List 815-589-7	EC/ List 701-027-7	EC/ List 430-830-2
Use in Fuels			F, I, **P, C**	
Use in Cleaning and Washing products	F, I, **P, C**			
Use in Polishes and Wax	F, **P, C**			
Use in Air care products	F, **C**			
Use in Cosmetics	F, **C**			
Use in Biocides	F, **C**			
Use in Coatings				
Use in rubber production / processing				
Use in Pharmaceutical / Fine Chemicals				
Use as solvent extraction agent				
Use as laboratory agent				
Use in Functional Fluids				
Use in Mining industry				
Use as intermediate		I		

F: formulation, I: industrial use, P: professional use, C: consumer use, A: article service life; P, C and A are highlighted in red to indicate widespread use with potential for exposure/release

Annex 3: Overview of completed or ongoing regulatory risk management activities

Data extracted on 05/01/2021

EC/List number	RMOA	Authorisation		Restriction	CLH*	Actions not under REACH/ CLP
		Candidate list	Annex XIV	Annex XVII	Annex VI (CLP)	
203-560-6					YES	
213-611-4					YES	
426-530-6					YES	
430-830-2					YES	

*Some of the broad restriction entries in the Annex XVII of REACH are not represented in the overview, e.g. when the scope of the restriction is defined by its classification or the substance identification is broad (e.g. entries 3, 28-30 and 40).

There are no relevant completed or ongoing regulatory risk management activities for the other substances.