Assessment of regulatory needs

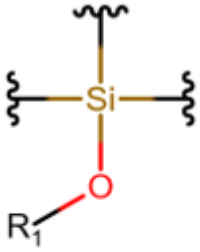
Authority: European Chemicals Agency (ECHA)

Group Name: Alkoxysilyl carbamates

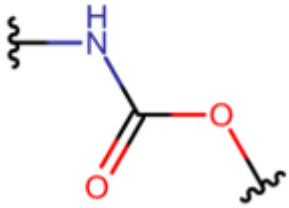
General structure:

(a) Alkoxysilyl moiety

-O-R_1: alkoxy group, more than one alkoxy group may be present



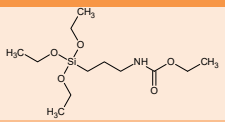
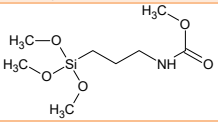
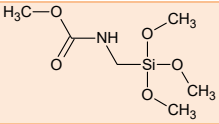
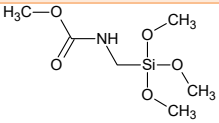
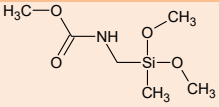
(b) carbamate moiety



Revision history

Version	*Date*	*Description*
1.0	18 September 2024	

Substances within this group:

EC / List no	CAS no	Substance name [and / or Substance name acronyms]	Chemical structures	Registration type (full, OSII or TII, NONS, cease manufacture), highest tonnage band among all the registrations (t/y) [1]
241-872-4	17945-05-0	Ethyl 3-(triethoxysilyl)propylcarbamate		OSII or TII
245-659-7	23432-62-4	Methyl [3-(trimethoxysilyl)propyl]carbamate		Full, not (publicly) available
449-370-9 *	23432-64-6	Carbamic acid, N-[(trimethoxysilyl)methyl]-, methyl ester		Full, not (publicly) available
815-001-9 *	23432-64-6	Methyl N-(trimethoxysilylmethyl)carbamate		C&L notification
457-690-5	23432-65-7	Carbamic acid, N-[(dimethoxymethylsilyl)methyl]-, methyl ester		Full, not (publicly) available
472-710-2	-	[No public or meaningful name is available]	not (publicly) available	NONS
483-070-9	-	[No public or meaningful name is available]	not (publicly) available	NONS
Not (publicly) available	-	Alkane-alpha,omega-diyl bis{[(trimethoxysilyl)propyl]carbamate}_M1	not (publicly) available	Full, not (publicly) available
Not (publicly) available	-	Alkane-alpha,omega-diyl bis{[(trimethoxysilyl)propyl]carbamate}_M3	not (publicly) available	Full, not (publicly) available
Not (publicly) available	-	Alkane-alpha,omega-diyl bis{[(trimethoxysilyl)propyl]carbamate}_M2	not (publicly) available	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 no	CAS no	Substance name [and / or Substance name acronyms]	Chemical structures	Registration type (full, OSII or TII, NONS, cease manufacture), highest tonnage band among all the registrations (t/y) [1]
Not (publicly) available	-	Alkane-alpha,omega-diyl bis{[(triethoxysilyl)propyl]carbamate}_E2	not (publicly) available	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.

(*) When a dossier is submitted without EC number, REACH-IT automatically assigns a List number to the dossier. Sometimes, due to IT technical limitations, duplicate List numbers are created. In this group the following are considered duplicate entries: EC 449-370-9 and List 815-001-9. In general, EC numbers take precedence over List numbers.

Contents

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Foreword

The assessment of regulatory needs of a group of substances is an iterative, informal process to help authorities consider the most appropriate way to address an identified concern for a group of substances or a single substance and decide whether further regulatory risk management activities are necessary.

The grouping is mainly based on structural similarity and associations made by the registrants between substances through read-across and category approaches as well as category associations from external sources (e.g. OECD categories)[2]. These methods are different from grouping as defined in Section 1.5 of Annex XI to REACH because the scope and intended use of ECHA's grouping is different. Thus, in this context, grouping does not aim to validate read-across and category approaches according to the Annex XI requirements but rather to support a faster and more consistent approach for regulating chemicals and avoid regrettable substitution.

