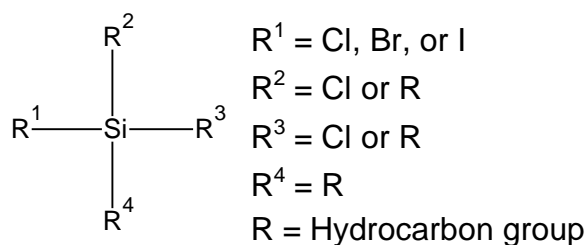


Assessment of regulatory needs

Authority: European Chemicals Agency (ECHA)

Group Name: Hydrocarbylhalosilanes

General structure:



Revision history

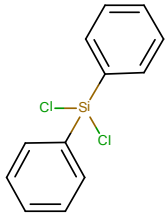
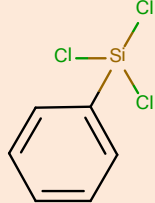
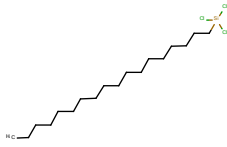
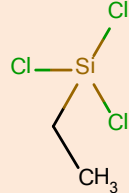
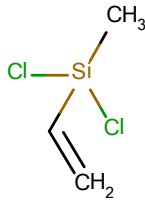
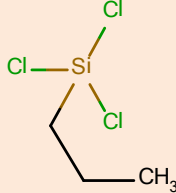
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1.0	11 January 2024	

Substances within this group:

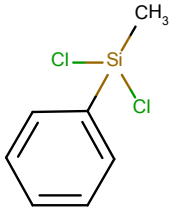
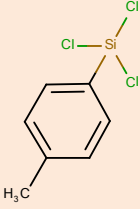
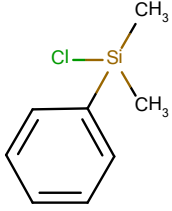
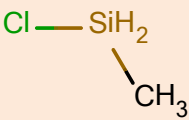
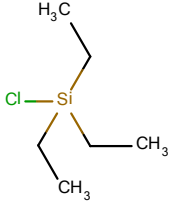
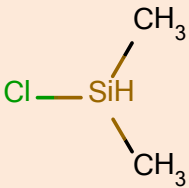
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200-877-1	75-54-7	Dichloro(methyl)silane		Full, >1000
200-900-5	75-77-4	Chlorotrimethylsilane		Full, >1000
200-901-0	75-78-5	Dichloro(dimethyl)silane		Full, >1000
200-902-6	75-79-6	Trichloro(methyl)silane		Full, >1000
200-917-8	75-94-5	Trichloro(vinyl)silane		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>

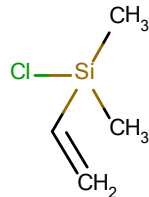
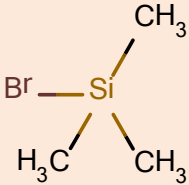
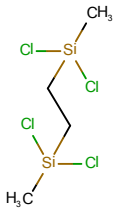
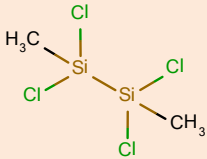
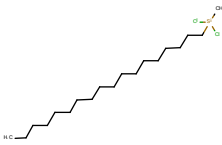
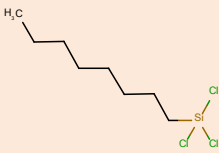
ASSESSMENT OF REGULATORY NEEDS

EC/List no	CAS no	Substance name	Chemical structure	Registration type (full, OSII or TII, NONS), highest tonnage band among all the registrations (t/y) ¹
201-251-0	80-10-4	Dichloro(diphenyl)silane		Full, 100-1000
202-640-8	98-13-5	Trichloro(phenyl)silane		Full, >1000
203-930-7	112-04-9	Trichloro(octadecyl)silane		Full, not (publicly) available
204-072-6	115-21-9	Trichloro(ethyl)silane		Full, not (publicly) available
204-710-3	124-70-9	Dichloro(methyl)(vinyl)silane		Full, 100-1000
205-489-6	141-57-1	Trichloro(propyl)silane		Full, 100-1000

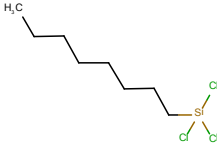
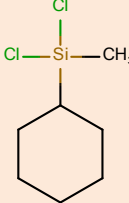
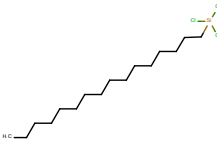
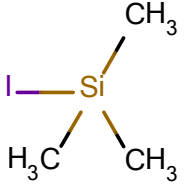
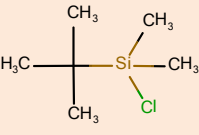
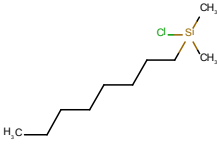
ASSESSMENT OF REGULATORY NEEDS

EC/List no	CAS no	Substance name	Chemical structure	Registration type (full, OSII or TII, NONS), highest tonnage band among all the registrations (t/y) ¹
205-746-2	149-74-6	Dichloro(methyl)(phenyl)silane		Full, 100-1000
211-854-0	701-35-9	Trichloro-p-tolylsilane		Full, not (publicly) available
212-193-0	768-33-2	Chlorodimethylphenylsilane		OSII or TII
213-600-4	993-00-0	Chloro(methyl)silane		Cease manufacture
213-615-6	994-30-9	Chlorotriethylsilane		OSII or TII
213-912-0	1066-35-9	Chlorodimethylsilane		Full, >1000

