

COMMISSION REGULATION (EU) 2021/383**of 3 March 2021****amending Annex III to Regulation (EC) No 1107/2009 of the European Parliament and of the Council listing co-formulants which are not accepted for inclusion in plant protection products****(Text with EEA relevance)**

THE EUROPEAN COMMISSION,

Having regard to the Treaty on the Functioning of the European Union,

Having regard to Regulation (EC) No 1107/2009 of the European Parliament and of the Council of 21 October 2009 concerning the placing of plant protection products on the market and repealing Council Directives 79/117/EEC and 91/414/EEC ⁽¹⁾, and in particular Article 27(2) and Article 78(2) thereof,

Whereas:

- (1) Co-formulants are described in point (c) of Article 2(3) of Regulation (EC) No 1107/2009 as substances or preparations, which are used or intended to be used in a plant protection product or adjuvant, but are neither active substances nor safeners or synergists.
- (2) Co-formulants are unacceptable in plant protection products if their residues, consequent on application consistent with good plant protection practice, and having regard to realistic conditions of use, have a harmful effect on human or animal health or on groundwater or an unacceptable effect on the environment. Co-formulants are also unacceptable in plant protection products if their use, consequent on application consistent with good plant protection practice, and having regard to realistic conditions of use, have a harmful effect on human or animal health or have an unacceptable effect on plants, plant products or the environment. Such unacceptable co-formulants are to be listed in Annex III to Regulation (EC) No 1107/2009.
- (3) Co-formulants are substances or preparations used together with active substances in plant protection products and are thus equally spread in the environment. Therefore, the criteria concerning human health, the environment, ecotoxicity and groundwater, provided for in points 3.6.2, 3.6.3, 3.6.4, 3.6.5, 3.7, 3.8.2 and 3.10 of Annex II to Regulation (EC) No 1107/2009, should also be relevant to identify unacceptable co-formulants.
- (4) The list of unacceptable co-formulants thus should include substances with a harmonised classification as carcinogens, category 1A or 1B, as mutagens, category 1A or 1B, or as toxic to reproduction, category 1A or 1B, in accordance with Annex VI to Regulation (EC) No 1272/2008 of the European Parliament and of the Council ⁽²⁾.
- (5) The list of unacceptable co-formulants should further include substances identified as persistent, bioaccumulative and toxic ('PBT') or very persistent and very bioaccumulative ('vPvB') in accordance with points (d) and (e) of Article 57 of Regulation (EC) No 1907/2006 of the European Parliament and of the Council ⁽³⁾.

⁽¹⁾ OJ L 309, 24.11.2009, p. 1.

⁽²⁾ Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006 (OJ L 353, 31.12.2008, p. 1).

⁽³⁾ Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC (OJ L 396, 30.12.2006, p. 1).

- (6) The list of unacceptable co-formulants should also include substances of very high concern due to endocrine disrupting properties in accordance with point (f) of Article 57 of Regulation (EC) No 1907/2006 or substances identified as endocrine disruptors under Regulation (EC) No 528/2012 of the European Parliament and of the Council ⁽⁴⁾ or substances identified as persistent organic pollutants (‘POP’) under Regulation (EU) 2019/1021 of the European Parliament and of the Council ⁽⁵⁾.
- (7) Regulation (EC) No 1907/2006 sets out restrictions for certain dangerous substances in its Annex XVII. Where the use of those substances is subject to restrictions as co-formulants in plant protection products, they should be added to the list of co-formulants in Annex III to Regulation (EC) No 1107/2009.
- (8) Member States have identified co-formulants that they found unacceptable in plant protection products authorised under Council Directive 91/414/EEC ⁽⁶⁾ or Regulation (EC) No 1107/2009. Such co-formulants have been notified by Austria, Belgium, France, Germany, Italy, Lithuania, Spain and Norway. Amongst those co-formulants, those with a harmonised classification as carcinogens, category 1A or 1B, as mutagens, category 1A or 1B, or as toxic to reproduction, category 1A or 1B, in accordance with Annex VI to Regulation (EC) No 1272/2008, those identified as PBT or vPvB according to points (d) and (e) of Article 57 of Regulation (EC) No 1907/2006, those identified as substances of very high concern due to endocrine disrupting properties in accordance with point (f) of Article 57 of Regulation (EC) No 1907/2006, and those identified as POP under Regulation (EU) 2019/1021 should be listed in Annex III to Regulation (EC) No 1107/2009.
- (9) The use of polyethoxylated tallowamines (CAS No 61791-26-2) in plant protection products containing glyphosate was prohibited by Commission Implementing Regulation (EU) 2016/1313 ⁽⁷⁾, as concerns were identified in relation to the toxicity of polyethoxylated tallowamines and their potential to negatively affect human health. Given that those concerns are due to the intrinsic properties of the substances concerned and are thus not limited to formulated products containing glyphosate but are equally valid for formulated products containing other active substances, polyethoxylated tallowamines should also be added to the list of co-formulants in Annex III to Regulation (EC) No 1107/2009.
- (10) Commission Implementing Decisions (EU) 2016/109 ⁽⁸⁾ and (EU) 2018/619 ⁽⁹⁾ did not approve PHMB (1600; 1.8), CAS number 27083-27-8 and 32289-58-0, and PHMB (1415; 4.7), CAS number 32289-58-0 and 1802181-67-4, as existing active substances for use in biocidal products for product-type 6 (in-can preservatives), amongst other product types due to unacceptable risks for human health and the environment. Their use as in-can preservatives in plant protection products would, therefore, lead to unacceptable effects on human health and the environment. Consequently, PHMB (1600; 1.8) and PHMB (1415; 4.7) should also be listed in Annex III to Regulation (EC) No 1107/2009.
- (11) Co-formulants to be listed in Annex III to Regulation (EC) No 1107/2009 may also be contained in adjuvants placed on the market. As detailed rules for the authorisation of adjuvants, in accordance with Article 58(2) of Regulation (EC) No 1107/2009, have not yet been established, Member States may continue to apply national provisions as regards adjuvants in accordance with Article 81(3) of that Regulation. As Regulation (EC) No 1107/2009 aims to prevent the placing on the market or use of adjuvants containing prohibited co-formulants, it is necessary to ensure that also adjuvants, to be mixed with plant protection products, do not contain any of those unacceptable co-formulants.