The focus of the assessment is largely based on information available in the registration dossiers and on properties requiring regulatory risk management action at EU level[3]. The information reported on uses is from the registration dossiers (IUCLID) and is used as a proxy for assessing how widespread uses are and whether potential for exposure to humans and releases to the environment can be expected. The chemical safety reports are not necessarily consulted and no quantitative exposure assessment is performed at this stage.

The outcome of these assessments are proposals for immediate (the first action) and subsequent regulatory action(s), including the foreseen ultimate regulatory action (last foreseen regulatory action) to address the identified concern(s) in case the potential hazards are confirmed. For example, further data generation through compliance check is suggested as a first action, to confirm the identified hazard.

Where hazards are confirmed, regulatory risk management actions could be considered for the whole group, for a subgroup or for individual substances within the group. The robustness of the group depends on the stage of assessment and the level of certainty this stage requires. For example, the needs for grouping under restriction may differ from the needs for grouping for the purpose of harmonised classification. Group membership is reconsidered accordingly throughout the iterative assessment of regulatory needs, for example, after further information is generated and the hazard has been clarified or when new insights on uses and risks are available.

The assessment of regulatory needs in itself does not represent a regulatory action, but rather a preparatory step to consider further possible regulatory actions at the level of individual substances or groups/subgroups of substances.

Publication of ARNs makes it easier for companies to follow the latest status of their substances of interest, anticipate potential regulatory actions and make strategic choices in their chemicals portfolio.

[2] Working with Groups - ECHA (europa.eu)

[3] Regarding hazard properties the focus is for instance 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 report. This does not mean that the substances do not have other known or potential hazards. In some specific cases, ECHA may consider additional hazards (e.g. neurotoxicity, STOT RE).

For more information on assessments of regulatory needs please consult ECHA's website[4].

[4] 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
PMT/vPvM	Persistent, mobile, and toxic / very persistent and very mobile
RDT	Repeated dose toxicity
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
TPE	Testing proposal evaluation

1 Overview of the group

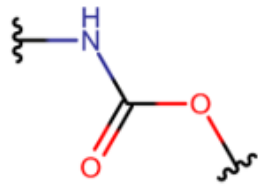
Explanations on the scope of this assessment is available in the foreword to this document. Please read it carefully before going through the report.

ECHA has grouped together structurally similar substances based on the presence of the (a) alkoxysilyl and (b) carbamate moieties shown in the figures below.

(a) Alkoxysilyl moiety

-O-R_1: alkoxy group, more than one alkoxy group may be present

(b) carbamate moiety



The group includes 11 substances, of which 7 are fully registered, one has intermediate registration, two are NONs and one is notified under the CLP Regulation.

Based on information reported in the REACH registration dossiers, most of the registered substances in the group are reported to be used in applications such as adhesives, sealants, coatings and paints, thinners, paint removers, and a few ones also in applications such as fillers, putties, plasters, modelling clay as cross-linking agents, adhesion promotors or stabiliser. In these applications, uses by professional workers and consumers are reported and, therefore, these uses can be considered widespread and in addition have a potential for exposure and releases.

A few substances in the group are also used as intermediates or as laboratory chemicals, mostly in industrial settings and sometimes in professional setting for the laboratory chemicals. In these cases, the potential for exposure and releases is considered much lower.

The substances of this group react upon use and it is possible that their reaction products end-up in articles. Article service life is reported for uses in adhesives, sealants, coatings and paints, ink and toners and polymer preparations and compounds for only one substance in the group.

2 Conclusions and proposed actions

The conclusions and actions proposed in the table below are based mainly on the REACH and CLP information available at the time of the assessment by ECHA. The conclusions are preliminary suggestions from a screening-level assessment done by ECHA with the aim to propose the next steps for further work (e.g., strengthening of the hazard conclusions, clarification of the uses and/or potential for exposure). 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 may be updated, and conclusions and actions revisited.

