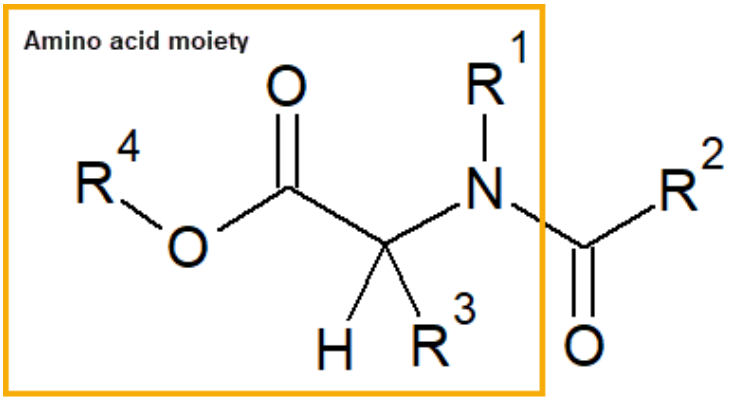
Assessment of regulatory needs

Authority: European Chemicals Agency (ECHA)

Date: 4 November 2022

Group Name: N-acyl derivatives from alpha-amino acids other than glutamic acid, glycine or sarcosine

General structure:



Revision history

Version	*Date*	*Description*
1.0	4 November 2022	

Substances within this group:

EC/List number	CAS number	Substance name	Registration type (full, OSII or TII, NONS), highest tonnage band among all the registrations (t/y) [1]
201-739-3	87-32-1	Nα-acetyl-DL-tryptophan	Full, not (publicly) available
210-498-3	616-91-1	Acetylcysteine	Full, not (publicly) available
214-935-9	1218-34-4	N-acetyl-L-tryptophan	C&L notification
245-854-7	23735-96-8	N6-(1-oxooctyl)-L-lysine	Full, not (publicly) available
254-073-0	38665-30-4	(Z)-N-(1-oxooctadec-9-en-1-yl)-DL-methionine	C&L notification
257-843-4	52315-75-0	N6-(1-oxododecyl)-L-lysine	Full, not (publicly) available
261-406-3	58725-33-0	Sodium 5-oxo-1-palmitoyl-L-prolinate	Full, not (publicly) available
261-407-9	58725-39-6	1-(1-oxododecyl)-L-proline	C&L notification
261-763-5	59441-32-6	1-(1-oxohexadecyl)-L-proline	Not registered
290-478-9	90170-45-9	L-Alanine, N-coco acyl derivs., sodium salts	Full, not (publicly) available
292-282-9	90583-79-2	L-Threonine, N-coco acyl derivs., monosodium salts	Full, not (publicly) available
421-020-1	-	POSM	NONS
424-330-3	147732-57-8	L-Tyrosine, N-[(9Z)-1-oxo-9-octadecen-1-yl]-	NONS
434-630-6	60372-77-2	ethyl N2-dodecanoyl-.sc.l.sc.-argininate hydrochloride	Full, not (publicly) available
434-950-6	-	Methyl N-(1-oxohexadecyl)serinate; methyl N-(1-oxohexadecyl)glycinate; methyl N-(1-oxohexadecyl)alaninate	NONS
446-800-7	175357-18-3	2-(undec-10-enoylamino)-3-phenylpropanoic acid	Full, 1-10
449-900-9	-	[No public or meaningful name is available]	NONS
451-050-9	-	[No public or meaningful name is available]	NONS
479-070-3	-	[No public or meaningful name is available]	NONS
611-909-2	59875-04-6	Alanine, N-(1-oxobutyl)-	Full, not (publicly) available
616-824-4	800392-66-9	Amino acids, wheat, reaction products with cocoyl chloride, sodium salts	Full, not (publicly) available

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

EC/List number	CAS number	Substance name	Registration type (full, OSII or TII, NONS), highest tonnage band among all the registrations (t/y) [1]
627-025-5	101541-04-2	Isoleucine, N-(1-oxohexadecyl)-	Full, not (publicly) available
686-761-5	222400-43-3	Sodium lauroyl oat aminoacids	Full, not (publicly) available
918-984-3	-	Acylation product between cocoyl chloride and aminoacids	Full, not (publicly) available
920-912-0	-	acylation product between palmitoyl chloride and amino acids	Full, not (publicly) available
927-837-2	-	acylation product between lauroyl chloride and amino acids	Full, not (publicly) available
928-348-7 [2]	-	potassium lauroyl wheat aminoacids	Full, not (publicly) available
934-509-2	-	Potassium cocoyl rice amino acids	Full, not (publicly) available
934-512-9 [2]	-	Potassium Lauroyl Wheat Amino Acids	Full, not (publicly) available
942-725-3	-	sodium cocoyl barley aminoacids	Full, not (publicly) available
947-765-5	-	Reaction products of DL-methionine and C18 unsaturated fatty acid chloride and isopropanol	Full, not (publicly) available
949-231-7	-	N-Cocoyl L-Proline	Full, not (publicly) available

This table contains also group members that are only notified under the CLP Regulation. However, the list is not necessarily exhaustive. Should further regulatory risk management action on one or more substances in the group be considered, ECHA may make an additional search for related C&L notified substances to be included in the group and develop an assessment of regulatory needs for them.