⁽⁴⁾ Regulation (EU) No 528/2012 of the European Parliament and of the Council of 22 May 2012 concerning the making available on the market and use of biocidal products (OJ L 167, 27.6.2012, p. 1).

⁽⁵⁾ Regulation (EU) 2019/1021 of the European Parliament and of the Council of 20 June 2019 on persistent organic pollutants (OJ L 169, 25.6.2019, p. 45).

⁽⁶⁾ Council Directive 91/414/EEC of 15 July 1991 concerning the placing of plant protection products on the market (OJ L 230, 19.8.1991, p. 1).

⁽⁷⁾ Commission Implementing Regulation (EU) 2016/1313 of 1 August 2016 amending Implementation Regulation (EU) No 540/2011 as regards the conditions of approval of the active substance glyphosate (OJ L 208, 2.8.2016, p. 1).

⁽⁸⁾ Commission Implementing Decision (EU) 2016/109 of 27 January 2016 not to approve PHMB (1600; 1.8) as an existing active substance for use in biocidal products for product-types 1, 6 and 9 (OJ L 21, 28.1.2016, p. 84).

⁽⁹⁾ Commission Implementing Decision (EU) 2018/619 of 20 April 2018 not approving PHMB (1415; 4.7) as an existing active substance for use in biocidal products of product-types 1, 5 and 6 (OJ L 102, 23.4.2018, p. 21).

- (12) Member States should be provided with sufficient time to review the composition of the plant protection products and adjuvants currently authorised in their territory, in order to assess whether they contain co-formulants listed in Annex III to Regulation (EC) No 1107/2009 and to withdraw or amend authorisations for plant protection products and adjuvants containing those co-formulants.
- (13) For plant protection products or adjuvants containing a co-formulant listed in Annex III to Regulation (EC) No 1107/2009, where Member States grant any grace period in accordance with Article 46 of that Regulation or in accordance with national provisions for authorisation of adjuvants, respectively, that period should expire for the sale and distribution at the latest 3 months and for the disposal, storage and use additional 9 months after the date of amendment or withdrawal of the authorisations.
- (14) Co-formulants to be listed in Annex III to Regulation (EC) No 1107/2009 may be present as unintentional impurities in other co-formulants, which as such are acceptable for use in plant protection products or adjuvants. Therefore, the individual concentration of the unacceptable co-formulants in the finished plant protection product or adjuvant should be less than 0,1 % weight by weight (w/w) or less than a specific concentration limit related to CMR properties (carcinogenic, mutagenic and reprotoxic), when established in Annex VI to Regulation (EC) No 1272/2008 for the unacceptable co-formulant at a level lower than 0,1 % weight by weight (w/w), in order to be considered as acceptable unintentional impurity, unless a different limit is provided due to technical limitations of relevant analytical methods.
- (15) The measures provided for in this Regulation are in accordance with the opinion of the Standing Committee on Plants, Animals, Food and Feed,

HAS ADOPTED THIS REGULATION:

Article 1

Annex III to Regulation (EC) No 1107/2009 is amended in accordance with the Annex to this Regulation.

Article 2

Member States which have granted authorisations for plant protection products containing co-formulants listed in Annex III to Regulation (EC) No 1107/2009, as amended by this Regulation, shall amend or withdraw those authorisations as soon as possible but no later than 24 March 2023.

Article 3

Member States shall not authorise the placing on the market or use of adjuvants containing co-formulants listed in Annex III to Regulation (EC) No 1107/2009, as amended by this Regulation.

Member States which have authorised adjuvants containing co-formulants listed in Annex III to Regulation (EC) No 1107/2009, as amended by this Regulation, shall amend or withdraw those authorisations as soon as possible but no later than 24 March 2023.

Article 4

Any grace period granted by Member States in accordance with Article 46 of Regulation (EC) No 1107/2009 or national provisions for authorisation of adjuvants shall be as short as possible and shall expire for the sale and distribution at the latest 3 months and for the disposal, storage and use additional 9 months after the date of amendment or withdrawal of the authorisations referred to in Articles 2 and 3.

Article 5

This Regulation shall enter into force on the twentieth day following that of its publication in the *Official Journal of the European Union*.

This Regulation shall be binding in its entirety and directly applicable in all Member States.

Done at Brussels, 3 March 2021.