Subgroup name, EC / list no, substance name	Human Health Hazard	Environmental Hazard	Relevant use(s) & exposure potential	Suggested regulatory actions
All group members	Known or potential hazard for reproductive toxicity and/or for ED	Known or potential hazard for PMT/vPvM Known or potential hazard for ED	For most substances industrial, professional and consumer uses where potential for exposure is likely (e.g. adhesives, sealants, coatings, paints). Article service life in various applications such as polymer preparations, adhesives, coatings or inks is reported for EC 457-690-5.	**First step:** SEV for 457-690-5 and 449-370-9 **Potential next steps (if hazard confirmed after data generation):** CLH **Potential last action:** **Restriction** Justification: The harmonised classification as Repr. 1 would lead to generic restriction of the substance(s) in consumer mixtures by means of restriction entry 30. Releases to the environment from consumer and widespread professional uses cannot be avoided. The reported professional uses are widespread (at many sites and many users) with relatively low levels of operational controls and risk management

Subgroup name, EC / list no, substance name	Human Health Hazard	Environmental Hazard	Relevant use(s) & exposure potential	Suggested regulatory actions
				measures but with often frequent exposures with a long duration. In addition, these 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 considered as part of the restriction. Potential exposure from articles needs further investigation, restriction for use in articles to be considered together with the restriction of professional uses. For potential PMT/vPvM: The need for EU RRM will be assessed if the results from data generation support/confirm the PMT properties.

3 Justification for the need for regulatory risk management action at EU level (if hazard confirmed)

Suggested regulatory risk management action – restriction for all members of the group **if reproductive toxicity and / or ED HH / ENV** hazards are confirmed.

ECHA is currently working on the assessment of regulatory needs for various groups of silanes. The silanes have been split in several groups to facilitate the assessment of this large group of substances. Therefore, it was not possible to assess the potential interchangeability of the substances for some of their uses between groups. ECHA may need in the future to revisit the assessment considering all groups of silanes in order to account for the potential for substitution as this can impact the regulatory actions proposed.

Based on ECHA's assessment of hazard information currently available in the registration dossiers and considerations of structural similarity and presence of common functional moiety, the following human health/environmental hazards have been identified for the substances in this group.

For environment, due to the rate of hydrolysis, the potential hazards identified are generally associated with the alkylsilanol hydrolysis products.

This group is related to the silane group "amino alkoxysilanes and siloxanes" due to a common hydrolysis product (i.e. 3-(aminopropyl)silanetriol, EC 261-145-5).

Based on ECHA's assessment of hazard information currently available in the registration dossiers and considerations of structural similarity and presence of common functional moiety **all group members** have (potentially) the following: **reproductive toxicity (human health) and ED (human health and environment).**

Overall, the conclusions are based on very limited evidence available for reproductive toxicity and ED hazards.

None of the group members have a harmonised classification for reproductive toxicity. Potential reproductive toxicity (fertility and development) and ED are identified based on: i) one reproduction/developmental toxicity screening test (2016) conducted with EC 457-690-5, ii) self-classification (Repr. 1B, F and D) of EC 457-690-5, and EC 449-370-9 (no data in the dossier). The main adverse effects identified are at mid and high doses (300 and 1000 mg/kg bw per day) showing effects on testes and epididymis (major tubular degeneration with oligospermia or aspermia, and spermatogonia), thymus, thyroid, adrenal glands, as well as reduction in fertility index, gestation length, and post implantation loss. A NOAEL for developmental toxicity could not be established due to increased number of still births at all tested dose levels.

The conclusions on reproductive and ED toxicity are extrapolated to other substances in the group as a worst case assumption with uncertainty because there are variations in the chemical structure, e.g. in the presence of the methoxy group as well as the distance from the carbamic acid moiety, which might impact the toxicological profile. However, the mechanism of potential toxicity is unclear.

Notably, one member (EC 245-659-7) has information on repeated dose toxicity and developmental toxicity showing no specific effects (no effects in testes and sperm parameters); however no screening or other fertility study is available

regarding investigation of parameters such as fertility index. For another group member (EC 457-690-5), the hydrolysis product (i.e. (aminomethyl)(methyl)silanediol, CAS 179257-74-0) is not widely applicable to other substances in this group or in other silane groups. Considering that the hydrolysis product could be responsible for the potential toxicity, the extrapolation to other group members is uncertain.

