Assessment of regulatory needs

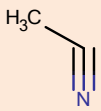
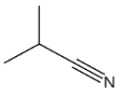
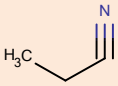
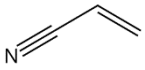
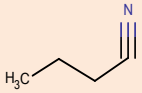
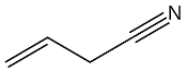
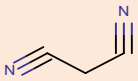
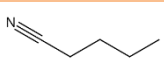
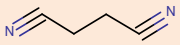
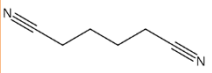
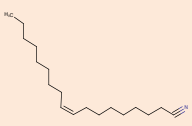
Authority: European Chemicals Agency (ECHA)

Group Name: Aliphatic nitriles

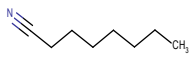
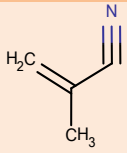
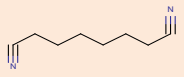
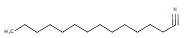
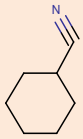
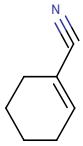
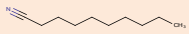
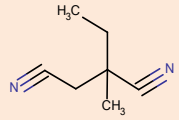
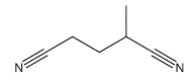
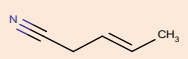
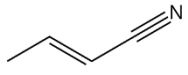
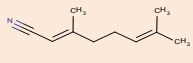
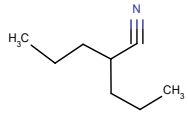
Revision history

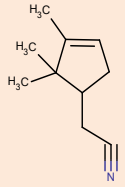
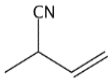
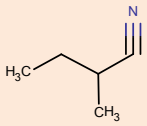
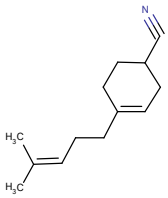
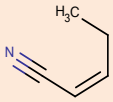
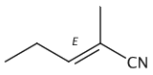
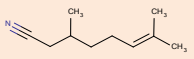
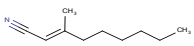
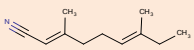
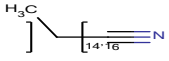
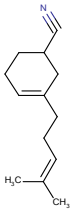
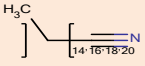
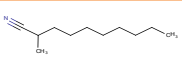
Version	*Date*	*Description*
1	23/02/2022	

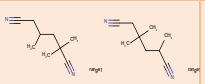
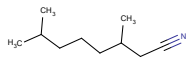
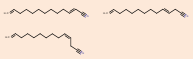
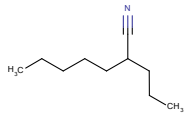
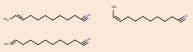
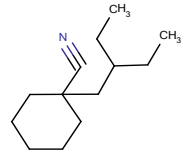
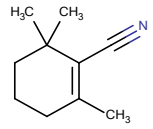
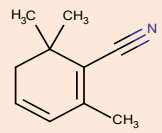
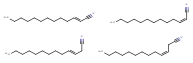
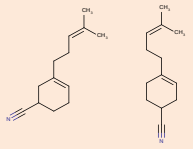
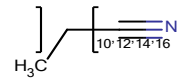
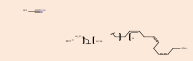
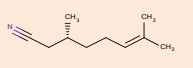
Substances within this group:

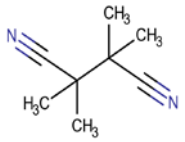
EC / List number	CAS number	Substance name	Chemical structures	Registration type (full, OSII or TII, NONS), highest tonnage band among all the registrations (t/y) [1]
200-835-2	75-05-8	Acetonitrile		Full, >1000
201-147-5	78-82-0	Isobutyronitrile		Not (publicly) available
203-464-4	107-12-0	Propiononitrile		Not (publicly) available
203-466-5	107-13-1	Acrylonitrile		Full, >1000
203-700-6	109-74-0	Butyronitrile		Not (publicly) available
203-701-1	109-75-1	But-3-enenitrile		Not (publicly) available
203-703-2	109-77-3	Malononitrile		Not (publicly) available
203-781-8	110-59-8	Valeronitrile		Not (publicly) available
203-783-9	110-61-2	Succinonitrile		Not (publicly) available
203-896-3	111-69-3	Adiponitrile		Not (publicly) available
204-016-0	112-91-4	Oleonitrile		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