For the Commission
The President
Ursula VON DER LEYEN

Annex III to Regulation (EC) No 1107/2009 is replaced by the following:

‘ANNEX III

List of co-formulants which are not accepted for inclusion in plant protection products as referred to in Article 27 ⁽¹⁾

No	Name	EC names/Other names	CAS number	EC number	Classification/Other properties
1.	1-Chloro-2,3-epoxypropane	Epichlorohydrin, 2,3-Epoxypropyl chloride	106-89-8	203-439-8	Carcinogenic cat.1B
2.	1,2- Dichloroethane	1,2-Dichloroethane; Ethane, 1,2-dichloro-	107-06-2	203-458-1	Carcinogenic cat.1B
3.	2-Ethoxyethanol	2-Ethoxyethanol; Ethanol, 2-ethoxy-	110-80-5	203-804-1	Toxic to reproduction cat.1B
4.	2-Ethoxyethyl acetate	2-Ethoxyethanol acetate; Ethanol, 2-ethoxy-, 1-acetate	111-15-9	203-839-2	Toxic to reproduction cat.1B
5.	1-Ethylpyrrolidin-2-one	1-Ethylpyrrolidin-2-one; N-ethyl-2-pyrrolidone	2687-91-4	220-250-6	Toxic to reproduction cat.1B
6.	2-Methoxyethanol	2-Methoxyethanol; Ethanol, 2-methoxy-	109-86-4	203-713-7	Toxic to reproduction cat.1B
7.	2-Methoxyethyl acetate	2-Methoxyethyl acetate; Ethanol, 2-methoxy-, 1-acetate; 2-Methoxyethanol acetate	110-49-6	203-772-9	Toxic to reproduction cat.1B
8.	2-Methoxypropanol	2-Methoxypropanol; 1-Propanol, 2-methoxy-	1589-47-5	216-455-5	Toxic to reproduction cat.1B
9.	1-Methylpyrrolidin-2-one	1-Methyl-2-pyrrolidone; 2-Pyrrolidinone, 1-methyl-	872-50-4	212-828-1	Toxic to reproduction cat.1B

No	Name	EC names/Other names	CAS number	EC number	Classification/Other properties
10.	2-Nitropropane	2-Nitropropane; Propane, 2-nitro-	79-46-9	201-209-1	Carcinogenic cat.1B
11.	Amines, tallow alkyl, ethoxylated	Amines, tallow alkyl, ethoxylated; POE-tallowamine	61791-26-2		Concerns or data gaps related to potential effects on human health or the environment
12.	Amines, tallow alkyl, ethoxylated propoxylated	Amines, tallow alkyl, ethoxylated propoxylated; POEP-tallowamine	68213-26-3		Concerns or data gaps related to potential effects on human health or the environment
13.	Asbestos fibres	Actinolite asbestos; Asbestos, actinolite	77536-66-4		Carcinogenic cat.1A
14.		Amosite asbestos; Asbestos, amosite	12172-73-5		Carcinogenic cat.1A
15.		Anthophyllite asbestos; Asbestos, anthophyllite	77536-67-5		Carcinogenic cat.1A
16.		Chrysotile asbestos; Asbestol, chrysotile	12001-29-5		Carcinogenic cat.1A
17.		Crocidolite asbestos; Asbestos, crocidolite	12001-28-4		Carcinogenic cat.1A
18.		Tremolite asbestos; Asbestos, tremolite	77536-68-6		Carcinogenic cat.1A
19.	Benzene	Benzene	71-43-2	200-753-7	Carcinogenic cat.1A/ Mutagenic cat.1B
20.	Benzo[def]chrysene; (²) Benzo[<i>pqr</i>]tetraphene	Benzo[<i>def</i>]chrysene; Benzo[<i>a</i>]pyrene	50-32-8	200-028-5	Carcinogenic cat.1B/Mutagenic cat.1B/ Toxic to reproduction cat.1B

No	Name	EC names/Other names	CAS number	EC number	Classification/Other properties
21.	Bis(2-methylpropyl) benzene-1,2-dicarboxylate	Diisobutyl phthalate	84-69-5	201-553-2	Endocrine disrupting properties (REACH Article 57(f) – Human Health) Toxic to reproduction cat.1B
22.	Boric acid	Boric acid	10043-35-3 11113-50-1	233-139-2 234-343-4	Toxic to reproduction cat.1B
23.	Disodium octaborate	Disodium octaborate; Disodium octaborate anhydrous	12008-41-2	234-541-0	Toxic to reproduction cat.1B
24.	Disodium octaborate, tetrahydrate	Boric acid, disodium salt, tetrahydrate;	12280-03-4	234-541-0	Toxic to reproduction cat.1B
25.	Disodium tetraborate, anhydrous	Disodium tetraborate, anhydrous; Boron sodium oxide	1330-43-4	215-540-4	Toxic to reproduction cat.1B
26.	Disodium tetraborate, decahydrate	Borax	1303-96-4	215-540-4	Toxic to reproduction cat.1B
27.	Disodium tetraborate, pentahydrate	Boron sodium oxide, hydrated	12179-04-3	215-540-4	Toxic to reproduction cat.1B
28.	Orthoboric acid, sodium salt	Orthoboric acid, sodium salt; Boric acid, sodium salt	13840-56-7	237-560-2	Toxic to reproduction cat.1B
29.	Tetraboron disodium heptaoxide, hydrate	Tetraboron disodium heptaoxide, hydrate; Boron sodium oxide, hydrate	12267-73-1	235-541-3	Toxic to reproduction cat.1B
30.	Buta-1,3-diene	Buta-1,3-diene; 1,3-Butadiene	106-99-0	203-450-8	Carcinogenic cat.1A/ Mutagenic cat.1B
31.	Butane containing ≥ 0,1 % butadiene (EC No 203-450-8)	Butane	106-97-8	203-448-7	Carcinogenic cat.1A
32.	Co Poly (bisiminoimidocarbonyl, hexamethylene hydrochloride), (iminoimidocarbonyl, hexamethylene hydrochloride)	Guanidine, N,N"-1,6-hexanedylbis[N'-cyano-, polymer with 1,6-hexanediamine, hydrochloride	27083-27-8 and		Not approved for use in biocidal products for product-type 6 (in-can preservatives).

