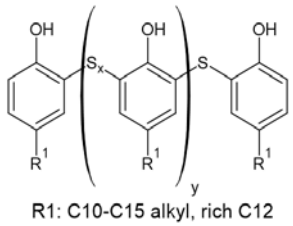
Assessment of regulatory needs

Authority: European Chemicals Agency (ECHA)

Group Name: Sulfurised alkylphenol derivatives

General structure:

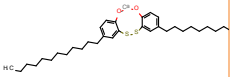
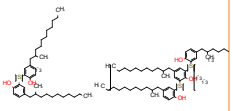


R1: C10-C15 alkyl, rich C12

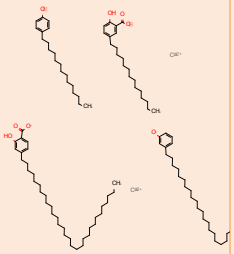
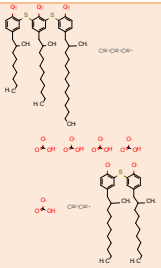
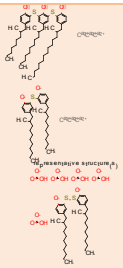
Revision history

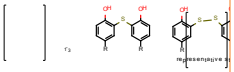
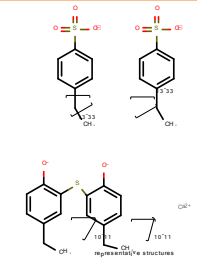
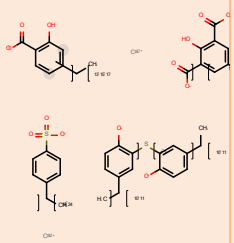
Version	*Date*	*Description*
1.0	31 March 2023	

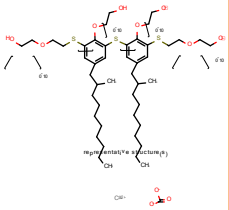
Substances within this group:

EC/List number	CAS number	Substance name [and/ or Substance name acronyms]	Chemical structures	Registration type (full, OSII or TII, NONS), highest tonnage band among all the registrations (t/y) [1]
248-159-7	26998-97-0	Calcium thiobis[dodecylphenolate]	structure not available	C&L notification
271-119-5	68515-93-5	Phenol, nonyl derivs., sulfides	structure not available	Not registered
272-233-8	68784-25-8	Phenol, dodecyl-, sulfurized, carbonates, calcium salts	structure not available	C&L notification
272-234-3	68784-26-9	Phenol, dodecyl-, sulfurized, carbonates, calcium salts, overbased		C&L notification
272-388-1	68815-67-8	Thiobis[tetrapropylenephenol]	structure not available	Not registered
272-486-4	68855-45-8	Phenol, dodecyl-, sulfurized, calcium salts	structure not available	C&L notification
277-588-2	73758-62-0	Phenol, C12-and C18-30-alkyl derivs., sulfurized, calcium salts, overbased	structure not available	Not registered
306-115-5	96152-43-1	Phenol, dodecyl-, branched, sulfurized		Full, not (publicly) available

[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/ or Substance name acronyms]	Chemical structures	Registration type (full, OSII or TII, NONS), highest tonnage band among all the registrations (t/y) [1]
415-930-6	-	A mixture of: Ca salicylates (branched C10-14 and C18-30 alkylated); Ca phenates (branched C10-14 and C18-30 alkylated); Ca sulfurized phenates (branched C10-14 and C18-30 alkylated)		NONS
602-701-2	122384-85-4	Phenol, tetrapropylene-, sulfurized, calcium salts	structure not available	C&L notification
701-208-0	-	Phenol, paraalkylation products with C10-15 branched olefins (C12 rich) derived from propene oligomerization, carbonates, calcium salts, sulfurized, including distillates (petroleum), hydrotreated, solvent-refined, solvent-dewaxed, or catalytic dewaxed, light or heavy paraffinic C15-C50		Full, 100-1000
701-249-4	-	-	structure not available	Full, >1000
701-251-5	-	Phenol, paraalkylation products with C10-15 branched olefins (C12 rich) derived from propene oligomerization, carbonates, calcium salts, overbased, sulfurized, including distillates (petroleum),		Full, >1000