204-682-2	124-12-9	Octanenitrile		Not (publicly) available
204-817-5	126-98-7	Methacrylonitrile		Not (publicly) available
207-306-5	460-19-5	Oxalonitrile		Not (publicly) available
211-089-2	629-40-3	Suberonitrile		Not (publicly) available
211-099-7	629-63-0	Myristonitrile		Not registered
212-157-4	766-05-2	Cyclohexanecarbonitrile		Not (publicly) available
217-454-2	1855-63-6	Cyclohexenecarbonitrile		Not registered
217-830-6	1975-78-6	Decanenitrile		Not (publicly) available
218-808-9	2243-27-8	N-octanenitrile		Not (publicly) available
218-826-7	2244-07-7	Undecanonitrile		Not registered
219-440-1	2437-25-4	Dodecanenitrile		Not (publicly) available
224-035-8	4172-97-8	2-ethyl-2-methylsuccinonitrile		Not (publicly) available
224-923-5	4553-62-2	2-methylglutaronitrile		Not (publicly) available
225-060-7	4635-87-4	Pent-3-enenitrile		Not (publicly) available
225-335-1	4786-20-3	Crotononitrile		Not (publicly) available
225-918-0	5146-66-7	3,7-dimethylocta-2,6-dienenitrile		Not (publicly) available
236-338-2	13310-75-3	2-propylvaleronitrile		Not (publicly) available

239-405-4	15373-31-6	2,2,3-trimethylcyclopent-3-enylacetonitrile		Not (publicly) available
240-596-1	16529-56-9	2-methyl-3-butenenitrile		Not (publicly) available
242-687-1	18936-17-9	2-methylbutyronitrile		Not (publicly) available
244-530-2	21690-43-7	4-(4-methyl-3-pentenyl)cyclohex-3-ene-1-carbonitrile		Not registered
247-323-5	25899-50-7	(Z)-pent-2-enenitrile		Not (publicly) available
250-694-6	31551-28-7	(E)-2-methylpent-2-enenitrile		Not (publicly) available
257-288-8	51566-62-2	3,7-dimethyloct-6-enenitrile		Not (publicly) available
258-398-9	53153-66-5	3-methylnon-2-enenitrile		Not registered
263-066-1	61789-53-5	Nitriles, coco	-	Not (publicly) available
263-120-4	61790-28-1	Nitriles, tallow	-	Not (publicly) available
263-214-5	61792-11-8	3,7-dimethylnona-2,6-dienenitrile		Not (publicly) available
268-079-6	68002-65-3	Nitriles, C16-18		Not (publicly) available
268-080-1	68002-66-4	Nitriles, C14-18	-	Not registered
268-417-2	68084-04-8	3-(4-methyl-3-pentenyl)cyclohex-3-ene-1-carbonitrile		Not registered
268-861-7	68153-02-6	Nitriles, C16-22		Not (publicly) available
273-960-3	69300-15-8	2-methyldecanenitrile		Not (publicly) available

283-810-9	84713-17-7	2,2,4(or 2,4,4)-trimethylhexanedinitrile		Not (publicly) available
403-620-3	40188-41-8	3,7-dimethyloctanenitrile		Not (publicly) available
422-190-8	124071-40-5	A mixture of: (E)-2,12-tridecadiennitrile; (E)-3,12-tridecadiennitrile; (Z)-3,12-tridecadiennitrile		Not (publicly) available
428-160-0	Not (publicly) available	JASMONITRILE		Not (publicly) available
443-360-8	Not (publicly) available	FLORIDILE		Not (publicly) available
619-573-9	855425-38-6	1-(2-Ethylbutyl)cyclohexanecarbonitrile		Not (publicly) available
609-792-8	40188-41-8	3,7-Dimethyloctanenitrile	-	Not registered
921-141-2	Not (publicly) available	2,6,6-trimethylcyclohex-1-enecarbonitrile		Not (publicly) available
917-351-9	Not (publicly) available	2,6,6-trimethylcyclohexa-1,3-dienecarbonitrile		Not (publicly) available
919-489-5	Not (publicly) available	Reaction mass of (2E)-Tridec-2-enenitrile and (2Z)-Tridec-2-enenitrile and (3E)-Tridec-3-enenitrile and (3Z)-Tridec-3-enenitrile		Not (publicly) available
915-371-2	Not (publicly) available	Reaction mass of 4-(4-methyl-3-pentenyl)cyclohex-3-ene-1-carbonitrile and 68084-04-8		Not (publicly) available
628-856-6	1218787-29-1	C12-18 evennumbered alkyl nitrile		Not (publicly) available
629-695-4	164383-22-6	C16-18 evennumbered, C18 unsaturated alkyl nitrile		Not (publicly) available
629-723-5	1190409-68-7	Nitriles, C12-14		Not (publicly) available
695-909-8	35931-93-2	(3R)-3,7-dimethyloct-6-enenitrile		Not (publicly) available
951-345-7	Not (publicly) available	Reaction mass of 3-(4-methyl-3-pentenyl)cyclohex-3-ene-1-carbonitrile and 4-(4-methyl-3-pentenyl)cyclohex-3-ene-1-carbonitrile and Dipentene	-	OSII or TII

211-345-3	638-65-3	Stearonitrile		Not (publicly) available
608-859-9	3333-52-6	Tetramethylsuccinonitrile		Not registered

This table contains also group members that are not registered (yet) but have a C&L notification under the CLP Regulation. However, the list is currently non-exhaustive. Once further regulatory risk management action on one or more registered substances is being considered, ECHA will make an extensive search for related C&L notified substances to be included in the group and develop a regulatory strategy for them.