No	Name	EC names/Other names	CAS number	EC number	Classification/Other properties
		Poly[iminocarbonimidoyliminocarbonimidoylimino-1,6-hexanediyl], hydrochloride Cyanamide, N-cyano-, compd. with 1,6-hexanediamine (2:1), polymer with 1,6-hexanediamine hydrochloride (1:2); PHMB	32289-58-0 and 1802181-67-4		
33.	Dibutyl phthalate	<i>n</i> -Butyl phthalate; Dibutyl benzene-1,2-dicarboxylate	84-74-2	201-557-4	Endocrine disrupting properties (REACH Article 57(f) – Human Health) Toxic to reproduction cat.1B
34.	Distillates (petroleum), hydrotreated heavy naphthenic with a content of $\geq 3,0$ % DMSO-extract (measured by IP 346)		64742-52-5	265-155-0	Carcinogenic cat.1B
35.	Distillates (petroleum), hydrotreated heavy paraffinic with a content of $\geq 3,0$ % DMSO-extract (measured by IP 346)		64742-54-7	265-157-1	Carcinogenic cat.1B
36.	Distillates (petroleum), hydrotreated light naphthenic with a content of $\geq 3,0$ % DMSO-extract (measured by IP 346)		64742-53-6	265-156-6	Carcinogenic cat.1B
37.	Distillates (petroleum), hydrotreated light paraffinic with a content of $\geq 3,0$ % DMSO-extract (measured by IP 346)		64742-55-8	265-158-7	Carcinogenic cat.1B
38.	Distillates (petroleum), solvent-dewaxed heavy paraffinic with a content of $\geq 3,0$ % DMSO-extract (measured by IP 346)		64742-65-0	265-169-7	Carcinogenic cat.1B

No	Name	EC names/Other names	CAS number	EC number	Classification/Other properties
39.	Distillates (petroleum), solvent-refined heavy paraffinic with a content of $\geq 3,0$ % DMSO-extract (measured by IP 346)		64741-88-4	265-090-8	Carcinogenic cat.1B
40.	Distillates (petroleum), solvent-refined light paraffinic with a content of $\geq 3,0$ % DMSO-extract (measured by IP 346)		64741-89-5	265-091-3	Carcinogenic cat.1B
41.	Ethylene oxide	Ethylene oxide; Oxyrane; Epoxyethane	75-21-8	200-849-9	Carcinogenic cat.1B/ Mutagenic cat. 1B
42.	Formaldehyde	Formaldehyde; Formalin; Methanal;,Formol	50-00-0	200-001-8	Carcinogenic cat.1B
43.	Formamide	Formamide; Methanamide	75-12-7	200-842-0	Toxic to reproduction cat.1B
44.	Isobutane (containing $\geq 0,1$ % butadiene (EC No 203-450-8))	Isobutane; Propane, 2-methyl-	75-28-5	200-857-2	Carcinogenic cat.1A/ Mutagenic cat. 1B
45.	Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based, high-viscosity with a content of $\geq 3,0$ % DMSO-extract (measured by IP 346)		72623-85-9	276-736-3	Carcinogenic cat.1B
46.	Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based with a content of $\geq 3,0$ % DMSO-extract (measured by IP 346)		72623-86-0	276-737-9	Carcinogenic cat.1B
47.	Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based with a content of $\geq 3,0$ % DMSO-extract (measured by IP 346)		72623-87-1	276-738-4	Carcinogenic cat.1B

No	Name	EC names/Other names	CAS number	EC number	Classification/Other properties
48.	Lubricating oils (petroleum), C17-32, solvent-extd., dewaxed, hydrogenated with a content of $\geq 3,0$ % DMSO-extract (measured by IP 346)		101316-70-5	309-875-6	Carcinogenic cat.1B
49.	Naphtha (petroleum), heavy alkylate predominantly branched chain C9-C12 with a content of $\geq 0,1$ % benzene (EC No 200-753-7)		64741-65-7	265-067-2	Carcinogenic cat.1B/ Mutagenic cat.1B
50.	Naphtha (petroleum), hydrodesulfurized heavy predominantly C7-C12 with a content of $\geq 0,1$ % benzene (EC No 200-753-7)		64742-82-1	265-185-4	Carcinogenic cat.1A/ Mutagenic cat.1B
51.	Naphtha (petroleum), hydrodesulfurized light, dearomatized predominantly C7 paraffins and cycloparaffins with a content of $\geq 0,1$ % benzene (EC No 200-753-7)		92045-53-9	295-434-2	Carcinogenic cat.1A/ Mutagenic cat.1B
52.	Naphtha (petroleum), hydrotreated heavy predominantly C6-C13 with a content of $\geq 0,1$ % benzene (EC No 200-753-7)		64742-48-9	265-150-3	Carcinogenic cat.1A/ Mutagenic cat.1B
53.	Naphtha (petroleum), light aromatic predominantly C8-C10 with a content of $\geq 0,1$ % benzene (EC N. 200-753-7)		64742-95-6	265-199-0	Carcinogenic cat.1A/ Mutagenic cat.1B
54.	Nitrobenzene	Nitrobenzene; Benzene, nitro-	98-95-3	202-716-0	Toxic to reproduction cat.1B
55.	N-methylformamide	N-methylformamide; Formamide, N-methyl-	123-39-7	204-624-6	Toxic to reproduction cat.1B