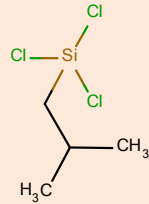
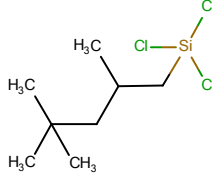
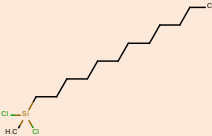

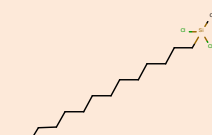

ASSESSMENT OF REGULATORY NEEDS

EC/List no	CAS no	Substance name	Chemical structure	Registration type (full, OSII or TII, NONS), highest tonnage band among all the registrations (t/y) ¹
217-007-1	1719-58-0	Chlorodimethylvinylsilane		Full, >1000
220-672-0	2857-97-8	Bromotrimethylsilane		OSII or TII
222-123-0	3353-69-3	Ethane-1,2-diylbis[dichloromethylsilane]		Full, not (publicly) available
224-844-6	4518-98-3	1,1,2,2-tetrachloro-1,2-dimethyldisilane		C&L notification
225-931-1	5157-75-5	Dichloromethyloctadecyl silane		OSII or TII
226-112-1	5283-66-9	Octyltrichlorosilane		Full, 100-1000

ASSESSMENT OF REGULATORY NEEDS

EC/List no	CAS no	Substance name	Chemical structure	Registration type (full, OSII or TII, NONS), highest tonnage band among all the registrations (t/y) ¹
226-956-0	5578-42-7	Dichlorocyclohexylmethyl silane		Full, not (publicly) available
227-575-2	5894-60-0	Trichloro(hexadecyl)silane		Full, not (publicly) available
236-870-5	13528-88-6	1,1,2-trichloro-1,2,2-trimethyldisilane		C&L notification
238-863-2	14799-93-0	Dichloromethyloctylsilane	N/A	C&L notification
240-171-0	16029-98-4	Iodotrimethylsilane		OSII or TII
242-042-4	18162-48-6	tert-butylchlorodimethyl silane		Full, 10-100
242-044-5	18162-84-0	Chlorodimethyloctylsilane		Full, 1-10


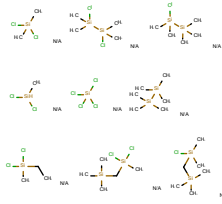
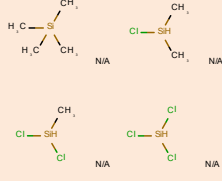
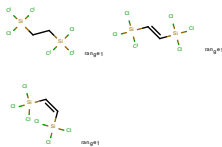
ASSESSMENT OF REGULATORY NEEDS

EC/List no	CAS no	Substance name	Chemical structure	Registration type (full, OSII or TII, NONS), highest tonnage band among all the registrations (t/y) ¹
242-053-4	18169-57-8	Trichloroisobutylsilane		Full, not (publicly) available
242-262-0	18379-25-4	Trichloro(2,4,4-trimethylpentyl)silane		Full, not (publicly) available
242-286-1	18407-07-3	Dichlorododecylmethylsilane		Full, not (publicly) available
242-472-2	18643-08-8	Chlorodimethyloctadecyl silane		Full, 1-10
261-596-8	59086-80-5	Dichloromethyltetradecyl silane		Full, not (publicly) available
266-421-9	66604-31-7	Chlorododecyldimethylsilane		C&L notification

ASSESSMENT OF REGULATORY NEEDS

EC/List no	CAS no	Substance name	Chemical structure	Registration type (full, OSII or TII, NONS), highest tonnage band among all the registrations (t/y) ¹
273-054-8	68937-17-7	Disilane, chloro Me derivs.		Cease manufacture
423-700-1	1000-50-6	Butylchlorodimethylsilane		NONS
442-590-6	Not (publicly) available	Not (publicly) available	Not (publicly) available	NONS
454-150-0	13154-25-1	Triisobutylchlorosilane		NONS
600-021-0	1000-50-6	chloro-dimethyl-n-butyl silane	Not (publicly) available	Not registered
603-492-0	13154-24-0	Chlorotriisopropylsilane		OSII or TII
604-112-6	139147-73-2	Cyclopentane, 1,1'-(dichlorosilylene)bis-		OSII or TII
627-295-4	13154-25-1	Chlorotriisobutylsilane	N/A	C&L notification

ASSESSMENT OF REGULATORY NEEDS

EC/List no	CAS no	Substance name	Chemical structure	Registration type (full, OSII or TII, NONS), highest tonnage band among all the registrations (t/y) ¹
678-409-4	18402-22-7	Silane, trichlorotetradecyl-		OSII or TII
700-717-5	Not (publicly) available	Chloro(methyl)(mono and di)silanes and dichloro(ethyl)methylsilane and hexamethyldisilane from fractionated distillation of the reaction products of silicon and chloromethane		Cease manufacture
700-790-3	Not (publicly) available	chloro(methyl)silanes and tetramethylsilane and trichlorosilane from the fractionated distillation of the reaction products of silicon and chloromethane		Cease manufacture
935-540-4	Not (publicly) available	Reaction mass of silane, 1,2-ethanediylbis(trichloro- and silane, 1,1'-(1,2-ethenediyl)bis[1,1,1-trichloro- isomer		OSII or TII

This table contains also group members that are only notified under the CLP Regulation. However, the list is not necessarily exhaustive.