Contents

DISCLAIMER

Foreword

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

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

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

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

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

For more information on Assessment of regulatory needs please consult ECHA website[2].

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

Glossary

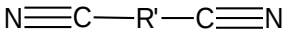
ARN	Assessment of Regulatory Needs
CCH	Compliance Check
CLH	Harmonised classification and labelling
CMR	Carcinogenic, mutagenic and/or toxic to reproduction
DEv	Dossier evaluation
ED	Endocrine disruptor
NONS	Notified new substances
OEL	Occupational exposure limit
OSII or TII	On-site isolated intermediate 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 structurally similar substances based on the presence of the nitrile moiety attached to the aliphatic alkyl chain as shown in the figures below.

Nitriles:

where R= Linear and branched saturated and unsaturated or cyclic alkyl chains (C1 to C18)

Dinitriles: 

Where R'= Linear or branched alkyl chains (C0 to C6).

Based on information reported in the REACH registration dossiers, the substances in the group are mainly used as intermediates or fragrances in several types of applications. About half the substances only have intermediate registrations, and the remaining substances that are registered indicate mainly intermediate and fragrance uses. There are additional uses for 4 substances (EC 200-835-2, 203-466-5, 257-288-8, 203-700-6) as e.g. monomer, cleaning agent, solvent etc. Besides intermediates (e.g. in pharmaceuticals), the substances of the group are used in washing and cleaning, biocides, perfumes, air care products, cosmetics, polishes and wax blends, ink and toners, lab chemicals, polymer preparations and compounds, and textile dyes with industrial, professional, consumer and article uses. The substances with intermediate registrations or uses have low potential for exposure, while the substances with fragrance and other uses have some professional, consumer and article uses for which potential for exposure cannot be excluded.

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 need for (further) EU regulatory risk management – Occupational exposure limit (OEL) for carcinogenicity, mutagenicity, skin sensitisation and STOT RE hazards due to the potential for release/exposure of the substance EC 203-466-5 (acrylonitrile).

Acrylonitrile has harmonised classification as Carc. 1B and can be considered a genotoxic carcinogen[3]. Acrylonitrile is acutely toxic and causes neurotoxicity, local irritation of skin, eyes and respiratory tract, and skin sensitisation. Part of this toxicity is due to the metabolism of acrylonitrile to cyanide.[3] It may also cause systemic toxicity via repeated exposure (STOT RE).

Considering environmental hazards, acrylonitrile is unlikely PBT or vPvB because it does not screen for persistence. While likely toxic to aquatic environment based on self-classification and with its harmonised classification as Carc 1B sufficient measures to protect the environment should be in place.

Acrylonitrile has industrial, professional and article uses. Upon request by the European Commission, RAC has provided an opinion on an OEL for acrylonitrile in 2018, and it is now with the Commission to adopt. This OEL should be sufficient for most of the uses, which are industrial and professional laboratory uses. It should be noted that while the main route of occupational exposure to acrylonitrile according to RAC is by inhalation of the vapour, dermal exposure might also be relevant, as acrylonitrile can readily penetrate the skin and induce known serious acute toxicity. The substance has CLH for Skin sensitisation which puts it under a restriction[4] of using skin sensitising substances in textiles even when it does not appear on the master list of skin sensitiser substances in the restriction background document. Nevertheless, the registrations indicate professional uses in polymers and as process chemicals, which may need to be reviewed in the future for possible restrictions.

Furthermore, acrylonitrile is present, as an impurity, in ten registrations and above the 0.1% classification limit in two registrations for the substance EC 200-835-2 (acetonitrile). In one of these two registrations professional uses are indicated (as laboratory reagents and photochemicals), which means potential worker exposure. Professional users should prefer to buy EC 200-835-2 from the many suppliers who don't have the impurity, as the accompanying SDS, indicating the OEL of the impurity, imposes certain responsibilities on the employer. CCH is proposed to address the incorrect classification for this impurity in EC 200-835-2 registrations, and the OEL proposed for EC 203-466-5 should minimise exposure in the workplace, including where it is present as an impurity.

Based on currently available information, there is no need for (further) EU regulatory risk management for the rest of the substances in the group.

Some of the substances have known (e.g. EC 225-918-0 with harmonised classification as Muta. 1B) or potential hazards (e.g. carcinogenicity, reproductive toxicity, genotoxicity, and skin sensitisation based on available information on the substance or based on the structure) while for others based on ECHA's assessment

[3] RAC opinion on OEL

[4] Restriction on skin sensitisers in textiles

of currently available hazard information, no likely hazards were identified for human health. These conclusions are based on the available experimental studies including repeated dose toxicity studies, *in vitro* or *in vivo* mutagenicity studies and *in vivo* or *in vitro/in silico* skin sensitisation studies as well as on low hazard potential based on mechanistic and structural characteristics of the substances. The substances in this group are unlikely to fulfil the PBT criteria because they are readily or inherently biodegradable, and/or have low potential for bioaccumulation. These conclusions are based on ready biodegradability test results and log Kow values. As most of the substances in the group, especially the ones with known or potential hazards, have intermediate registrations or uses, with some only having C&L notifications, while most others have no/unlikely human health, ED or PBT/vPvB hazards, no regulatory risk management actions are being currently planned for the rest of the group members. For some substances CCHs are opened to clarify the potential hazard (e.g. for reproduction toxicity for EC 203-783-9 and EC 207-306-5) or confirm no hazard (e.g. EC 207-306-5, EC 203-783-9, EC 219-440-1, EC 695-909-8).