No	Name	EC names/Other names	CAS number	EC number	Classification/Other properties
56.	Nonyl-phenols: Substances with a linear and/or branched alkyl chain with a carbon number of 9 covalently bound in any position to phenol, covering also substances which include any of the individual isomers or a combination thereof.	4-(3,5-Dimethylheptan-3-yl)phenol Phenol, 4-(1-ethyl-1,3-dimethylpentyl)-; 4-(1-Ethyl-1,3-dimethylpentyl)phenol	186825-36-5		Endocrine disrupting properties (REACH Article 57(f) – Environment)
57.		4-(3,6-Dimethylheptan-3-yl)phenol Phenol, 4-(1-ethyl-1,4-dimethylpentyl)-; 4-(1-Ethyl-1,4-dimethylpentyl)phenol	142731-63-3		Endocrine disrupting properties (REACH Article 57(f) – Environment)
58.		4-(2-Methyloctan-2-yl)phenol <i>p</i> -(1,1-Dimethylheptyl)phenol; Phenol, 4-(1,1-dimethylheptyl)-	30784-30-6	250-339-5	Endocrine disrupting properties (REACH Article 57(f) – Environment)
59.		4-(3-Methyloctan-3-yl)phenol Phenol, 4-(1-ethyl-1-methylhexyl)-; 4-(1-Ethyl-1-methylhexyl)phenol;	52427-13-1	257-907-1	Endocrine disrupting properties (REACH Article 57(f) – Environment)
60.		4-Nonylphenol <i>p</i> -Nonylphenol; Phenol, 4-nonyl-	104-40-5	203-199-4	Endocrine disrupting properties (REACH Article 57(f) – Environment)
61.		Isononylphenol	11066-49-2	234-284-4	Endocrine disrupting properties (REACH Article 57(f) – Environment)
62.		<i>p</i> -Isononylphenol; Phenol, 4-isononyl-	26543-97-5	247-770-6	Endocrine disrupting properties (REACH Article 57(f) – Environment)

No	Name	EC names/Other names	CAS number	EC number	Classification/Other properties
63.		Nonylphenol; Phenol, nonyl-	25154-52-3	246-672-0	Endocrine disrupting properties (REACH Article 57(f) – Environment)
64.		Phenol, 4-(1-methyloctyl)-; <i>p</i> -(1-Methyloctyl)phenol	17404-66-9	241-427-4	Endocrine disrupting properties (REACH Article 57(f) – Environment)
65.		Phenol, 4-nonyl-, branched	84852-15-3	284-325-5	Endocrine disrupting properties (REACH Article 57(f) – Environment)
66.		Phenol, nonyl-, branched	90481-04-2	291-844-0	Endocrine disrupting properties (REACH Article 57(f) – Environment)
67.	Nonyl-phenols, ethoxylated: Substances with a linear and/or branched alkyl chain with a carbon number of 9 covalently bound in any position to phenol, ethoxylated, covering also substances which include any of the individual isomers or a combination thereof.	Nonylphenol, ethoxylated; Poly(oxy-1,2-ethanediyl), α -(nonylphenyl)- ω -hydroxy-		500-024-6	Endocrine disrupting properties (REACH Article 57(f) – Environment)
68.		4-Nonylphenol, branched, 1 – 2,5 moles ethoxylated Poly(oxy-1,2-ethanediyl), α -(4-nonylphenyl)- ω -hydroxy-, branched		500-315-8	Endocrine disrupting properties (REACH Article 57(f) – Environment)
69.		4-Nonylphenol, 1 – 2,5 moles ethoxylated		500-045-0	Endocrine disrupting properties (REACH Article 57(f) – Environment)
70.		2-(2-{2-[2-(4-Nonylphenoxy)ethoxy]ethoxy}ethoxy)ethan-1-ol 2-[2-[2-[2-(4-Nonylphenoxy)ethoxy]ethoxy]ethoxy]ethanol; Ethanol, 2-[2-[2-[2-(4-nonylphenoxy)ethoxy]ethoxy]ethoxy]-	7311-27-5	230-770-5	Endocrine disrupting properties (REACH Article 57(f) – Environment)
71.		2-[2-(4-Nonylphenoxy)ethoxy]ethanol; Ethanol, 2-[2-(4-nonylphenoxy)ethoxy]-	20427-84-3	243-816-4	Endocrine disrupting properties (REACH Article 57(f) – Environment)