EC/List number	CAS number	Substance name [and/ or Substance name acronyms]	Chemical structures	Registration type (full, OSII or TII, NONS), highest tonnage band among all the registrations (t/y) [1]
		hydrotreated, solvent-refined, solvent-dewaxed, or catalytic dewaxed, light or heavy paraffinic C15-C50		
701-254-1	-	Phenol, para-alkylation products with C10-15 branched olefins (C12 rich) derived from propene oligomerization, reaction products with sulphur monochloride and dec-1-ene		Cease manufacture
814-827-7	-	-	structure not available	Not registered
903-161-3	-	Reaction mass of Phenol, dodecyl-, sulfurized, calcium salts and benzene and butene and calcium carbonate and calcium dihydroxide and sulphur trioxide		Full, not (publicly) available
903-162-9	-	Phenol, paraalkylation products with C12-rich branched olefins derived from propene oligomerisation, reaction products with sulphur monochloride and decene, reaction products with Benzoic acid, 2-hydroxy-,C14-18 alkyl dervis., polybutenyl benzenesulphonic acid, carbon dioxide and calcium hydroxide		Full, not (publicly) available

EC/List number	CAS number	Substance name [and/ or Substance name acronyms]	Chemical structures	Registration type (full, OSII or TII, NONS), highest tonnage band among all the registrations (t/y) [1]
946-321-8	-	Phenol, para-alkylation products with branched olefins (C12 rich) derived from propene oligomerisation and ethane-1,2-diol, carbonates, sulfurized, calcium salts, overbased, reacted with 1,3-dioxolan-2-one, including distillates (petroleum), heavy paraffinic C10-C50		Full, not (publicly) available

This table contains also group members that are only notified under the CLP Regulation. However, the list is not necessarily exhaustive. Should further regulatory risk management action on one or more substances in the group be considered, ECHA may 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 a 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, a 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[2].

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

Glossary

ARN	Assessment of Regulatory Needs
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 18 structurally similar substances based on the presence of the sulfurised alkylphenol moiety shown in the figure below.

The group consists of UVCB substances. The registration status of the substances is the following: 7 with full (Article 10) registrations, 5 with C&L notifications, 1 ceased manufacture, 1 NONS and 4 not registered.

All (registered) members in the group for which compositional information has been provided contain as constituent EC 310-154-3, phenol, dodecyl-, branched (i.e. tetrapropenylphenol or TPP) in concentrations above 0.1% (w/w), which has been assessed as part of group "4-hydrocarbylphenols (other than styrenated phenols)". Due to similarities in structure and manufacturing processes, it is suspected that substances for which compositional information is not available also likely contain TPP above 0.1%. TPP has a harmonised classification for Repr. 1B and has been identified as an SVHC due to toxicity to reproduction, and endocrine disrupting properties for human health and the environment. Consequently, all substances containing TPP above the respective regulatory thresholds[3] would be considered as confirmed reproductive toxicants and/or endocrine disruptors.

In addition, all substances contain (or are expected to contain) EC 265-157-1, 278-012-2 and/or 265-090-8 as constituents in concentrations above 0.1%. These oils are identified petroleum stream substances and are discussed under the PetCo Working Group[4]. They have a conditional harmonised classification as Carc 1B that does not apply if it can be shown that the substance contains less than 3% DMSO extract (note L of Annex VI to CLP[5]).

Based on information reported in the REACH registration dossiers, the uses for all fully registered substances are homogenous. The substances are mainly used as additives in lubricants and other technical fluids (e.g. metalworking, heat transfer). All group members have widespread professional or consumer uses with a high likelihood for exposure to humans and releases to the environment. In addition, some industrial uses appear to be similar to professional uses (e.g. general use of lubricants in vehicles and machinery) and likely involve manual activities (e.g.

[3] As stipulated under Annex I to CLP, the generic concentration limit triggering classification that should be applied for reproductive toxicants is 0.3% (w/w). Furthermore, substances containing a constituent with known ED properties at a concentration above 0.1% (w/w) can be considered as endocrine disruptors. Note that some substances have been identified as SVHC based on ED properties on that basis already and are included in the Candidate list.

[4] The Petroleum and Coal stream Substances (PetCo) Working Group

[5] Note L of Annex VI to CLP states: "The classification as a carcinogen need not apply if it can be shown that the substance contains less than 3% DMSO extract as measured by IP 346 'Determination of polycyclic aromatics in unused lubricating base oils and asphaltene free petroleum fractions – Dimethyl sulphoxide extraction refractive index method', Institute of Petroleum, London. This note applies only to certain complex oil-derived substances in Part 3."

during maintenance). Therefore, it is likely that there is a potential for release and exposure also in the industrial setting.