There are substances in the group (EC 203-464-4, EC 203-700-6, EC 207-306-5, EC 219-440-1, EC 273-960-3, EC 257-288-8, EC 263-214-5, EC 204-817-5, EC 919-489-5) with potential aquatic toxicity hazards which, in some cases are incorrectly classified or there is data missing. Compliance checks are proposed for all of these aforementioned substances to clarify the potential hazard. All group members are assessed to have known or likely aquatic toxicity hazards.

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. Therefore, it is proposed that there is currently no need for EU-wide regulatory risk management based on potential aquatic toxicity.

Substances with potential skin sensitisation have mostly intermediate registrations or they are not registered. Main uses are industrial and professional uses for which sufficient and consistent self-classification by registrants should trigger adequate risk management measures according to workplace legislation. Adequate product labelling should in principle provide consumers with sufficient information to manage risks arising from the use of mixtures containing substances 219-440-1, 919-489-5 and 403-620-3.

However, there is a concern related to skin sensitisers (potentially) present in consumer mixtures and the need to further investigate whether further regulatory actions are needed and what would be the best options to address this concern. Such concern has already been identified in other groups of substances and was brought for further discussion to Member States. Work is ongoing on this generic issue by both Member States and ECHA which may affect the regulatory actions on substances in this group.

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
203-466-5	Known or potential hazard for carcinogenicity for skin sensitisation For mutagenicity For STOT RE	Known or potential hazard for aquatic toxicity	Industrial and professional uses in process chemicals, polymers, textiles, lab chemicals. Use in articles (polymers, textiles). Potential exposure from process chemicals and polymers cannot be excluded.	Need for EU RRM: OEL. RMOA (2014) proposed OEL (which ECHA agrees with) and there is already a CLH. Justification: OEL is on the way, RAC gave an opinion on it in 2018. OEL will take care of IND uses and PROF laboratory uses. CLH for skin sensitisation takes care of uses in textiles as the substance belongs under restriction of skin sensitisers in textiles. Nevertheless,	Waiting for the Commission decision on **OEL**

				professional uses in process chemicals and polymers should be looked at later for possible restriction.	
200-835-2	Known or potential hazard for STOT RE, Carc 1B for two registrations based on the presence of an impurity (>0.1% EC 203-466-5)	Known or potential hazard for aquatic toxicity	Intermediate uses Industrial uses in washing products, pharmaceuticals. Professional uses in process chemicals, inks and toners, laboratory chemicals, photochemicals. Consumer uses in batteries, ink and toners (articles), and photochemicals. Potential exposure from professional uses in process chemicals, ink and toners and photochemicals as well as article uses in ink and toners, photochemicals uses cannot be excluded.	Currently no need for EU RRM Justification: Generally low hazard, for aquatox correct self-classification is sufficient. For intermediate and IND uses low exposure. One registrant with >0.1% Carc 1B impurity from EC 203-466-5 has professional uses of the but there is an upcoming OEL on the impurity which should take care of this. CCH to request correct self-classification.	**CCH**
203-464-4 **203-700-6** **219-440-1** **273-960-3**	Known or potential hazard for STOT RE, Known or potential hazard	Known or potential hazard for aquatic toxicity	Intermediate uses. Industrial uses in pharmaceuticals (EC 203-464-4). Professional laboratory uses (EC 203-700-6).	Currently no need for EU RRM Justification: Mainly low exposure uses, low hazard	**CCH**

	for skin sensitisation for EC 219-440-1 No or unlikely hazard for EC 273-960-3		Industrial, professional and consumer uses as fragrances (EC 219-440-1). Industrial, professional and consumer uses in washing products, biocidals, cosmetics, polishes, metal surface treatment, perfumes, air care (EC 273-960-3)	potential, for aquatox correct self-classification is sufficient. For EC 219-440-1 if confirmed as Skin sens correct self-classification is sufficient.	
263-214-5 **257-288-8** **695-909-8**	Known or potential hazard for skin sensitisation	Known or potential hazard for aquatic toxicity	Industrial, professional and consumer uses washing products, biocidal, perfumes, cosmetics, air care products, polishes, metal surface treatment	Currently no need for EU RRM Justification: Low hazard potential. Correct self-classification followed by implementation of necessary RRMs should be sufficient to ensure safe use for environment	**CCH**
204-817-5	Known or potential hazard for skin sensitisationFor STOT RE	Known or potential hazard for aquatic toxicity	Industrial intermediate uses in polymers and coatings	Currently no need for EU RRM Justification: Substance has harmonised classification and only industrial intermediate uses. Correct self-classification followed	**CCH**