[2] When a dossier is submitted without EC number, REACH-IT automatically assigns a List number to the dossier. Sometimes, due to IT technical limitations, duplicate List numbers are created. In this group the following are considered duplicate entries: List nr 928-348-7 and List nr 934-512-9.

Contents

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

Foreword

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

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

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

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

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

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

[3] 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 chemical moiety shown in the figure below.

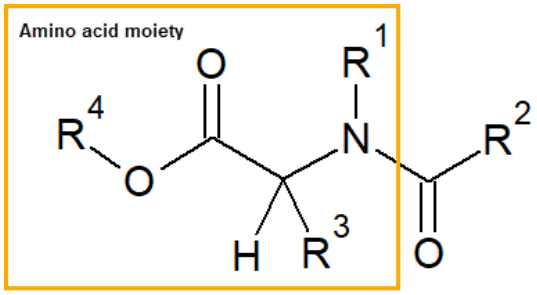

Figure 1: Chemical moiety on which structural basis the current group is formed. R^1 can be an H or cyclic amine functionality; R^2 can be any aliphatic group; R^3 may be functionalised in line with amino acid structures; R^4 as part of the carboxylate can be available as an acid, as a salt or as an ester.

Half of the substances in the group are UVCBs and the remaining are well defined (mono and multi-constituent substances).

22 substances have a full registration. Six substances are registered as NONS. Three substances (214-935-9, 254-073-0 and 261-407-9) are C&L notified but not registered and are retrieved via read across. One is not C&L notified and not registered.

Based on information reported in the REACH registration dossiers, most substances are used as surfactant and/or functional powder in cosmetics and personal care products. EC 245-854-7, 257-843-4, 290-478-9 and 292-282-9 are most widely used, e.g. in washing and cleaning products, polishes, waxes, lubricants, metal working fluids, inks and dyes for textile, leather and paper and board. The registered uses are expected to lead to a high potential for exposure for humans (professional and industrial workers and consumers) and the environment.

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

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

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

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

Based on currently available information, there is no need for (further) EU regulatory risk management due to no or unlikely hazards for all substances in the group.

Based on ECHA's assessment of hazard information currently available in the registration dossiers and considerations of structural similarity and presence of common functional moiety, no potential hazards were identified for human health for all the substances in the group. These conclusions are based on studies for EC/List 201-739-3, 210-498-3, 245-854-7, 257-843-4, 261-406-3, 292-282-9, 434-630-6, 446-800-7, 611-909-2, 627-025-5, 918-984-3, 920-912-0, 927-837-2, 934-512-9, and 949-231-7 showing no indication for mutagenicity and for 257-843-4, 434-630-6, 446-800-7, 918-984-3, 947-765-5 showing no indication of reproductive toxicity or repeated dose systemic effects including effects on endocrine organs. Furthermore, none of the substances for which data is available show skin sensitizing properties (except for EC 424-330-3 which is self-classified). Based on structural features ((fatty-)acid-substituted amino acids) and structural similarity to group members, these hazards are concluded unlikely also for all other substances in the group. Self-classification of EC 424-330-3 as skin sensitiser followed by implementation of necessary RRMs should be sufficient to ensure safe use at the workplace. Concern for skin sensitisers in consumer mixtures has 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 action on EC 424-330-3. Therefore, it is proposed that there is currently no need for EU-wide regulatory risk management for this substance.

The substances in this (sub)group (except for EC421-020-1) are also unlikely to fulfil the PBT/vPvB screening criteria, because they are likely readily biodegradable

and have at least partly a low potential for bioaccumulation. These conclusions are based on ready biodegradability test results and logKow values, partly based on reliable QSAR data but also on experimental data present in the dossiers for the group member(s). For persistency for the UVCB members of the group (ECs 261-406-3, 290-478-9, 292-282-9, 616-824-4, 686-761-5, 918-984-3, 920-912-0, 927-837-2, 928-348-7, 934-509-2, 934-512-9, 942-725-3, 947-765-5, 949-231-7) biodegradability tests were carried out on the product itself (OECD 301B & F) and all are declared to be readily biodegradable with biodegradation rates between approx. 74 % (EC 949-231-7) and 112 % (EC 927-837-2). The involved compounds are e.g. biological protein derivatives, amino acids or fatty acids and therefore leaving low concern for persistency. For EC/List 261-406-3, 434-630-6, 627-025-5, 920-912-0, 934-512-9, 947-765-5, and 949-231-7 conclusions on bioaccumulation potential remain inconclusive based on surface activity (logKow is not a valid descriptor). The group members show no sign of ED properties and are not aquatic toxic except for one substance (EC 434-630-6).