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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 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 level³. 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.

² [Working with Groups - ECHA \(europa.eu\)](https://echa.europa.eu/en/working-with-groups)

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).

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.

For more information on assessments of regulatory needs please consult ECHA's website⁴.

⁴ <https://echa.europa.eu/understanding-assessment-regulatory-needs>

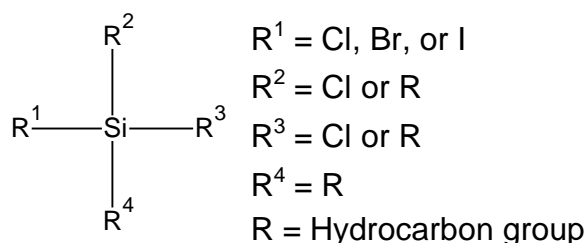
Glossary

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 halosilane moiety shown in the figure below.



The group consists of 48 substances out of which 26 have full registrations, nine are registered as intermediates, three are NONS, five have been C&L notified and five have inactive/revoked registrations. All except one of the registered substances are well-defined mono-constituent substances.

The registered substances are mainly used as intermediates, as monomer in polymers (plastic and rubber) preparation and as laboratory agent in industrial setting. Few other industrial uses (e.g. coating; adhesives; surface agent for surface treatments) are mentioned in the registration dossier for a limited number of substances. Few dossiers also report professional uses (adhesives, coatings, etc.), while for only one substance consumer uses have been mentioned; finally, for 2 substances article service is also mentioned (linked to PC1 - adhesive, PC9 - coatings, PC32 - polymers). Potential for exposure is particularly relevant for industrial and professional uses of coatings, adhesives and surface treatments and for the limited number of uses where consumers and article service life are mentioned; for the latter, besides the 2 substances where service life is explicitly reported, we have identified few uses and 1 substance where, from combination of PC and technical function, the articles service seems to be likely. In most of cases, the articles involved are rubber and plastics, although other type are possible (e.g. textile in one case). Since the main function of the substances is as monomer in polymers, the article service life is not relevant anyway in most of cases.

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.

Table: Conclusions and proposed actions

Subgroup name, EC/List no, substance name	Human Health Hazard	Environmental Hazard	Relevant use(s) & exposure potential	Suggested regulatory actions
200-877-1 200-901-0 200-902-6 201-251-0 202-640-8 205-746-2 213-912-0 226-112-1 227-575-2 242-042-4 242-262-0	Known or potential hazard for ED for reproductive toxicity (except for 227-575-2) for mutagenicity For 200-901-0, 201-251-0, 202-640-8	Known or potential hazard for ED (except for 227-575-2) for PBT/vPvB For 226-112-1, 227-575-2	Professional uses, including for adhesive, coatings, surface treatments (200-877-1, 200-901-0, 226-112-1) Use in articles (200-901-0, 226-112-1) after adhesive, coatings application or surface treatment and consumer uses in textile (200-901-0) Use in industrial setting, especially as monomer in polymer preparation, intermediate and lab	First step: CCH Potential next steps (if hazard confirmed after data generation): SVHC identification For ED and/or PBT properties CLH For reproductive toxicity Potential last action: Restriction <u>Justification:</u> Releases to the environment from consumer and widespread professional uses cannot be avoided. Widespread professional uses are typically non-

ASSESSMENT OF REGULATORY NEEDS

Subgroup name, EC/List no, substance name	Human Health Hazard	Environmental Hazard	Relevant use(s) & exposure potential	Suggested regulatory actions
			agent (all substances)	<p>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. Potential exposure from articles needs further investigation, restriction for use in articles to be considered together with the restriction of professional uses. Industrial uses to be considered as part of the restriction</p>
200-917-8 203-930-7 204-710-3 211-854-0 217-007-1 222-123-0 242-044-5 242-286-1 242-472-2 261-596-8	Inconclusive hazard for reproductive toxicity for ED for mutagenicity	Known or potential hazard for PBT/vPvB For 242-044-5, 203-930-7, 242-286-1, 242-472-2, 261-596-8 (all Annex VII substances, no info possible from CCH) Inconclusive hazard for ED	Article service life in polymer and adhesives for 242-472-2 Use in industrial setting, especially as monomer in polymer preparation, intermediate and lab agent (all substances)	<p>First step: CCH</p> <p>Potential last action: Currently not possible to assess the regulatory needs</p> <p><u>Justification:</u> It is not possible to assess the needs for regulatory risk management as information on hazard is not sufficient to conclude on ED/R and M. The needs for regulatory risk management actions will be assessed once generation of data is completed (CCH).</p>