An RMOA[6] has been concluded by Sweden on several group members (EC/List 272-233-8, 272-234-3, 272-486-4), highlighting the presence of TPP as an impurity. In the RMOA, only the human health concern regarding the reprotoxic properties of TPP was assessed. The RMOA states that "[…] *industry continues to make efforts to lower the content of TPP in substances* [however] *claims that a further reduction of TPP content* […] *requires time and investments in R&D."* Furthermore, as also mentioned in the RMOA, all substances which contain TPP above 0.3% are considered reproductive toxicants and therefore fall under the Annex XVII entry 30[7] restricting their use by consumers.

It is important to note that ECHA is assessing the regulatory needs of several groups of structurally related hydrocarbylphenols (i.e. phenols with any kind of saturated or unsaturated hydrocarbon substituent(s) on the phenol ring). Some hydrocarbylphenols have already been scrutinised by Member State Competent Authorities. For some others, regulatory activities are ongoing. The use of hydrocarbylphenols as such, as a constituent/impurity, in mixtures or articles with (potential) endocrine properties (ED), toxicity to reproduction and/or PBT/vPvB properties and potential exposure to human health and the environment is of concern. ECHA, Member States and the Commission are working together to i) identify those substances, and ii) consider the most appropriate regulatory instrument to address the substances as such or as a constituent to minimise exposure to those hydrocarbylphenols with hazardous properties. This report documents the assessment of regulatory needs of substances belonging to the group **sulfurised alkylphenol derivatives**. The assessment of regulatory needs of the other hydrocarbylphenol-related groups and the overall regulatory strategy for the wider group of hydrocarbylphenols are or will be documented in separate reports.

[6] Risk Management Option Analysis Conclusion Document for Metallic salts of alkyl phenol sulfides ("phenates")

[7] Annex XVII entry 30

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 need for regulatory risk management action at EU level

Based on currently available information, there is a need for (further) EU regulatory risk management – restriction for ED (human health and environment) and reproductive toxicity, due to the potential for release/ exposure and potential regrettable substitution for all substances in the group.

Based on ECHA's assessment of hazard information currently available in the registration dossiers, considerations of structural similarity and presence of common functional moiety all the substances in the group have (potentially) the following human health/environmental hazards: ED HH&ENV, Repro 1B. These hazards are identified based on the presence of TPP as an impurity above the regulatory threshold for all registered substances in the group. Based on structural similarity these hazard findings are extrapolated to the substances where there is limited information for these endpoints. Additionally, as all the group members may potentially degrade into hydrocarbylphenols (i.e. hydrocarbylphenol precursors), there is a potential ED concern deriving from their degradation products.

All of the registered group members (except for List 946-321-8) are self-classified as Repr 1B due to the presence of TPP in their composition above 0.3%[8]. Although reduction of the amount of TPP is claimed for List 946-321-8, TPP is still present in the composition of this substance based on analytical data (below 0.12%) and is therefore not classified as Repro 1B. However, the regulatory threshold of 0.1% for endocrine disrupting properties would still apply.

[8] With the exception of EC 306-115-5 for which TPP is not reported in IUCLID section 1.2 but the registrant has self-classifed the substance based on the presence of TPP.

Moreover, it is observed that all of the group members are likely to contain, above 0.1% of their composition, at least one of the following petroleum substances: EC 265-157-1, 278-012-2, 265-090-8. These substances are lube oils that are added to the group members after manufacturing (often in high concentrations) and have a conditional harmonised classification as Carc 1B[9]. The registrants have not applied the corresponding self-classification to any of the substances in the group however there is no information available in the dossiers to support the conclusion that they would not meet conditions for the classification. Nevertheless, it is assumed that these petroleum substances when used to manufacture the substances are not classified as carcinogenic and therefore the carcinogenicity concern is not relevant for this group, albeit with uncertainties.

In addition to the leading ED and repro hazards, all group members (and potentially their degradation products) also have potential PBT/vPvB properties. All substances screen P/vP as none of them are readily biodegradable. Recalcitrant degradation products may also form. Bioconcentration via the aqueous route is unlikely for any of the substances, due to their limited bioavailability (highly hydrophobic and relatively large molecules). However, bioaccumulation cannot be ruled out for the degradation products. Bioaccumulation via the dietary route (parents and/or degradation products) is still unresolved. Further clarification of PBT/vPvB properties for the substances would likely not bring added value - it is expected that the proposed restriction for ED ENV would likely also address risks related to PBT/vPvB considering that both are non-threshold environmental hazards and require minimisation of releases. In addition, some substances have potential skin sensitisation properties (EC/List 701-251-5, 903-162-9, 946-321-8) however due to conflicting study results, a clear trend could not be identified and extrapolated to the whole group.