No	Name	EC names/Other names	CAS number	EC number	Classification/Other properties
72.		20-(4-Nonylphenoxy)-3,6,9,12,15,18-hexaoxaicosan-1-ol; 3,6,9,12,15,18-Hexaoxaicosan-1-ol, 20-(4-nonylphenoxy)-	27942-27-4	248-743-1	Endocrine disrupting properties (REACH Article 57(f) – Environment)
73.		2-[2-[2-[2-(4-Nonylphenoxy)ethoxy]ethoxy]ethoxy]ethoxy]ethan-1-ol Ethanol,2-[2-[2-[2-(4-nonylphenoxy)ethoxy]ethoxy]ethoxy]-	7311-27-5		Endocrine disrupting properties (REACH Article 57(f) – Environment)
74.		26-(4-Nonylphenoxy)-3,6,9,12,15,18,21,24-octaoxahehexacosan-1-ol 3,6,9,12,15,18,21,24-Octaoxahehexacosan-1-ol, 26-(4-nonylphenoxy)-	14409-72-4		Endocrine disrupting properties (REACH Article 57(f) – Environment)
75.		17-(4-Nonylphenoxy)-3,6,9,12,15-pentaoxaheptadecan-1-ol 3,6,9,12,15-Pentaoxaheptadecan-1-ol, 17-(4-nonylphenoxy)-	34166-38-6		Endocrine disrupting properties (REACH Article 57(f) – Environment)
76.		Poly(oxy-1,2-ethanediyl), α -(4-nonylphenyl)- ω -hydroxy-, branched	127087-87-0		Endocrine disrupting properties (REACH Article 57(f) – Environment)
77.		Poly(oxy-1,2-ethanediyl), α -(4-nonylphenyl)- ω -hydroxy-	26027-38-3		Endocrine disrupting properties (REACH Article 57(f) – Environment)
78.		Ethanol, 2-(4-nonylphenoxy)	104-35-8		Endocrine disrupting properties (REACH Article 57(f) – Environment)
79.		Isononylphenol, ethoxylated; Poly(oxy-1,2-ethanediyl), α -(isononylphenyl)- ω -hydroxy-	37205-87-1		Endocrine disrupting properties (REACH Article 57(f) – Environment)

No	Name	EC names/Other names	CAS number	EC number	Classification/Other properties
80.		2-[2-(4- <i>tert</i> -Nonylphenoxy) ethoxy] ethanol Ethanol, 2-[2-(4- <i>tert</i> -nonylphenoxy)ethoxy]-	156609-10-8		Endocrine disrupting properties (REACH Article 57(f) – Environment)
81.		Poly(oxy-1,2-ethanediyl), α -(nonylphenyl)- ω -hydroxy- Nonylphenol, ethoxylated	9016-45-9		Endocrine disrupting properties (REACH Article 57(f) – Environment)
82.	Octyl-phenols: Substances with a linear and/or branched alkyl chain with a carbon number of 8 covalently bound in any position to phenol, covering also substances which include any of the individual isomers or a combination thereof.	<i>p</i> -Octylphenol; 4-Octylphenol	1806-26-4	217-302-5	Endocrine disrupting properties (REACH Article 57(f) – Environment)
83.		4-(2,4,4-Trimethylpentan-2-yl)phenol; 4-(1,1,3,3-Tetramethylbutyl)phenol; 4-(<i>tert</i> -octyl) Phenol Phenol, 4-(1,1,3,3-tetramethylbutyl)-; 4- <i>tert</i> -Octylphenol	140-66-9	205-426-2	Endocrine disrupting properties (REACH Article 57(f) – Environment)
84.		Octylphenol; Phenol, octyl-	67554-50-1	266-717-8	Endocrine disrupting properties (REACH Article 57(f) – Environment)
85.		Phenol, 2-isooctyl-	86378-08-7		Endocrine disrupting properties (REACH Article 57(f) – Environment)
86.		Phenol, isooctyl-; Isooctylphenol	11081-15-5	234-304-1	Endocrine disrupting properties (REACH Article 57(f) – Environment)
87.		Phenol, 2-octyl-; <i>o</i> -Octylphenol	949-13-3	213-437-9	Endocrine disrupting properties (REACH Article 57(f) – Environment)
88.		Phenol, 2- <i>sec</i> -octyl-; <i>o-sec</i> -Octylphenol	26401-75-2	247-663-4	Endocrine disrupting properties (REACH Article 57(f) – Environment)

No	Name	EC names/Other names	CAS number	EC number	Classification/Other properties
89.		Phenol, 4-isooctyl-; <i>p</i> -Isooctylphenol	27013-89-4	248-164-4	Endocrine disrupting properties (REACH Article 57(f) – Environment)
90.		Phenol, 4- <i>sec</i> -octyl-; <i>p-sec</i> -Octylphenol	27214-47-7	248-330-6	Endocrine disrupting properties (REACH Article 57(f) – Environment)
91.		Phenol, <i>sec</i> -octyl-; <i>sec</i> -Octylphenol	93891-78-2	299-461-0	Endocrine disrupting properties (REACH Article 57(f) – Environment)
92.		Phenol, 4-(1-ethylhexyl)-; <i>p</i> -(1-Ethylhexyl)phenol	3307-00-4	221-989-7	Endocrine disrupting properties (REACH Article 57(f) – Environment)
93.		Phenol, 2-(1-methylheptyl)-; <i>o</i> -(1Methylheptyl)phenol	18626-98-7	242-459-1	Endocrine disrupting properties (REACH Article 57(f) – Environment)
94.		Phenol, 2-(1-ethylhexyl)-; <i>o</i> -(1-Ethylhexyl)phenol	17404-44-3	241-426-9	Endocrine disrupting properties (REACH Article 57(f) – Environment)
95.		Phenol, 2-(1-propylpentyl)-; <i>o</i> -(1-Propylpentyl)phenol	37631-10-0	253-574-1	Endocrine disrupting properties (REACH Article 57(f) – Environment)
96.		Phenol, 4-(1-propylpentyl)-; <i>p</i> -(1-Propylpentyl)phenol	3307 - 01-5	221-990-2	Endocrine disrupting properties (REACH Article 57(f) – Environment)
97.		Phenol, 2-(1-methylheptyl)-; <i>o</i> -(1,1,3,3-Tetramethylbutyl)phenol	3884-95-5	223-420-8	Endocrine disrupting properties (REACH Article 57(f) – Environment)
98.		Phenol, (1,1,3,3-tetramethylbutyl)-; (1,1,3,3-Tetramethylbutyl)phenol	27193-28-8	248-310-7	Endocrine disrupting properties (REACH Article 57(f) – Environment)