A related group on amino alkoxysilanes and siloxanes includes two group members EC 213-048-4 and EC 237-511-5 sharing the same hydrolysis product 3-(aminopropyl)silanetriol (EC 261-145-5) with some members of this group. Data generation has been proposed in the related group to clarify reproductive toxicity and ED hazards (the currently outcome is inconclusive for both reproductive toxicity and ED).

EC 245-659-7 has known STOT RE hazards and is self-classified by the registrant. It is registered for its use by industrial and professional workers and consumers in applications such as adhesives, sealants, fillers, putties, plasters and modelling clay as well as in coatings and paints. It is proposed that there is currently no need for EU-wide regulatory risk management as the substance is adequately self-classified by the registrant and based on this it is expected that registrants have recommended necessary RRMs to ensure safe use.

Data generation for human health is currently proposed for some group members. SEV is proposed for EC 457-690-5 and 449-370-9, compliance check for EC 245-659-7. The conclusion will be revisited based on reproductive toxicity and ED hazards that will be found in this group and in related silane groups, where extrapolation may be possible, after data generation.

For the substances for which no data generation is possible, the conclusion will be revisited based on reproductive toxicity and ED hazards (or lack of hazards) that will be found for similar substances in this group (and in related silane groups, where extrapolation will be possible) after data generation.

STOT RE has been identified for one group member (EC 245-659-7), based on one subchronic repeated dose toxicity study showing adverse effects on the urinary system. This substance is already self-classified as STOR RE 2.

All the group members based on HH data only or extrapolation within the group, are considered potentially ED for HH and ENV except for EC 457-690-5.

EC 245-659-7, “Alkane-alpha,omega-diyl bis{[(trimethoxysilyl)propyl]carbamate}_M1”, “Alkane-alpha,omega-diyl bis{[(trimethoxysilyl)propyl]carbamate}_M3”, “Alkane-alpha,omega-diyl bis{[(trimethoxysilyl)propyl]carbamate}_M2”, “Alkane-alpha,omega-diyl bis{[(triethoxysilyl)propyl]carbamate}_E2”, EC 241-872-4, and EC 472-710-2, are **potentially persistent, mobile and toxic,** as their Si-containing hydrolysis products are potentially P/vP, potentially mobile based on screening information, and potential T based on human health (HH) data. Based on limited data due to adaptations like **read-across within the group and/or outside the group to other silane groups and/or parent information only** and with a high degree of uncertainty, based on common structural features and the formation of common hydrolysis products within this group, it is possible to screen and assign potential hazards. **Therefore, potential outcome for potential persistency, mobility and toxicity hazards** for the rest of the group members may be possible, but with a high degree of uncertainty.

EC 245-659-7, is potentially persistent (based on a read-across OECD 301 F - Not readily biodegradable: 15.5 - 19.5% after 28 d (O2 consumption)), mobile (Log Kow value of -2.3 hydrolysis) and toxic (based on STOT RE hazard), as their Si-containing hydrolysis products are potentially P/vP, potentially mobile based on screening information, and potential T based on human health (HH) data. Due to potential PMT/vPvM properties, data generation is proposed to clarify PMT hazards with the Si-containing hydrolysis product. The potential (or lack of) persistency, mobility and toxicity hazards will be confirmed after the data becomes available.

Furthermore, data generation is proposed for EC 245-659-7 to clarify the potential aquatic toxicity due to uncertainty for long-term aquatic toxicity, persistency and mobility of the Si-hydrolysis product, 3-(aminopropyl)silanetriol (EC 261-145-5). The substance is used in applications where releases to the environment are possible (for example in adhesives, sealants or coatings and paints). It is expected that following data generation for aquatic toxicity registrants would adequately self-classify the substances and implement necessary RMMs to ensure safe use from that perspective.

A related silane group “Amino alkoxysilanes and siloxanes” includes 2 group members (EC 213-048-4 and EC 237-511-5) sharing the same hydrolysis product (3-(aminopropyl)silanetriol, EC 261-145-5), but with no conclusive data available on PMT hazards. Data generation has been proposed in this related group to clarify PMT hazards.