All substances in the group are unlikely to have the following human health/environmental hazards: mutagenicity, carcinogenicity, skin sensitisation (except for EC/List 946-321-8,701-251-5, 903-162-9) repeated dose toxicity and aquatic toxicity. Although the data density is low due to use of read-across adaptation, the provided studies indicate negative results. Furthermore, no other constituents of concern have been identified and provided animal data on endocrine disruption and reproductive toxicity indicate a generally low effect, suggesting that the toxicity for the substances correlates with the presence of TPP.

A restriction, targeting the presence of the hazardous constituent TPP, is seen as the most appropriate option as potential for exposure is expected from consumer, professional and industrial uses for all group members. While consumer uses have been reported in the full registration dossiers for most group members, they are in principle already restricted under the Annex XVII entry 30 for all substances containing TPP above 0.3%. It is important to note that ECHA is currently assessing the regulatory needs of several groups of hydrocarbylphenols and has developed an overall regulatory strategy[10]. Restriction under REACH has been identified as the most suitable regulatory risk management tool to address a group of (relevant) hydrocarbylphenols due to their (potential) ED, reproductive toxicity and/or PBT/vPvB hazards, potential for release and exposure and potential for regrettable substitution. For example, ECHA has already concluded that for substances

[9] Note L of Annex VI to CLP states: "The classification as a carcinogen need not apply if it can be shown that the substance contains less than 3% DMSO extract as measured by IP 346 'Determination of polycyclic aromatics in unused lubricating base oils and asphaltene free petroleum fractions – Dimethyl sulphoxide extraction refractive index method', Institute of Petroleum, London. This note applies only to certain complex oil-derived substances in Part 3."

[10] Overall strategy on hydrocarbylphenols

containing 4-TBP restriction is the most appropriate EU-wide regulatory risk management to mitigate the risks associated with 4-TBP[11] and stated the following: "*Restriction of 4-TBP as a substance, constituent or impurity in other substances, mixtures and articles up to a certain threshold is proposed to ensure that environmental emissions of 4-TBP are minimised".* Therefore, a similar approach could be taken to address the presence of other hydrocarbylphenols such as TPP.

By extension, it is suggested that this work would also cover the presence of other hydrocarbylphenols as minor constituents and as degradation products of precursors. Expanding the scope of the abovementioned restriction to include also TPP as one of the relevant hydrocarbylphenols would ensure that all members of this group are also addressed. The identified need for restriction to address the wider group of hydrocarbylphenols has been included as an entry ("Substances containing 4-tert-butylphenol (4-TBP), 4-nonylphenol and other alkylphenols") in the Restrictions Roadmap under the Chemicals Strategy for Sustainability[12] and is the outcome of preliminary discussions between ECHA, Member States and the Commission. Therefore, it is expected that all substances in this group will be further investigated and likely addressed as part of the ongoing work to develop a potential restriction on the wider group of hydrocarbylphenols, and that additional actions beyond that will not be necessary. However, the need for further EU RRM will be revisited if needed, taking into account any future developments.

In the event that content reduction below the regulatory threshold of the hazardous constituent TPP is obtained by the registrants, information on the potential hazards deriving from the remaining constituents of the substances as well as their degradation products would be needed to clarify the need for additional regulatory action. Therefore, parallel to the regulatory risk management action proposed, CCH are proposed to be opened for EC/List 306-115-5, 701-208-0, 701-249-4, 701-251-5 to further clarify the hazards of the substances. As severe hazards are already identified based on the presence of constituent (reproductive toxicity, ED), CCH is only proposed for the substances with the highest registration tonnages thereby limiting the number of substances tested while also yielding the most (eco)toxicological data.

[11] Assessment of regulatory needs for substances containing 4-tert-butylphenol

[12] Restrictions Roadmap under the Chemicals Strategy for Sustainability

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 number, substance name	Human Health Hazard	Environmental Hazard	Relevant use(s) & exposure potential	Last foreseen action	Action
Sulfurised alkylphenol derivatives	Known or potential hazard for reproductive toxicity (except for List 946-321-8) and ED Known or potential hazard for skin sensitisation for EC/List 272-234-3, 701-251-5, 903-162-9, 946-321-8	Known or potential hazard for PBT/vPvB and ED	Widespread professional and consumer uses in lubricants and other technical fluids with a high likelihood for exposure to humans and releases to the environment. Release/exposure in the industrial setting cannot be excluded.	**Need for EU RRM: Restriction** <u>Justification:</u> Releases to the environment from consumer and widespread professional uses cannot be avoided. Widespread professional uses are typically non-contained and non-automated leading to releases to the environment. Restriction of professional uses is preferred over authorisation as it is considered to be more efficient and effective to introduce controls at the level of placing on the market rather than at the level of uses. Industrial uses to be further investigated and possibly considered as part of the restriction.	Restriction of substances containing TPP above a certain threshold And in parallel CCH for EC/List 306-115-5, 701-208-0, 701-249-4, 701-251-5