No	Name	EC names/Other names	CAS number	EC number	Classification/Other properties
99.		Phenol, (1-methylheptyl)-; (1-Methylheptyl)phenol	27985-70-2	248-759-9	Endocrine disrupting properties (REACH Article 57(f) – Environment)
100.		Phenol, 4-(2-methylheptyl)-	898546-19-5		Endocrine disrupting properties (REACH Article 57(f) – Environment)
101.		Phenol, 2-(2-ethylhexyl)-	28752-62-7		Endocrine disrupting properties (REACH Article 57(f) – Environment)
102.		Phenol, 4-(1-methylheptyl)-; <i>p</i> -(1-Methylheptyl)phenol	1818-08-2	217-332-9	Endocrine disrupting properties (REACH Article 57(f) – Environment)
103.		Phenol, 4-(2-ethylhexyl)-	69468-20-8		Endocrine disrupting properties (REACH Article 57(f) – Environment)
104.		Phenol, 4-(5-methylheptyl)-	1824164-95-5		Endocrine disrupting properties (REACH Article 57(f) – Environment)
105.		Phenol, 2-(2-methylheptyl)-	898546-20-8		Endocrine disrupting properties (REACH Article 57(f) – Environment)
106.		Phenol, 4-(2-propylpentyl)-	119747-99-8		Endocrine disrupting properties (REACH Article 57(f) – Environment)
107.		Phenol, 3-octyl-	20056-69-3		Endocrine disrupting properties (REACH Article 57(f) – Environment)
108.		Phenol, 2-(1,1-dimethylhexyl)-	1824575-79-2		Endocrine disrupting properties (REACH Article 57(f) – Environment)
109.		Phenol, 4-(1,1-dimethylhexyl)-	30784-29-3		Endocrine disrupting properties (REACH Article 57(f) – Environment)

No	Name	EC names/Other names	CAS number	EC number	Classification/Other properties
110.		Phenol, 4-(5,5-dimethylhexyl)-	13330-52-4		Endocrine disrupting properties (REACH Article 57(f) – Environment)
111.		Phenol, 2-(5,5-dimethylhexyl)-	1822989-97-8		Endocrine disrupting properties (REACH Article 57(f) – Environment)
112.		Phenol, 3-(1,1-dimethylhexyl)-	70435-92-6		Endocrine disrupting properties (REACH Article 57(f) – Environment)
113.		Phenol, 4-(1,4-dimethylhexyl)-	164219-26-5		Endocrine disrupting properties (REACH Article 57(f) – Environment)
114.	Octyl-phenols, ethoxylated: Substances with a linear and/or branched alkyl chain with a carbon number of 8 covalently bound in any position to phenol, ethoxylated, covering also substances which include any of the individual isomers or a combination thereof.	Poly(oxy-1,2-ethanediyl), α-[(1,1,3,3-tetramethylbutyl) phenyl]-ω-hydroxy-2-(2-[4-(1,1,3,3-Tetramethylbutyl)phenoxy] ethoxy)ethanol Polyethylene Glycol Octylphenyl Ether;	9036-19-5		Endocrine disrupting properties (REACH Article 57(f) – Environment)
115.		2-[4-(2,4,4-Trimethylpentan-2-yl)phenoxy]ethanol Poly(oxy-1,2-ethanediyl), α-[4-(1,1,3,3-tetramethylbutyl)phenyl]-ω-hydroxy-Octylphenol ethoxylated	9002-93-1		Endocrine disrupting properties (REACH Article 57(f) – Environment)
116.		20-[4-(1,1,3,3-Tetramethylbutyl)phenoxy]-3,6,9,12,15,18-hexaoxaicosan-1-ol 3,6,9,12,15,18-Hexaoxaicosan-1-ol, 20-[4-(1,1,3,3-tetramethylbutyl)phenoxy]-	2497-59-8	219-682-8	Endocrine disrupting properties (REACH Article 57(f) – Environment)
117.		Ethanol, 2-[4-(1,1,3,3-tetramethylbutyl)phenoxy]-	2315-67-5		Endocrine disrupting properties (REACH Article 57(f) – Environment)