ASSESSMENT OF REGULATORY NEEDS

Subgroup name, EC/List no, substance name	Human Health Hazard	Environmental Hazard	Relevant use(s) & exposure potential	Suggested regulatory actions
212-193-0 213-615-6 220-672-0 225-931-1 240-171-0 603-492-0 604-112-6 678-409-4 935-540-4	Inconclusive hazard for reproductive toxicity for ED for mutagenicity	Inconclusive hazard for ED Known or potential hazard for PBT/vPvB For 604-112-6, 678-409-4	Used as intermediate under strictly controlled conditions (registration ex art 17/18)	First step: No action Potential last action: Currently no need for EU RRM <u>Justification:</u> According to the reported uses, low potential for exposure to both human health and environment is expected. Actions (including data generation) will be re-considered when the assessment will be revisited if the registration status and/or uses change.
213-600-4 224-844-6 236-870-5 238-863-2 266-421-9 273-054-8 600-021-0 627-295-4 700-717-5 700-790-3 423-700-1 442-590-6 454-150-0	Inconclusive hazard Except for 213-600-4 for reproductive toxicity for ED	Inconclusive hazard Except for 213-600-4 for ED	No Uses Not registered substance or inactive registration NONs a with no uses reported (423-700-1, 442-590-6, 454-150-0)	First step: No action Potential last action: Currently no need for EU RRM <u>Justification:</u> Due to NONs, not registered substance, no data generation is possible to clarify the hazards currently. Actions (including data generation) will be re-considered when the assessment will be revisited if the registration status and/or uses change.
200-900-5 204-072-6 205-489-6	No hazard or unlikely hazard	No hazard or unlikely hazard	Industrial uses as Intermediate or laboratory agent	First step: No action

ASSESSMENT OF REGULATORY NEEDS

Subgroup name, EC/List no, substance name	Human Health Hazard	Environmental Hazard	Relevant use(s) & exposure potential	Suggested regulatory actions
226-956-0 242-053-4			200-900-5 several uses, including by consumers	<p>Potential last action: Currently no need for EU RRM</p> <p><u>Justification:</u> Overall, no or unlikely hazard that would lead to concern for the reported uses.</p>

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

ECHA is currently working on the assessment of regulatory needs for various groups of silanes. The silanes have been split in groups to facilitate the assessment of this large group of substances. However, this approach also has its disadvantages. One of the uncertainties identified relates to the potential interchangeability of the substances for some of their uses within but also between groups. The potential for substitution can impact the regulatory actions proposed in this assessment of regulatory needs. Therefore, ECHA may modify the assessment once all individual assessment for regulatory needs have been finalised. This should help ensure a coherent approach throughout the silane groups on the proposed regulatory actions.

It should be noted that based primarily on experimental hydrolysis studies, the hydrocarbylhalosilanes hydrolyse rapidly, but all ultimately release alkylsilanol hydrolysis products, which are not readily biodegradable, hydrocarbylsilanols and hydrogen chloride (HCl). Corrosive properties deriving from HCl have been addressed in REACH registrations with self-classifications. The hazards related to the alkylsilanol hydrolysis products is further discussed in this report. For this group, the silanol-containing hydrolysis products include EC/CAS 213-915-7, 219-489-9, 5651-16-1, 213-427-4, 221-257-7, 223-562-0, 219-903-6, 213-915-7. The alkylsilanol hydrolysis products, ECs 213-914-1, 213-915-7 and 219-489-9 are also common to other silanes/siloxanes groups.

For the environment, due to the rapid rate of hydrolysis of hydrocarbylhalosilane, the potential hazards identified can be generally associated with the alkylsilanol hydrolysis products. Where there is no/limited hydrolysis information, the potential hazards identified may be generally associated with either the parent and/or the alkylsilanol hydrolysis products.

Whilst CCH is proposed for this group, the final proposed selection of substances for which to conduct a CCH will consider commonalities to other silane groups, the intrinsic properties of the substances (e.g. corrosivity), tonnages and uses.

Based on currently available information, suggested regulatory management action – restriction for ED (both human health and environment) and/or reprotoxic toxicity for EC 200-877-1, 200-901-0, 200-902-6, 201-251-0, 202-640-8, 205-746-2, 213-912-0, 242-042-4, 242-262-0, and, in few cases, PBT hazard 226-112-1, and 227-575-2 due to the potential for release/ exposure.

Based on ECHA's assessment of currently available hazard information, potential hazards were identified for human health. The available information indicates potential for reproductive toxicity and/or ED. EC 200-877-1, 200-901-0, 200-902-6, 201-251-0, 202-640-8, 213-600-4, 213-912-0, 226-112-1 and 242-262-0 have extrapolated reproductive toxicity hazards from tested analogue substances in a related silane group. EC 242-042-4, 201-251-0, 205-746-2 and 200-901-1 have potential reproductive toxicity and ED hazards based on AGD, NR and thyroid developmental effects reported in prenatal developmental toxicity studies, screening studies and a repeated dose toxicity study studies (no extrapolation, group member substances tested). The reported effects are fetal variations and malformations, and AGD and/or NR.

The available data on EC 200-901-0 warrants already harmonised classification

(CLH) as Repr. 1B H360D (based on fetal variations and malformations including small thyroid, and lower fetal weight).

The first step of the regulatory risk management action proposed, should the hazard exist, is the confirmation of hazard via **SVHC identification** and inclusion on the Candidate List as ED and/or PBT. SVHC identification is highly recommended as a step prior to restriction. In addition, SVHC identification brings immediate obligations for suppliers of the substances such as (i) supplying a safety data sheet and communicating on the safe use of the substances, (ii) responding to consumer requests within 45 days and (iii) notifying ECHA if the article they produce contains the substance above regulatory threshold. CLH for reprotoxic effects (e.g. for EC 200-901-0 it is already possible to proceed with CLH as Repr 1B) can also be considered.

Confirmation of the hazard properties via SVHC identification is not considered sufficient to minimise potential releases of the substances in the environment. A **restriction is seen as the most appropriate option** as potential for exposure is expected from professional uses, article service and cannot be excluded for industrial uses.