				by implementation of necessary RRMs should be sufficient to ensure safe use for environment	
919-489-5 **443-360-8**	Known or potential hazard for skin sensitisation	Known or potential hazard for aquatic toxicity	Industrial, professional and consumer uses in washing products, biocidals, air care products, cosmetics, polishes EC 443-360-8 is C&L notification	Currently no need for EU RRM Justification: Self-classified for skin sens for EC 919-489-5 and 443-360-8 is C&L notification.	**CCH**
207-306-5 **203-783-9**	Known or potential hazard for STOT RE For repro	Known or potential hazard for aquatic toxicity	Full reg – total quantity exported	Currently no need for EU RRM Justification Only industrial manufacture, no uses in the EU	**CCH**
218-808-9 **204-682-2** **217-830-6** **218-826-7** **211-099-7** **236-338-2** **428-160-0** **619-573-9** **609-792-8** **268-861-7** **268-079-6** **629-723-5**	No or unlikely hazard Known or potential hazard for STOT RE for EC 203-781-8, 212-157-4, 201-147-5 and 242-687-1, 203-703-2, 283-810-9 Known or potential hazard	Known or potential hazard for for aquatic toxicity	Intermediate registrations, pre-registered (and C&L notifications) For EC 403-620-3: Industrial, professional and consumer uses as a fragrance in washing products, biocidals, perfumes, air care, cosmetics etc and in articles (polymers, papers)	Currently no need for EU RRM Justification: Low/No exposure for all substances except EC 403-620-3, which is already CLH skin sens Correct self-classification for EC	**No action**

628-856-6 **268-080-1** **263-120-4** **263-066-1** **211-345-3** **915-371-2** **239-405-4** **204-016-0** **951-345-7**	for skin sensitisation for EC 403-620-3, 247-323-5**,** 225-335-1, 250-694-6, 258-398-9, 225-918-0, 917-351-9, 921-141-2**,** 217-454-2, 203-703-2		For EC 915-371-2 and EC 239-405-4 Industrial, professional and consumer uses in washing products, biocidals, air care products, cosmetics, polishes	422-190-8 followed by implementation of necessary RRMs should be sufficient to ensure safe use for environment.	
268-417-2 **244-530-2** **422-190-8**	Known or potential hazard for carcinogenicity		For 422-190-8 Industrial, professional and consumer uses in washing products, biocidals, air care products, cosmetics, polishes		
629-695-4	For mutagenicity				
	For repro				
203-781-8	For STOT RE				
212-157-4 **201-147-5** **242-687-1**	For 203-701-1, 225-060-7, 240-596-1, 247-323-5, 225-335-1, 250-694-6,				
403-620-3 **247-323-5** **225-335-1**	Known or potential hazard				
225-918-0	For mutagenicity for 225-918-0				
250-694-6 **258-398-9** **917-351-9** **921-141-2**	Known or potential hazard for STOT RE				
217-454-2	For repro				
203-703-2 **283-810-9**	For 203-703-2, 283-810-9, 203-896-3, 211-089-2, 224-035-8, 224-923-5, 608-859-9				

Annex 1: Harmonised classifications and self-classifications reported by registrants (reporting performed in November 2021)

EC/ List No	CAS No	Substance name	Harmonised classification	Classification in registrations[5]
200-835-2	75-05-8	Acetonitrile	Flam. Liq. 2 H225 Acute Tox. 4 * H302 Acute Tox. 4 * H312 Acute Tox. 4 * H332 Eye Irrit. 2 H319	Carc. 1B H350 Flam. Liquid 2 H225 Acute Tox. 3 H301 Acute Tox. 4 H302 Acute Tox. 4 H312 Acute Tox. 3 H311 Acute Tox. 3 H331 Acute Tox. 4 H332 Skin Corr. 1B H314 Eye Irrit. 2 H320 Eye Irrit. 2 H319 Skin Sens. 1A H317 Aquatic Chronic 2 H411
201-147-5	78-82-0	Isobutyronitrile		Flam. Liquid 2 H225 Acute Tox. 3 H331 Acute Tox. 3 H301
203-464-4	107-12-0	Propiononitrile		Flam. Liquid 2 H225 Acute Tox. 2 H300 Acute Tox. 2 H310 Acute Tox. 4 H332 Eye Irrit. 2 H319 Acute Tox. 1 H310 Acute Tox. 3 H331 Aquatic Acute 3 H402 Acute Tox. 3 H301 STOT Rep. Exp. 2 H373, affected organs: Blood System
203-466-5	107-13-1	Acrylonitrile	Flam. Liq. 2 H225 Carc. 1B H350	Carc. 1B H350 Flam. Liquid 2 H225 Acute Tox. 3 H301

[5] Classifications in C&L notifications can be found on the ECHA website at: https://echa.europa.eu/information-on-chemicals/cl-inventory-database