Annex 1: Overview of classifications

Data extracted on 29/09/2022

EC/ List No	CAS No	Substance name	Harmonised classification	Classification in registrations
701-249-4	-	-	-	Repr. 1B H360 Aquatic Chronic 4 H413
946-321-8	-	Phenol, para-alkylation products with branched olefins (C12 rich) derived from propene oligomerisation and ethane-1,2-diol, carbonates, sulfurized, calcium salts, overbased, reacted with 1,3-dioxolan-2-one, including distillates (petroleum), heavy paraffinic C10-C50	-	Skin Irrit. 2 H315 Skin Sens. 1B H317
306-115-5	96152-43-1	Phenol, dodecyl-, branched, sulfurized	-	Repr. 1B H360, specific effect:Fertility: effects on implantation, oestrous cycles, sperm production Aquatic Chronic 4 H413
701-251-5	-	Phenol, paraalkylation products with C10-15 branched olefins (C12 rich) derived from propene oligomerization, carbonates, calcium salts, overbased, sulfurized, including distillates (petroleum), hydrotreated, solvent-refined, solvent-dewaxed, or catalytic dewaxed, light or heavy paraffinic C15-C50	-	Repr. 1B H360 Aquatic Chronic 4 H413
903-162-9	-	Phenol, paraalkylation products with C12-rich branched olefins derived from propene oligomerisation, reaction products with sulphur monochloride and decene, reaction products with Benzoic acid, 2-hydroxy-,C14-18 alkyl dervis., polybutenyl benzenesulphonic acid, carbon dioxide and calcium hydroxide	-	Repr. 1B H360 Aquatic Chronic 4 H413
903-161-3	-	Reaction mass of Phenol, dodecyl-, sulfurized, calcium salts and benzene and butene and calcium carbonate and calcium dihydroxide and sulphur trioxide	-	Repr. 1B H360 Aquatic Chronic 4 H413

EC/ List No	CAS No	Substance name	Harmonised classification	Classification in registrations
701-208-0	-	Phenol, paraalkylation products with C10-15 branched olefins (C12 rich) derived from propene oligomerization, carbonates, calcium salts, sulfurized, including distillates (petroleum), hydrotreated, solvent-refined, solvent-dewaxed, or catalytic dewaxed, light or heavy paraffinic C15-C50	-	Repr. 1B H360 Aquatic Chronic 4 H413
701-254-1	-	Phenol, para-alkylation products with C10-15 branched olefins (C12 rich) derived from propene oligomerization, reaction products with sulphur monochloride and dec-1-ene	-	Aquatic Chronic 4 H413 [Article 10 (inactive)] Repr. 1B H360, specific effect:Fertility: effects on implantation, oestrous cycles, sperm production [Article 10 (inactive)]

(*) the number in brackets indicates the number of notifications received. Each notification can represent a group of notifiers, therefore the number may differ from the C&L inventory which displays number of notifiers.

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

Data extracted on 29/09/202

Main types of applications structured by product or article types	EC/List 306-115-5	EC/List 701-208-0	EC/List 701-249-4	EC/List 701-251-5	EC/List 903-161-3	EC/List 903-162-9	EC/List 946-321-8
PC 24: Lubricants, greases, release products	F, I, **P**, **C**	F, I, **P**, **C**	F, I, **P**, **C**	F, I, **P**, **C**	F, I, **P**, **C**	F, I, **P**	F, I, **P**
PC 25: Metal working fluids			F	F	F		F
PC 16: Heat transfer fluids					I, **P**		
PC 17: Hydraulic fluids		I, **P**	F, I, **P**	F, I, **P**	F, I, **P**		F, I, **P**

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 29/09/2022

EC / List number	RMOA	Authorisation		Restriction*	CLH	Actions not under REACH / CLP
		Candidate list	Annex XIV	Annex XVII	Annex VI (CLP)	
272-233-8	x					
272-234-3	x					
272-486-4	x					
415-930-6					x	

*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.