Due to potential PMT/vPvM properties, data generation is proposed to clarify PMT hazards with the Si-containing hydrolysis product. The potential (or lack of) persistency, mobility and toxicity hazards will be confirmed after the data becomes available. For the substances for which no data generation is possible, the conclusion will be revisited based on persistency, mobility and toxicity hazards (or lack of hazards) that will be found for similar substances in this group (and in related silane groups) after data generation.

No PBT/vPvB hazards with the parent and/or with the Si-containing hydrolysis products for the group members.

Based on currently available information, suggested regulatory risk management action – restriction if reproductive toxicity and/or ED HH/ENV hazards are confirmed for release/exposure for all members of the group.

For all the group members with potential Reprotoxicity or ED properties, the first step of the regulatory risk management action proposed, should the hazards exist, is the confirmation of hazard via harmonised classification (CLH) as reprotoxic and ED (HH and ENV).

CLH i) will require company level risk management measures (RMM) under the occupational safety and health (OSH) legislation for workers to be in place, and ii) is a prerequisite to restrict the presence of the substances in consumer mixtures, by means of the restriction entry 30. When preparing the proposals, it may be considered what would be the best way to develop them, for instance whether to make a proposal for the group of substances, to submit them individually or jointly.

Confirmation of the hazard properties via CLH is not considered sufficient to minimise potential releases of the substances in the environment. Potential for release and exposure is expected in particular from consumer uses (e.g. adhesives, sealants, coatings and paints) where releases to the environment cannot be avoided.

The professional uses in adhesives, sealants, fillers or coatings and paints are expected to be widespread (at many sites and by many users) and typically non-contained and non-automated leading to releases to the environment and with relatively low levels of operational controls and risk management measures but with often frequent exposures with a long duration leading to potential workers' exposure. In addition, professional users may be self-employed and therefore not covered by OSH legislation.

Consumers may be co-exposed to the substances used by professionals (polymer preparations for adhesives or coatings, stabiliser in fillers, putties, plasters or modelling clay*)*.

Therefore, a restriction of the substances as such or in mixtures (concentration limit in mixtures) used by consumers, industrial and professional workers is suggested after CLH, with the aim to minimise or control emissions to the environment and exposure to humans.

In addition, the use of the most harmful substances (e.g. ED, CMR) by consumers and professional workers has been recognised as an area of concern under the European Commission's Chemicals Strategy for Sustainability[5].

Moreover, potential exposure from articles needs further investigation. The need for restricting substances in articles used by professionals or consumers should be considered in the context of the restriction of professional uses. Article service life is only reported for EC 457-690-5 in polymer preparations, adesives, coatings and painsts as well as ink and toners. Even though the substances in this group react upon use, it cannot be excluded that their reaction products end-up in articles or that unreacted substances, if any, are present in or on the articles. Hence, article service life could also be relevant for other group members with a similar use profile than EC 457-690-5.

All the substances are potentially P/vP and are expected to be (very) mobile in the environment M/vM and potentially toxic from a HH side, only. Since there is high release potential to surface waters, soil and ground water due to the use in adhesives, sealants, paints or coatings, data generation is proposed to clarify the potential persistency and mobility of the substances. However, for the time being no EU regulatory risk management is proposed for this substances until confirmation of the hazard properties. Further clarity is needed on the hazard before suggesting regulatory risk management action.

There is no information on the hazard(s) of the following substances due to their registration status (NONS, not registered or intermediate), ECs 241-872-4, 472-0710-2 and 483-070-9. However, from an environmental point of view, with a high degree of uncertainty, based on common structural features and the formation of common hydrolysis products within this group, it is possible to screen and assign potential hazards. With regards to uses, no widespread uses are reported for EC 241-872-4 or the other two substances which are only notified to the C&L Inventory. For human health hazards, EC 449-370-9 is self-classified by the registrant as Repr. 1B. However, no data is available in the registration dossier to verify the hazard and therefore data generation is proposed to clarify. EC 449-370-9 has currently no reported widespread uses but formulation and industrial uses in similar applications as group members with reported widespread professional and consumer uses. Provided the hazard is confirmed, the

[5] European Commission, *Chemical Strategy for Sustainability Towards a Toxic-Free Environment*, available at https://ec.europa.eu/environment/pdf/chemicals/2020/10/Strategy.pdf

EU RRM actions are proposed for all substances in the group (except for EC 245-659-7) to address potential regrettable substitution.