Few of these substances (EC 200-877-1, 200-901-0, 226-112-1) have reported widespread uses (**professional, article service life**). Widespread professional uses are typically non-contained and non-automated leading to releases to the environment (e.g. when used in coating, adhesives or for textile treatments). Furthermore, potential for exposure and releases to the environment from articles cannot be excluded based on available information. Restricting substances in articles used by professionals or consumers (EC 200-901-0, 226-112-1) should be considered in the context of the restriction of consumer/professional uses as potential exposure from articles needs further investigation first.

Other substances (EC 200-902-6, 201-251-0, 202-640-8, 205-746-2, 213-912-0, 227-575-2, 242-042-4, 242-262-0) report only **industrial uses**, especially as intermediate, as monomer in polymer production and as laboratory agent; emissions to environment and exposure towards workers cannot be excluded (e.g. polymer production) also for the abovementioned industrial uses. It is therefore suggested to cover possibly also industrial uses as part of the restriction, also in light to the fact that authorisation might not be applicable in most of the cases (use as intermediate or as monomer in polymer production). EU-wide exposure limit for workers under OSH or REACH might also be considered as an alternative to control the risk for human health in industrial setting; however, this would not cover potential emission to the environment, which needs to be covered by a specific restriction.

Based on currently available information, it is not possible to regulatory risk management actions since information is not sufficient to conclude on reproductive toxicity and/or ED and/or PBT/vPvB hazards for many substances in the group (EC 200-917-8, 203-930-7, 204-710-3, 211-854-0, 217-007-1, 222-123-0, 242-044-5, 242-286-1, 242-472-2, 261-596-8). In this respect, available hazard information on the substance(s) (including any relevant data on structurally related substances in the group or from other GMTs) is insufficient to get a holistic view.

Compliance checks are preliminary suggested for the substances in this group to clarify mutagenic, reproductive toxic, ED and target organ toxicity hazards.

Based on currently available information, there is no need to suggest (further) regulatory risk management actions for some substances in the group.

In particular for 5 substances, namely EC 200-900-5 (the only substance for which consumer uses are reported), 204-072-6, 205-489-6, 226-956-0 and 242-053-4, the reproductive toxicity, ED and PBT-vPvB hazards are unlikely based on the information available in the dossier or from structurally related substances in other GMTs.

Other substances are only used as intermediate under strictly controlled conditions (namely, EC 212-193-0, 213-615-6, 220-672-0, 225-931-1, 240-171-0, 603-492-0, 604-112-6, 678-409-4 and 935-540-4), are not registered or have invalid/revoked registrations (namely, EC 213-600-4, 224-844-6, 236-870-5, 238-863-2, 266-421-9, 273-054-8, 600-021-0, 627-295-4, 700-717-5, 700-790-3) or are low tonnage NONS registration with no uses reported (namely, EC 423-700-1, 442-590-6, 454-150-0). For these substances, should the registration status change, data generation and potentially follow up actions will be re-considered when the assessment will be revisited.

Compliance checks are preliminary suggested for the following substances to clarify

- mutagenic hazard: EC 200-877-1, 200-900-5, 200-902-6, 200-917-8, 201-251-0, 202-640-8, 203-930-7, 204-072-6, 204-710-3, 205-489-6, 205-746-2, 213-912-0, 217-007-1, 226-112-1, 226-956-0, 242-262-0, 242-286-1, 261-596-8
- reproductive toxicity and ED: EC 200-877-1, 200-900-5, 200-902-6, 200-917-8, 201-251-0, 202-640-8, 204-072-6, 204-710-3, 205-489-6, 205-746-2, 213-912-0, 217-007-1, 222-123-0, 226-112-1, 242-053-4, 242-262-0
- STOT RE: 200-877-1, 200-900-5, 202-640-8, 204-072-6, 204-710-3, 205-489-6, 205-746-2, 213-912-0, 217-007-1, 222-123-0, 226-956-0, 242-053-4, 242-262-0

Annex 1: Overview of classifications

Data extracted on 11 March 2022.

No harmonised classifications (CLH) in the group

EC/ List No	CAS No	Substance name	Classification in registrations
604-112-6	13914 7-73-2	604-112-6	-
226-956-0	5578- 42-7	dichlorocyclohexylmethylsilane	Skin Corr. 1A H314 Eye Damage 1 H318 Aquatic Chronic 3 H412
200-902-6	75-79- 6	trichloro(methyl)silane	Flam. Liquid 2 H225 Acute Tox. 4 H302 Acute Tox. 4 H312 Acute Tox. 3 H331 Skin Irrit. 2 H315, specific concentration: >=1 Skin Corr. 1A H314 Eye Irrit. 2 H319, specific concentration: >=1 STOT Single Exp. 3 H335, affected organs: Respiratory tractus, specific concentration: >=1
203-930-7	112- 04-9	trichloro(octadecyl)silane	Skin Corr. 1A H314 Eye Damage 1 H318
200-877-1	75-54- 7	dichloro(methyl)silane	Flam. Liquid 2 H225 Water React. Flam. Gas 3 H261 Acute Tox. 3 H301 Acute Tox. 3 H331 Skin Corr. 1A H314
222-123-0	3353- 69-3	ethane-1,2-diylbis[dichloromethylsilane]	Skin Corr. 1A H314 Eye Damage 1 H318 STOT Single Exp. 3 H335, affected organs: Respiratory tract
242-053-4	18169- 57-8	trichloroisobutylsilane	Flam. Liquid 2 H225 Acute Tox. 3 H301 Skin Corr. 1A H314
213-600-4	993- 00-0	chloro(methyl)silane	Water React. Flam. Gas 3 H261 [intermediate (inactive)] Skin Corr. 1A H314 [intermediate (inactive)] Compressed gas H280 [intermediate (inactive)] Flam. Gas 1A H220 [intermediate (inactive)]