			Acute Tox. 3 * H301 Acute Tox. 3 * H311 Acute Tox. 3 * H331 STOT SE 3 H335 Skin Irrit. 2 H315 Eye Dam. 1 H318 Skin Sens. 1 H317 Aquatic Chronic 2 H411	Acute Tox. 3 H311 Acute Tox. 3 H331 Skin Irrit. 2 H315 Eye Damage 1 H318 Skin Sens. 1B H317 STOT Single Exp. 3 H335 Aquatic Chronic 2 H411
203-700-6	109-74-0	Butyronitrile	Flam. Liq. 2 H225 Acute Tox. 3 * H301 Acute Tox. 3 * H311 Acute Tox. 3 * H331	Flam. Liquid 2 H225 Acute Tox. 3 H301 Acute Tox. 3 H311 Acute Tox. 3 H331
203-701-1	109-75-1	But-3-enenitrile		Acute Tox. 2 H330 Acute Tox. 3 H301 STOT Rep. Exp. 2 H373, affected organs: Central nervous system (hearing loss, behavioural changes) Eye Damage 1 H318 Repr. 1B H360, specific effect:Developmental toxicity Acute Tox. 4 H312 STOT Rep. Exp. 2 H373, affected organs: Central nervous system (Hearing loss, behavioural changes) Flam. Liquid 3 H226 Acute Tox. 3 H311
203-703-2	109-77-3	Malononitrile	Acute Tox. 3 * H331 Acute Tox. 3 * H301 Acute Tox. 3 * H311 Aquatic Acute 1 Aquatic Chronic 1	Acute Tox. 3 H331 Acute Tox. 2 H300 Aquatic Chronic 1 H410 Acute Tox. 3 H301 Skin Irrit. 2 H315 STOT Single Exp. 1 H370, affected organs: central nervous system, cardiovascular system Aquatic Acute 1 H400 STOT Single Exp. 3 H335, affected organs: respiratory tract Skin Sens. 1 H317 Eye Irrit. 2 H319 [intermediate (active)] Acute Tox. 3 H311
203-781-8	110-59-8	Valeronitrile		Acute Tox. 4 H302

				Flam. Liquid 3 H226
203-783-9	110-61-2	Succinonitrile		Repr. 2 H361, specific effect:Suspected of damaging the unborn child. Acute Tox. 4 H302 Aquatic Chronic 3 H412
203-896-3	111-69-3	Adiponitrile		Acute Tox. 3 H301 Acute Tox. 4 H332
204-016-0	112-91-4	Oleonitrile		Skin Irrit. 2 H315 Aquatic Acute 1 H400, M-factor: 10.00 Aquatic Chronic 1 H410
204-682-2	124-12-9	Octanenitrile		Aquatic Acute 1 H400 Skin Irrit. 2 H315
204-817-5	126-98-7	Methacrylonitrile	Flam. Liq. 2 H225 Acute Tox. 3 * H301 Acute Tox. 3 * H311 Acute Tox. 3 * H331 Skin Sens. 1 H317: C ≥ 0.2%	Flam. Liquid 2 H225 Acute Tox. 3 H301 Acute Tox. 3 H311 Acute Tox. 2 H330 Skin Sens. 1 H317, specific concentration: >=.2 STOT Single Exp. 1 H370, affected organs: Central nervous system Acute Tox. 3 H331 Skin Sens. 1 H317
207-306-5	460-19-5	Oxalonitrile	Flam. Gas 1 H220 Press. Gas Acute Tox. 3 * H331 Aquatic Acute 1 H400 Aquatic Chronic 1 H410	Flam. Gas 1A H220 Liquefied gas H280 Acute Tox. 2 H330 Eye Irrit. 2 H319 Aquatic Acute 1 H400 STOT Single Exp. 3 H335, affected organs: respiratory organs Aquatic Chronic 1 H410
211-089-2	629-40-3	Suberonitrile		Acute Tox. 3 H301
211-099-7	629-63-0	Myristonitrile		
212-157-4	766-05-2	Cyclohexanecarbonitrile		Acute Tox. 3 H301 Acute Tox. 3 H311
217-454-2	1855-63-6	Cyclohexenecarbonitrile		
217-830-6	1975-78-6	Decanenitrile		Skin Irrit. 2 H315 Aquatic Acute 1 H400 Aquatic Chronic 1 H410
218-808-9	2243-27-8	N-octanenitrile		
218-826-7	2244-07-7	Undecanonitrile		
219-440-1	2437-25-4	Dodecanenitrile		Skin Irrit. 2 H315 Aquatic Acute 1 H400