Annex 1: Overview of classifications

Data extracted on 13 October 2022

EC/ List No	CAS no	Substance name	Harmonised classification	Classification in registrations[6]
241-872-4	17945-05-0	ethyl 3-(triethoxysilyl)propylcarbamate	-	-
245-659-7	23432-62-4	methyl [3-(trimethoxysilyl)propyl]carbamate	-	STOT Rep. Exp. 2 H373
449-370-9[7]	-	Carbamic acid, N-[(trimethoxysilyl)methyl]-, methyl ester	-	Repr. 1B H360 Acute Tox. 4 H332
457-690-5	23432-65-7	Carbamic acid, N-[(dimethoxymethylsilyl)methyl]-, methyl ester	-	Repr. 1B H360, specific effect:May damage the unborn child. Repr. 2 H361, specific effect:death of the developing organism and effects on male reproductive organs incl. spermatogenesis Flam. Liquid 2 H225 STOT Single Exp. 2 H371
Not (publicly) available		Alkane-alpha,omega-diyl bis{[(trimethoxysilyl)propyl]carbamate}_M1	-	-
Not (publicly) available		Alkane-alpha,omega-diyl bis{[(trimethoxysilyl)propyl]carbamate}_M3	-	-

[6] The column gives the classifications in registrations received under REACH. Additional classifications in intermediate and in inactive registrations (if any) are annotated and displayed last. For each classification the table includes information on the hazard category, the hazard statement and any available information on specific effects (relevant for reproductive toxicity), specific concentration limits, M-Factors and affected organs. Two classifications differing in any of these aspects are considered different and are repeated in the table. The columns "Classifications in registrations" and "Classifications in C&L notifications" are empty if there are no Registrations/C&L notifications (hazard is unknown). The value '-' is displayed on the same columns when there are (relevant) submissions but they do not contain self-classifications (substance is not hazardous).

[7] Duplicated by List 815-001-9 (notified to the C&L Inventory only; not classified)

Not (publicly) available		Alkane-alpha,omega-diyl bis{[(trimethoxysilyl)propyl]carbamate}_ M2	-	-
Not (publicly) available		Alkane-alpha,omega-diyl bis{[(triethoxysilyl)propyl]carbamate}_E2	-	-

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

Data extracted on 13 October 2022

Main types of applications structured by product or article types	241-872-4	245-659-7	449-370-9	457-690-5	Alkane-alpha,omega-diyl bis{[(trimethoxysilyl)propyl]carbamate}_M1	Alkane-alpha,omega-diyl bis{[(trimethoxysilyl)propyl]carbamate}_M3	Alkane-alpha,omega-diyl bis{[(trimethoxysilyl)propyl]carbamate}_M2	Alkane-alpha,omega-diyl bis{[(triethoxysilyl)propyl]carbamate}_E2
PC 35: Washing and cleaning products				F, I				
PC 8: Biocidal products (e.g. disinfectants, pest control)		F		F				
PC 29: Pharmaceuticals				I				
PC 32: Polymer preparations and compounds		F		F, I, **A**				
PC 1: Adhesives, sealants		F, I, **P**, **C**	F	F, I, **P**, **C**, **A**	F, I, **P**	F, I, **P**	F, I, **P**	F, I, **P**, **C**
PC 9b: Fillers, putties, plasters, modelling clay		F, I, **P**	F	F, I, **P**				

PC 9a: Coatings and paints, thinners, paint removes		**P**, **C**	F	F, I, **P**, **C**, **A**	F, I, **P**	F, I, **P**	F, I, **P**	F, I, **P**, **C**
PC 18: Ink and toners				**A**				
PC 21: Laboratory chemicals		I, **P**, **C**	I	F, I, **P**				
PC 19: Intermediate	I	I		F, 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 2 October 2022

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