ASSESSMENT OF REGULATORY NEEDS

EC/ List No	CAS No	Substance name	Classification in registrations
201-251-0	80-10-4	dichloro(diphenyl)silane	Skin Corr. 1A H314 Eye Damage 1 H318 Aquatic Chronic 2 H411
220-672-0	2857-97-8	bromotrimethylsilane	Eye Damage 1 H318 [intermediate (active)] STOT Single Exp. 3 H335, affected system: respiratory system, affected organs: respiratory tract [intermediate (active)] Skin Corr. 1B H314 [intermediate (active)] Flam. Liquid 2 H225 [intermediate (active)]
226-112-1	5283-66-9	octyltrichlorosilane	Skin Corr. 1A H314 Eye Damage 1 H318
627-295-4	13154-25-1	627-295-4	-
266-421-9	66604-31-7	chlorododecyl-dimethylsilane	-
205-489-6	141-57-1	trichloro(propyl)silane	Flam. Liquid 3 H226 Acute Tox. 4 H302 Acute Tox. 3 H331 Skin Corr. 1A H314 Eye Damage 1 H318
236-870-5	13528-88-6	1,1,2-trichloro-1,2,2-trimethyldisilane	-
225-931-1	5157-75-5	dichloromethyl octadecylsilane	Skin Corr. 1A H314 [intermediate (active)] Acute Tox. 4 H302 [intermediate (active)] Eye Damage 1 H318 [intermediate (active)]
238-863-2	14799-93-0	dichloromethyl octylsilane	-

ASSESSMENT OF REGULATORY NEEDS

EC/ List No	CAS No	Substance name	Classification in registrations
200-917-8	75-94-5	trichloro(vinyl)silane	Flam. Liquid 2 H225 Acute Tox. 4 H302 Acute Tox. 3 H311 Acute Tox. 3 H331 Skin Corr. 1A H314
205-746-2	149-74-6	dichloro(methyl)(phenyl)silane	Acute Tox. 4 H302 Skin Corr. 1A H314 Eye Damage 1 H318
213-615-6	994-30-9	chlorotriethylsilane	Skin Corr. 1A H314 [intermediate (active)] Eye Damage 1 H318 [intermediate (active)] Flam. Liquid 3 H226 [intermediate (active)] Acute Tox. 4 H302 [intermediate (active)]
678-409-4	18402-22-7	678-409-4	Eye Damage 1 H318 [intermediate (active)] Skin Corr. 1A H314 [intermediate (active)] Acute Tox. 4 H302 [intermediate (active)] Flam. Liquid 3 H226 [intermediate (active)]
213-912-0	1066-35-9	chlorodimethylsilane	Flam. Liquid 1 H224 Water React. Flam. Gas 3 H261 Acute Tox. 3 H331 Skin Corr. 1A H314 Eye Damage 1 H318
204-710-3	124-70-9	dichloro(methyl)(vinyl)silane	Flam. Liquid 2 H225 Acute Tox. 4 H302 Acute Tox. 3 H331 Skin Corr. 1A H314 Eye Damage 1 H318
242-472-2	18643-08-8	chlorodimethylotadecylsilane	Skin Corr. 1A H314 Eye Damage 1 H318
242-286-1	18407-07-3	dichlorododecylmethylethylsilane	Skin Corr. 1A H314 Eye Damage 1 H318

ASSESSMENT OF REGULATORY NEEDS

EC/ List No	CAS No	Substance name	Classification in registrations
700-790-3	-	Chloro(methyl)silanes and tetramethylsilane and trichlorosilane from the fractionated distillation of the reaction products of silicon and chloromethane	<p>Pyr. Liquid 1 H250 [intermediate (inactive)] Acute Tox. 4 H302 [intermediate (inactive)] Repr. 2 H361, specific effect:suspected damage to fertility and the unborn child. Lesions induced in testes and epididymis, associated effects on reproductive hormones. Heart defects were observed in fetus. [intermediate (inactive)] Skin Corr. 1A H314 [intermediate (inactive)] STOT Single Exp. 3 H335, affected organs: respiratory tract [intermediate (inactive)] Eye Damage 1 H318 [intermediate (inactive)] Acute Tox. 4 H332 [intermediate (inactive)] Aquatic Chronic 3 H412 [intermediate (inactive)] Flam. Liquid 1 H224 [intermediate (inactive)] Carc. 2 H351 [intermediate (inactive)]</p>
242-042-4	18162-48-6	tert-butylchlorodimethylsilane	<p>Flam. Solid 1 H228 Flam. Solid 2 H228 Skin Corr. 1A H314 Eye Damage 1 H318 Aquatic Chronic 2 H411</p>
200-901-0	75-78-5	dichloro(dimethyl)silane	<p>STOT Single Exp. 3 H335, affected organs: UPPER TRACT [intermediate (active)] Flam. Liquid 2 H225 Acute Tox. 4 H302 Acute Tox. 3 H331 Skin Irrit. 2 H315 Skin Corr. 1A H314 Eye Irrit. 2 H319 Eye Damage 1 H318 STOT Single Exp. 3 H335, affected organs: other: RTI</p>
273-054-8	68937-17-7	Disilane, chloro Me derivs.	<p>Flam. Liquid 2 H225 [intermediate (inactive)] Skin Corr. 1A H314 [intermediate (inactive)]</p>
217-007-1	1719-58-0	chlorodimethylvinylsilane	<p>Flam. Liquid 2 H225 Acute Tox. 4 H302 Skin Corr. 1A H314 Eye Damage 1 H318</p>