				Aquatic Chronic 2 H411 Aquatic Chronic 1 H410 Aquatic Acute 1 H400, M-factor: 10.00
224-035-8	4172-97-8	2-ethyl-2-methylsuccinonitrile		
224-923-5	4553-62-2	2-methylglutaronitrile		Acute Tox. 3 H301 Acute Tox. 2 H330 Acute Tox. 3 H311
225-060-7	4635-87-4	Pent-3-enenitrile		Flam. Liquid 3 H226 Acute Tox. 3 H311 Acute Tox. 2 H330 Acute Tox. 2 H300
225-335-1	4786-20-3	Crotononitrile		Acute Tox. 4 H302 Acute Tox. 4 H332 Flam. Liquid 2 H225
225-918-0	5146-66-7	3,7-dimethylocta-2,6-dienenitrile	Muta. 1B H340	Muta. 1B H340 [intermediate (active);Article 10 (inactive)] Aquatic Chronic 2 H411 [intermediate (active);Article 10 (inactive)]
236-338-2	13310-75-3	2-propylvaleronitrile		Flam. Liquid 3 H226 Acute Tox. 4 H302
239-405-4	15373-31-6	2,2,3-trimethylcyclopent-3-enylacetonitrile		Skin Irrit. 2 H315 Aquatic Chronic 3 H412
240-596-1	16529-56-9	2-methyl-3-butenenitrile		Acute Tox. 3 H301 Acute Tox. 3 H311 Carc. 1A H350 Muta. 1B H340 Flam. Liquid 3 H226 Acute Tox. 3 H331
242-687-1	18936-17-9	2-methylbutyronitrile		Flam. Liquid 3 H226 Acute Tox. 3 H331 Acute Tox. 2 H300 Aquatic Chronic 3 H412 Acute Tox. 3 H311 Acute Tox. 2 H310 Skin Irrit. 2 H315 Asp. Tox. 1 H304 Acute Tox. 2 H330 Eye Irrit. 2 H319

244-530-2	21690-43-7	4-(4-methyl-3-pentenyl)cyclohex-3-ene-1-carbonitrile		
247-323-5	25899-50-7	(Z)-pent-2-enenitrile		Acute Tox. 3 H311 Flam. Liquid 3 H226 Acute Tox. 3 H301 STOT Rep. Exp. 1 H372, affected organs: nose, nervous system Skin Sens. 1 H317 STOT Rep. Exp. 1 H372, affected organs: nose Acute Tox. 3 H331
250-694-6	31551-28-7	(E)-2-methylpent-2-enenitrile		Flam. Liquid 3 H226
257-288-8	51566-62-2	3,7-dimethyloct-6-enenitrile		
258-398-9	53153-66-5	3-methylnon-2-enenitrile		
263-066-1	61789-53-5	Nitriles, coco		
263-120-4	61790-28-1	Nitriles, tallow		
263-214-5	61792-11-8	3,7-dimethylnona-2,6-dienenitrile		Aquatic Chronic 2 H411
268-079-6	68002-65-3	Nitriles, C16-18		Aquatic Chronic 1 H410 Aquatic Acute 1 H400, M-factor: 10.00 Skin Irrit. 2 H315
268-080-1	68002-66-4	Nitriles, C14-18		
268-417-2	68084-04-8	3-(4-methyl-3-pentenyl)cyclohex-3-ene-1-carbonitrile		
268-861-7	68153-02-6	Nitriles, C16-22		Aquatic Acute 1 H400, M-factor: 10.00 Skin Irrit. 2 H315 Aquatic Chronic 1 H410
273-960-3	69300-15-8	2-methyldecanenitrile		Aquatic Chronic 2 H411
283-810-9	84713-17-7	2,2,4(or 2,4,4)-trimethylhexanedinitrile		STOT Rep. Exp. 2 H373, affected organs: haematopoetic system Aquatic Chronic 3 H412 Acute Tox. 3 H301
403-620-3	40188-41-8	3,7-dimethyloctanenitrile	Skin Irrit. 2 H315 Skin Sens. 1 H317 Aquatic Chronic 2 H411	Skin Irrit. 2 H315 Eye Irrit. 2 H319 Skin Sens. 1 H317 Aquatic Acute 2 H401

				Aquatic Chronic 2 H411
422-190-8	124071-40-5	A mixture of: (E)-2,12-tridecadiennitrile; (E)-3,12-tridecadiennitrile; (Z)-3,12-tridecadiennitrile	Aquatic Acute 1 Aquatic Chronic 1	Aquatic Acute 1 H400, M-factor: 10.00 Aquatic Acute 1 H400 Aquatic Chronic 2 H411 Aquatic Chronic 1 H410
428-160-0	N/A	Jasmonitrile		
443-360-8	N/A	Floridile		
619-573-9	855425-38-6	1-(2-Ethylbutyl)cyclohexanecarbonitrile		Skin Irrit. 2 H315 Aquatic Chronic 4 H413
609-792-8	40188-41-8	3,7-Dimethyloctanenitrile		
921-141-2	N/A	2,6,6-trimethylcyclohex-1-enecarbonitrile		
917-351-9	N/A	2,6,6-trimethylcyclohexa-1,3-dienecarbonitrile		Eye Irrit. 2 H319 Skin Sens. 1 H317 Skin Irrit. 2 H315
919-489-5	N/A	Reaction mass of (2E)-Tridec-2-enenitrile and (2Z)-Tridec-2-enenitrile and (3E)-Tridec-3-enenitrile and (3Z)-Tridec-3-enenitrile		Skin Sens. 1B H317 Aquatic Acute 1 H400, M-factor: 10.00 Aquatic Chronic 1 H410
915-371-2	N/A	Reaction mass of 4-(4-methyl-3-pentenyl)cyclohex-3-ene-1-carbonitrile and 68084-04-8		Aquatic Chronic 2 H411
628-856-6	1218787-29-1	C12-18 evennumbered alkyl nitrile		Aquatic Acute 1 H400, M-factor: 10.00 Skin Irrit. 2 H315 Aquatic Chronic 1 H410
629-695-4	164383-22-6	C16-18 evennumbered, C18 unsaturated alkyl nitrile		Aquatic Chronic 1 H410 Aquatic Acute 1 H400, M-factor: 10.00 Skin Irrit. 2 H315
629-723-5	1190409-68-7	Nitriles, C12-14		Aquatic Chronic 1 H410, M-factor: 10.00 Skin Irrit. 2 H315
695-909-8	35931-93-2	(3R)-3,7-dimethyloct-6-enenitrile		
951-345-7	N/A	Reaction mass of 3-(4-methyl-3-pentenyl)cyclohex-3-ene-1-		