In the absence of any indication for hazard, there is currently no need for EU RRM action on these substances.

Based on information reported in the REACH registration dossiers, high potential for exposure for humans (professional and industrial workers and consumers) and the environment is expected for all substances in the group. Most substances are used as surfactant and/or functional powder in cosmetics and personal care products. EC 245-854-7, 257-843-4, 290-478-9 and 292-282-9 are most widely used, e.g. in washing and cleaning products, polishes, waxes, lubricants, metal working fluids, inks and dyes for textile, leather and paper and board. If the registration status changes, data generation and potentially follow up actions will be re-considered when the assessment will be revisited.

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
201-739-3 210-498-3 214-935-9 245-854-7 254-073-0 257-843-4 261-406-3 261-407-9 261-763-5 290-478-9 292-282-9 421-020-1 424-330-3	No hazard or unlikely hazard for carcinogenicity, mutagenicity, reproductive toxicity, STOT RE and ED No hazard or unlikely hazard for skin sensitisation except for EC 424-330-3	No hazard or unlikely hazard for PBT (except for 421-020-1), vPvB and ED No hazard or unlikely hazard for aquatic toxicity except for EC 434-630-6	High potential for exposure for industrial and professional workers, consumers and the environment from the use in e.g. washing, cleaning, cosmetics and personal care products, and in inks and dyes in e.g. textile, leather and paper.	**Currently no need for EU RRM** <u>Justification:</u> Overall, no or unlikely hazard that would lead to concern for the reported uses. Harmonised/self-classification followed by implementation of necessary RRMs should be sufficient to ensure safe use at the workplace. The concern related to the presence of skin sensitisers in consumer mixtures is under investigation.	No action

Subgroup name, EC number, substance name	Human Health Hazard	Environmental Hazard	Relevant use(s) & exposure potential	Last foreseen action	Action
434-630-6					
434-950-6					
446-800-7					
449-900-9					
451-050-9					
479-070-3					
611-909-2					
616-824-4					
627-025-5					
686-761-5					
918-984-3					
920-912-0					
927-837-2					
928-348-7					
934-509-2					
934-512-9					
942-725-3					

Subgroup name, EC number, substance name	Human Health Hazard	Environmental Hazard	Relevant use(s) & exposure potential	Last foreseen action	Action
947-765-5 949-231-7					

Annex 1: Overview of classifications

Data extracted on 22.08.2022

EC/ List No	CAS No	Substance name	Harmonised classification	Classification in registrations
201-739-3		Nα-acetyl-DL-tryptophan	-	-
210-498-3		acetylcysteine	-	Eye Irrit. 2 H319
214-935-9		N-acetyl-L-tryptophan	-	-
245-854-7		N6-(1-oxooctyl)-L-lysine	-	-
254-073-0		(Z)-N-(1-oxooctadec-9-en-1-yl)-DL-methionine	-	-
257-843-4		N6-(1-oxododecyl)-L-lysine	-	-
261-406-3		sodium 5-oxo-1-palmitoyl-L-prolinate	-	Skin Irrit. 2 H315 Eye Damage 1 H318
261-407-9		1-(1-oxododecyl)-L-proline	-	-
261-763-5				
290-478-9		l-Alanine, N-coco acyl derivs., sodium salts	-	-
292-282-9		l-Threonine, N-coco acyl derivs., monosodium salts	-	-
421-020-1		421-020-1	-	May cause long-term adverse effects in the aquatic environment
424-330-3		424-330-3	-	H319, Irritating to the skin H317 May cause skin sensitisation
434-630-6		434-630-6	-	Eye Damage 1 H318 Aquatic Acute 1 H400 Aquatic Chronic 3 H412