ASSESSMENT OF REGULATORY NEEDS

EC/ List No	CAS No	Substance name	Classification in registrations
935-540-4	-	935-540-4	Eye Damage 1 H318 [intermediate (active)] Acute Tox. 3 H311 [intermediate (active)] STOT Single Exp. 3 H335 [intermediate (active)] Flam. Liquid 3 H226 [intermediate (active)] Acute Tox. 4 H302 [intermediate (active)] Acute Tox. 3 H331 [intermediate (active)] Skin Corr. 1A H314 [intermediate (active)]
211-854-0	701-35-9	trichloro-p-tolylsilane	Skin Corr. 1A H314
212-193-0	768-33-2	chlorodimethylphenylsilane	Skin Corr. 1B H314 [intermediate (active)] STOT Single Exp. 3 H335, affected organs: Respiratory system [intermediate (active)] Eye Damage 1 H318 [intermediate (active)]
242-044-5	18162-84-0	chlorodimethyloctylsilane	Flam. Liquid 3 H226 Skin Corr. 1A H314 Eye Damage 1 H318 Aquatic Chronic 2 H411
200-900-5	75-77-4	chlorotrimethylsilane	Flam. Liquid 2 H225 Acute Tox. 3 H301 Acute Tox. 4 H312 Acute Tox. 3 H331 Skin Corr. 1A H314 Eye Damage 1 H318
261-596-8	59086-80-5	dichloromethyltetradecylsilane	Skin Corr. 1A H314 Eye Damage 1 H318
423-700-1	1000-50-6	butylchlorodimethylsilane	-

ASSESSMENT OF REGULATORY NEEDS

EC/ List No	CAS No	Substance name	Classification in registrations
227-575-2	5894-60-0	trichloro(hexadecyl)silane	Acute Tox. 4 H302 Skin Corr. 1 H314
242-262-0	18379-25-4	trichloro(2,4,4-trimethylpentyl)silane	Acute Tox. 3 H301 Skin Corr. 1A H314 Eye Damage 1 H318
202-640-8	98-13-5	trichloro(phenyl)silane	Acute Tox. 4 H312 Skin Corr. 1A H314 Eye Damage 1 H318
700-717-5	-	Chloro(methyl)(mono and di)silanes and dichloro(ethyl)methylsilane and hexamethyldisilane from fractionated distillation of the reaction products of silicon and chloromethane	STOT Single Exp. 3 H335, affected organs: Respiratory tract [Article 10 (inactive)] Acute Tox. 3 H331 [Article 10 (inactive)] Eye Damage 1 H318 [Article 10 (inactive)] Acute Tox. 3 H301 [Article 10 (inactive)] Flam. Liquid 2 H225 [Article 10 (inactive)] Skin Corr. 1A H314 [Article 10 (inactive)]
603-492-0	13154-24-0	chloro(triisopropyl)silane	Skin Corr. 1B H314 [intermediate (active)] Eye Damage 1 H318 [intermediate (active)]
204-072-6	115-21-9	trichloro(ethyl)silane	Flam. Liquid 2 H225 Acute Tox. 4 H302 Acute Tox. 3 H331 Skin Corr. 1A H314
240-171-0	16029-98-4	iodotrimethylsilane	Skin Sens. 1 H317 [intermediate (active)] Eye Damage 1 H318 [intermediate (active)] Skin Corr. 1B H314 [intermediate (active)] STOT Single Exp. 3 H335, affected system: respiratory system, affected organs: respiratory tract [intermediate (active)] STOT Single Exp. 3 H335, affected organs: Respiratory

ASSESSMENT OF REGULATORY NEEDS

EC/ List No	CAS No	Substance name	Classification in registrations
			<p style="text-align: center;">system [intermediate (active)] Flam. Liquid 2 H225 [intermediate (active)]</p>
224- 844-6	4518- 98-3	1,1,2,2- tetrachloro-1,2- dimethyldisilane	-

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

Data extracted on 23/02/2022

Main types of applications structured by product or article types	EC/List 200-877-1	EC/List 200-900-5	EC/List 200-901-0	EC/List 200-902-6	EC/List 200-917-8	EC/List 201-251-0	EC/List 202-640-8	EC/List 203-930-7	EC/List 204-072-6	EC/List 204-710-3	EC/List 205-489-6	EC/List 205-746-2	EC/List 211-854-0	EC/List 212-193-0	EC/List 213-600-4	EC/List 213-615-6	EC/List 213-912-0	EC/List 217-007-1	EC/List 220-672-0	EC/List 222-123-0
PC 20: Products such as ph-regulators, flocculants, precipitants, neutralisation agents		I, P	F, I, P																	
PC 37: Water treatment chemicals			F, I																	
PC 12: Fertilisers	F, I, P																			
PC 4: Anti-freeze and de-icing products		F, I																		