		carbonitrile and 4-(4-methyl-3-pentenyl)cyclohex-3-ene-1-carbonitrile and Dipentene		
211-345-3	638-65-3	Stearonitrile		
608-859-9	3333-52-6	Tetramethylsuccinonitrile		

Annex 2: Overview of uses based on information available in registration dossiers (30/09/2021)

Main types of applications structured by product or article types																		
EC / List number	PC 20: Products such as pH-	PC 35: Washing and cleaning products	PC 8: Biocidal products (e.g. disinfectants, pest control)	PC 28: Perfumes, fragrances	PC 3: Air care products	PC 39: Cosmetics, personal care products	PC 29: Pharmaceuticals	PC 31: Polishes and wax blends	PC 32: Polymer preparations and compounds	PC 9a: Coatings and paints,	PC 18: Ink and toners	PC 26: Paper and board treatment	PC 34: Textile dyes, and impregnating product	PC 14: Metal surface treatment	PC 21: Laboratory chemicals	PC 19: Intermediate	PC 40: Extraction agents	PC42: Electrolytes for batteries	PC 30: Photo-chemicals
200-835-2	F, I, P	F, I					I				I, P, A				F, I, P	F, I, P	F, I, P	I, C	I, P, A
203-464-4							I									I			
203-700-6															P	I			
203-781-8																I			
218-808-9																			
204-682-2																I			
217-830-6																I			
219-440-1		I, P	F, C	F, C	F, C	F, C		F, P, C								I			
218-826-7																			
211-099-7																			
201-147-5																I			
242-687-1																I			
403-620-3		I,P, C	F,C	F,C	F,C	F,C		P, C	A			A							
609-792-8																			
273-960-3		F, I,P, C	F,I, P,C	F,C	F,C	F,P, C		F, P, C						I					
236-338-2						I										I			
428-160-0																			
212-157-4																I			
619-573-9																I			
268-861-7																I			
268-079-6																I			
629-723-5																I			
628-856-6																I			
211-345-3																I			
268-080-1																			

263-120-4																		
263-066-1																		
247-323-5																		
203-701-1																		
225-335-1							I								I	I		
225-060-7																		
204-016-0																I		
263-214-5		F,I, P,C	F,I, P,C	F,C	F,C	P,C		F, P, C						I				
250-694-6																I		
225-918-0		I,P, C	C	C	C	C		P, C										
257-288-8		I,P, C	F,I, P,C	F,I, P,C	F,I, P,C	F,I, P,C		F, P, C				F,I,P				I		
695-909-8		I,P, C	F,C	F,C	F,C	F,C		P, C										
240-596-1																		
258-398-9																		
203-466-5	I, P								I,P ,A			F,I,P, C*,A		I, P	I, P			
204-817-5									I	I					I			
915-371-2		I,P, C	F,C	F	F,C	F,C		P, C										
951-345-7				I											I			
217-454-2																		
239-405-4		I,P, C	F,C	F,P, C	F,C	F,P, C		P, C										
268-417-2																		
244-530-2																		
917-351-9																		
921-141-2																		
629-695-4															I			
422-190-8		I,P, C	F,C	F,C	F,C	F,C		P, C										
919-489-5		I,P, C	F,C	F,C	F,C	F,C		P, C										
443-360-8																		
207-306-5																		
203-783-9																		
203-896-3															I	I		
203-703-2															I			
211-089-2																		
224-035-8																		
224-923-5																		
283-810-9															I			
608-859-9																		

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
*ECHA considers that this consumer use is wrongly reported, and the substance is actually incorporated into articles used by consumers.

Annex 3: Overview of completed or ongoing regulatory risk management activities [30/09/2021]

EC/List number	RMOA	Authorisation		Restriction	CLH	Actions not under REACH/ CLP
		Candidate list	Annex XIV	Annex XVII	Annex VI (CLP)	
203-466-5	YES					OEL
207-306-5						Active Substance Approval
225-918-0					YES	
403-620-3						NONS, claimed, updated, no tpa upgrd
422-190-8						NONS, claimed, updated, no tpa upgrd
428-160-0						NONS, claimed, not updated
443-360-8						NONS, claimed, not updated

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