No	Name	EC names/Other names	CAS number	EC number	Classification/Other properties
118.		Ethanol, 2-[2-[4-(1,1,3,3-tetramethylbutyl)phenoxy]ethoxy]-	2315-61-9		Endocrine disrupting properties (REACH Article 57(f) – Environment)
119.		3,6,9,12,15,18,21,24-Octaoxahexacosan-1-ol, 26-(4-octylphenoxy)-;	42173-90-0	255-695-5	Endocrine disrupting properties (REACH Article 57(f) – Environment)
120.		Poly(oxy-1,2-ethanediyl), α -(octylphenyl)- ω -hydroxy-, branched	68987-90-6		Endocrine disrupting properties (REACH Article 57(f) – Environment)
121.		Poly(oxy-1,2-ethanediyl), α -[4-(6-methylheptyl)phenyl]- ω -hydroxy-	59379-12-3		Endocrine disrupting properties (REACH Article 57(f) – Environment)
122.		Ethanol, 2-(4-octylphenoxy)-; 2-(<i>p</i> -Octylphenoxy)ethanol	51437-89-9	257-203-4	Endocrine disrupting properties (REACH Article 57(f) – Environment)
123.		Poly(oxy-1,2-ethanediyl), α -(4-octylphenyl)- ω -hydroxy-	26636-32-8		Endocrine disrupting properties (REACH Article 57(f) – Environment)
124.		Poly(oxy-1,2-ethanediyl), α -[4-(1-methylheptyl)phenyl]- ω -hydroxy-	73935-42-9		Endocrine disrupting properties (REACH Article 57(f) – Environment)
125.		3,6,9,12,15,18-Hexaoxaeicosan-1-ol, 20-(4-octylphenoxy)-; 20-(4-Octylphenoxy)-3,6,9,12,15,18-hexaoxaeicosan-1-ol	32742-88-4	251-190-9	Endocrine disrupting properties (REACH Article 57(f) – Environment)
126.		Ethanol, 2-[2-[2-(4-octylphenoxy)ethoxy]ethoxy]ethoxy]-; 2-(<i>p</i> -Octylphenoxy)ethanol	51437-92-4		Endocrine disrupting properties (REACH Article 57(f) – Environment)
127.		Ethanol, 2-[2-(4-octylphenoxy)ethoxy]-	51437-90-2		Endocrine disrupting properties (REACH Article 57(f) – Environment)

No	Name	EC names/Other names	CAS number	EC number	Classification/Other properties
128.		3,6,9,12,15-Pentaoxaheptadecan-1-ol, 17-(4-octylphenoxy)-	51437-94-6		Endocrine disrupting properties (REACH Article 57(f) – Environment)
129.		Poly(oxy-1,2-ethanediyl), α -(isooctylphenyl)- ω -hydroxy-	9004-87-9		Endocrine disrupting properties (REACH Article 57(f) – Environment)
130.		2-[2-[2-(4-Octylphenoxy)ethoxy]ethoxy]ethanol	51437-91-3		Endocrine disrupting properties (REACH Article 57(f) – Environment)
131.		3,6,9,12,15-Pentaoxaheptadecan-1-ol, 17-[4-(1,1,3,3-tetramethylbutyl)phenoxy]-	2497-58-7		Endocrine disrupting properties (REACH Article 57(f) – Environment)
132.		Ethanol, 2-[2-[2-[4-(1,1,3,3-tetramethylbutyl)phenoxy]ethoxy]ethoxy]-	2315-62-0		Endocrine disrupting properties (REACH Article 57(f) – Environment)
133.		Ethanol, 2-[2-[2-[2-[4-(1,1,3,3-tetramethylbutyl)phenoxy]ethoxy]ethoxy]ethoxy]-	2315-63-1		Endocrine disrupting properties (REACH Article 57(f) – Environment)
134.		3,6,9,12-Tetraoxatetradecan-1-ol, 14-[4-(1,1,3,3-tetramethylbutyl)phenoxy]-	2315-64-2		Endocrine disrupting properties (REACH Article 57(f) – Environment)
135.		3,6,9,12,15,18,21,24-Octaoxahexacosan-1-ol, 26-[4-(1,1,3,3-tetramethylbutyl)phenoxy]-	2315-65-3		Endocrine disrupting properties (REACH Article 57(f) – Environment)
136.		3,6,9,12,15,18,21,24,27-Nonaoxanonacosan-1-ol, 29-[4-(1,1,3,3-tetramethylbutyl)phenoxy]-	2315-66-4		Endocrine disrupting properties (REACH Article 57(f) – Environment)
137.		Ethanol, 2-[3-(1,1,3,3-tetramethylbutyl)phenoxy]-	1026254-24-9		Endocrine disrupting properties (REACH Article 57(f) – Environment)
138.		Ethanol, 2-[2-(1,1,3,3-tetramethylbutyl)phenoxy]-	84658-53-7		Endocrine disrupting properties (REACH Article 57(f) – Environment)

No	Name	EC names/Other names	CAS number	EC number	Classification/Other properties
139.		Ethanol, 2-[2-(octylphenoxy)ethoxy]-	27176-92-7		Endocrine disrupting properties (REACH Article 57(f) – Environment)
140.	N, N-Dimethylformamide	N, N-dimethylformamide; Dimethyl formamide, DMF	68-12-2	200-679-5	Toxic to reproduction cat.1B
141.	Prop-2-enamide	Acrylamide; 2-propenamide	79-06-1	201-173-7	Carcinogenic cat.1B/ Mutagenic cat.1B
142.	Pyridine, alkyl derivatives, with a content of $\geq 0,1$ % benzene (EC No 200-753-7)		68391-11-7	269-929-9	Carcinogenic cat.1A/ Mutagenic cat.1B
143.	Quinoline	Quinoline	91-22-5	202-051-6	Carcinogenic cat.1B
144.	Tetrahydrofurfuryl Alcohol	Tetrahydrofurfuryl alcohol; 2-Furanmethanol, tetrahydro-	97-99-4	202-625-6	Toxic to reproduction cat.1B'

(¹) The limit for the acceptable presence of the substances listed in the table as unintentional impurity in the finished product is 0,1 % (weight by weight (w/w)) except where stated otherwise in this Annex.

(²) The limit for the acceptable presence of this substance as unintentional impurity in the finished product is 0,01 % (weight by weight (w/w)), corresponding to the specific concentration limit set in Annex VI to Regulation (EC) No 1272/2008.