EC/ List No	CAS No	Substance name	Harmonised classification	Classification in registrations
434-950-6		methyl N-(1-oxohexadecyl)serinate; methyl N-(1-oxohexadecyl)glycinate; methyl N-(1-oxohexadecyl)alaninate	-	-
446-800-7		446-800-7	-	Eye Damage 1 H318
449-900-9		449-900-9	-	-
451-050-9		451-050-9	-	-
479-070-3		479-070-3	-	-
611-909-2		611-909-2	-	Eye Damage 1 H318
616-824-4		616-824-4	-	Eye Damage 1 H318
627-025-5		N-palmitoylisoleucine	-	Eye Irrit. 2 H319
686-761-5		Acylation products of oat amino acids with dodecanoyl chloride, sodium salts	-	Eye Damage 1 H318
918-984-3		reaction product of apple aminoacids and lauryl chloride	-	Eye Damage 1 H318, specific concentration: >20
920-912-0		reaction product of aminoacids and palmitoyl chloride	-	Skin Corr. 1C H314, specific concentration: >=5-<=100 Eye Damage 1 H318, specific concentration: >=3-<=100
927-837-2		reaction product of wheat aminoacids and lauryl chloride	-	Eye Damage 1 H318, specific concentration: >=3

EC/ List No	CAS No	Substance name	Harmonised classification	Classification in registrations
928-348-7		Amino acids, wheat, reaction products with lauroyl chloride, potassium salts	-	Eye Damage 1 H318
934-509-2		Potassium Cocoyl Rice Amino Acids	-	Eye Damage 1 H318
934-512-9		Potassium Lauroyl Wheat Amino Acids	-	Skin Irrit. 2 H315 Eye Irrit. 2 H319
942-725-3		Sodium cocoyl barley amino acids	-	Eye Damage 1 H318
947-765-5		Reaction products of DL-methionine and C18 unsaturated fatty acid chloride and isopropanol	-	Eye Irrit. 2 H319
949-231-7		1-[C8-16 (even numbered) alkanoyl]-L-proline	-	Skin Corr. 1B H314 Eye Damage 1 H318

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

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

Data extracted on 23.05.2022

Table: Uses overview

EC number	201-739-3	210-498-3	245-854-7	257-843-4	261-406-3	290-478-9	292-282-9	434-630-6	446-800-7	611-909-2	616-824-4	627-025-5	686-761-5	918-984-3	920-912-0	927-837-2	928-348-7	934-509-2	934-512-9	942-725-3	947-765-5	949-231-7
PC 20: Products such as ph-regulators, flocculants, precipitants, neutralisation agents	i, p	i, p																				
PC 27: Plant protection products			p																			
PC 35: Washing and cleaning products			f, i, p, c	f, i		f, i, p, c	f, i, p, c							c								
PC 39: Cosmetics, personal			f, c	f, i, p, c	f, p, c	f, p, c	f, p, c	f, p, c	f, p, c		f, p, c	f, p, c	f, p, c	f, i, p, c	f, p	f, i, p, c	f, p, c	f, p, c	f, p, c	f, p, c		f, c

EC number	201-739-3	210-498-3	245-854-7	257-843-4	261-406-3	290-478-9	292-282-9	434-630-6	446-800-7	611-909-2	616-824-4	627-025-5	686-761-5	918-984-3	920-912-0	927-837-2	928-348-7	934-509-2	934-512-9	942-725-3	947-765-5	949-231-7
care products																						
PC 29: Pharmaceuticals	f, i																					
PC 31: Polishes and wax blends				f, i, p, c																		
PC 24: Lubricants, greases, release products				f, i, p, c																		
PC 25: Metal working fluids				f, i, p, c																		
PC 13: Fuels								i														
PC 18: Ink and toners			i, p	f, i, p, c		f, i, p, c	f, i, p, c															
PC 26: Paper and board			i	f, i, p, c		f, i, p, c	f, i, p, c															

EC number	201-739-3	210-498-3	245-854-7	257-843-4	261-406-3	290-478-9	292-282-9	434-630-6	446-800-7	611-909-2	616-824-4	627-025-5	686-761-5	918-984-3	920-912-0	927-837-2	928-348-7	934-509-2	934-512-9	942-725-3	947-765-5	949-231-7
treatment products																						
PC 34: Textile dyes, and impregnating products			f, i, p, c	f, i, p		f, i, p, c	f, i, p, c															
PC 23: Leather treatment products			i, p	f, i, p, c		f, i, p, c	f, i, p, c															
PC 21: Laboratory chemicals	i, p	f, i, p																				
PC 19: Intermediate	i	i								i												
PC 40: Extraction agents								i														
PC41: Oil and gas exploration or																					i	

EC number	201-739-3	210-498-3	245-854-7	257-843-4	261-406-3	290-478-9	292-282-9	434-630-6	446-800-7	611-909-2	616-824-4	627-025-5	686-761-5	918-984-3	920-912-0	927-837-2	928-348-7	934-509-2	934-512-9	942-725-3	947-765-5	949-231-7
production products																						
PC x1: Food and feed additives								f, i, p, c														

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

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

Data extracted on 28.06.2022

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