ASSESSMENT OF REGULATORY NEEDS

Main types of applications structured by product or article types	EC/List 200-877-1	EC/List 200-900-5	EC/List 200-901-0	EC/List 200-902-6	EC/List 200-917-8	EC/List 201-251-0	EC/List 202-640-8	EC/List 203-930-7	EC/List 204-072-6	EC/List 204-710-3	EC/List 205-489-6	EC/List 205-746-2	EC/List 211-854-0	EC/List 212-193-0	EC/List 213-600-4	EC/List 213-615-6	EC/List 213-912-0	EC/List 217-007-1	EC/List 220-672-0	EC/List 222-123-0
PC 35: Washing and cleaning products	F, I, P		F, I																	
PC 39: Cosmetics, personal care products	F, I, P		F, I	F																
PC 29: Pharmaceuticals			F, I																	
PC 31: Polishes and wax blends	F, I, P		F, I																	
PC 15: Non-metal-surface treatment products	I	F, I, A*	F, I, A*	I																
PC 24: Lubricants, greases, release products	F, I, P		F, I																	
PC 25: Metal working fluids	F, I, P																			

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Main types of applications structured by product or article types	EC/List 200-877-1	EC/List 200-900-5	EC/List 200-901-0	EC/List 200-902-6	EC/List 200-917-8	EC/List 201-251-0	EC/List 202-640-8	EC/List 203-930-7	EC/List 204-072-6	EC/List 204-710-3	EC/List 205-489-6	EC/List 205-746-2	EC/List 211-854-0	EC/List 212-193-0	EC/List 213-600-4	EC/List 213-615-6	EC/List 213-912-0	EC/List 217-007-1	EC/List 220-672-0	EC/List 222-123-0
PC 16: Heat transfer fluids			F, I																	
PC 32: Polymer preparations and compounds	F, I, P	F, I, P, C	F, I, A*			I	I			I		I					I	F, I		
PC 1: Adhesives, sealants		F, I, P, C	F, I, A*																	
PC 9b: Fillers, putties, plasters, modelling clay	P	F, I, P, C																		
PC 9a: Coatings and paints, thinners, paint removes	F, I, P	F, I, P, C	F, I, A*																	
PC 18: Ink and toners	F, I, P		F, I, A*																	
PC 34: Textile dyes, and impregnating products	F, I	I, C	F, I, C, A*																	

ASSESSMENT OF REGULATORY NEEDS

Main types of applications structured by product or article types	EC/List 200-877-1	EC/List 200-900-5	EC/List 200-901-0	EC/List 200-902-6	EC/List 200-917-8	EC/List 201-251-0	EC/List 202-640-8	EC/List 203-930-7	EC/List 204-072-6	EC/List 204-710-3	EC/List 205-489-6	EC/List 205-746-2	EC/List 211-854-0	EC/List 212-193-0	EC/List 213-600-4	EC/List 213-615-6	EC/List 213-912-0	EC/List 217-007-1	EC/List 220-672-0	EC/List 222-123-0
PC 23: Leather treatment products			F, I, A*																	
PC 14: Metal surface treatment products		F, I, A*																		
PC 33: Semiconductors	I	I	I	I													I			
PC 21: Laboratory chemicals		F, I, P	F, I, P	I, P	I	I, P	I	I	I, P	I	I	I	I				I	I		I
PC 19: Intermediate	I	F, I	F, I	F, I	I	I	I	I	I	I	I	I	I	I	I	I	I	F, I	I	I

ASSESSMENT OF REGULATORY NEEDS

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

Main types of applications structured by product or article types	EC/List 225-931-1	EC/List 226-112-1	EC/List 226-956-0	EC/List 227-575-2	EC/List 240-171-0	EC/List 242-042-4	EC/List 242-044-5	EC/List 242-053-4	EC/List 242-262-0	EC/List 242-286-1	EC/List 242-472-2	EC/List 261-596-8	EC/List 273-054-8	EC/List 603-492-0	EC/List 604-112-6	EC/List 678-409-4	EC/List 700-717-5	EC/List 700-790-3	EC/List 935-540-4
PC 20: Products such as ph-regulators, flocculants, precipitants, neutralisation agents																			
PC 37: Water treatment chemicals																			
PC 12: Fertilisers																			
PC 4: Anti-freeze and de-icing products																			
PC 35: Washing and cleaning products						I													

ASSESSMENT OF REGULATORY NEEDS

PC 39: Cosmetics, personal care products																			
PC 29: Pharmaceuticals																			
PC 31: Polishes and wax blends																			
PC 15: Non- metal-surface treatment products		I, A*								F, I									
PC 24: Lubricants, greases, release products																			
PC 25: Metal working fluids																			
PC 16: Heat transfer fluids																			
PC 32: Polymer preparations and compounds		I, A							I	F, A	I								

ASSESSMENT OF REGULATORY NEEDS

PC 1: Adhesives, sealants		I, A				I	F, I			F, A							
PC 9b: Fillers, putties, plasters, modelling clay										I							
PC 9a: Coatings and paints, thinners, paint removes						I	F, I			I							
PC 18: Ink and toners		A								A							
PC 34: Textile dyes, and impregnating products																	
PC 23: Leather treatment products																	
PC 14: Metal surface treatment products		I, A*															
PC 33: Semiconductors						I	F, I										

ASSESSMENT OF REGULATORY NEEDS

PC 21: Laboratory chemicals		I	I	I		I	I	I	I	I	I	I				I			I	
PC 19: Intermediate	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I			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; A*: article service not reported in the dossier, but likely due to combination of the use and technical function

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

Data extracted on 25 March 2022

EC/List number	RMOA	Authorisation		Restriction*	CLH	Actions not under REACH/ CLP
		Candidate list	Annex XIV	Annex XVII	Annex VI (CLP)	
200-901-0	PBT assessment					

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

