

Annex 15 Report

Proposal for identification of a substance of very high concern (SVHC)

Medium-Chain Chlorinated Paraffins (MCCPs)

EC Number: -

CAS Number: -

July 2026

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1. Proposal

Substance name(s): Medium-chain chlorinated paraffins (MCCPs)

EC number: -

CAS number: -

The substance is proposed to be identified as a substance meeting the criteria of Article 57 (d) and Article 57 (e) of UK REACH owing to the Agency¹ concluding that it fulfils the PBT and vPvB criteria of Annex 13 of UK REACH.

MCCPs were evaluated by the UK under EU REACH and concluded to meet both the Persistent, Bioaccumulative and Toxic (PBT) and very Persistent, very Bioaccumulative (vPvB) criteria under Annex 13 of EU REACH (Environment Agency, 2019).

Subsequently, the UK submitted a proposal in April 2021 to list chlorinated paraffins with carbon chain lengths in the range C₁₄₋₁₇ and chlorination levels at or exceeding 45% chlorine by weight (known as MCCPs) as a Persistent Organic Pollutant (POP) under the Stockholm Convention (UNEP, 2025a). POPs are chemicals that have been demonstrated to be persistent, bioaccumulative, toxic, and capable of long-range environmental transport. In September 2022, the Stockholm Convention POPs Review Committee (POPRC) adopted the Risk Profile for MCCPs, based on scientific screening criteria (UNEP, 2025b). In May 2025, the Conference of the Parties agreed to list MCCPs as a POP under Annex A of the Convention, with some specific exemptions.

It is proposed to identify MCCPs as persistent, bioaccumulative and toxic (PBT) (Article 57(d) of UK REACH) and as very persistent and very bioaccumulative (vPvB) (Article 57(e) of UK REACH).

Summary of how the substance meets the criteria set out in Article 57 of UK REACH

A weight-of-evidence determination according to the provisions of Annex 13 of UK REACH has been used to identify MCCPs as PBT and vPvB.

Persistence

The freshwater sediment degradation DT₅₀ values for C₁₄ chlorinated n-alkane, 50% Cl wt. in two types of sediment were assessed to have exceeded > 180 days in a study performed in accordance with Organisation for Economic Cooperation and Development (OECD) Test Guideline (TG) 308. This meets the very persistent (vP) criterion of Annex 13 of UK REACH for freshwater sediment (half-life > 180 days) (and therefore also the

¹ The Health and Safety Executive (HSE) acting in its capacity as the Agency for UK REACH, and with support from the Environment Agency in accordance with Article 2B of UK REACH.

persistent (P) criterion). This finding can be applied to longer carbon chain lengths on the basis of predicted trends in solubility and partitioning behaviour. The conclusion is supported by sediment core monitoring that indicates the presence of MCCPs over several years under the environmental conditions prevalent in these sediments.

Bioaccumulation

The reported bioconcentration factor (BCF) values of C₁₄ chlorinated alkanes with 45% Cl wt. and 50% Cl wt. were > 5,000 L/kg in two fish bioconcentration studies conducted to OECD TG 305. The BCF values meet the definitive very bioaccumulative (vB) criterion of Annex 13 of UK REACH (BCF >5000) (and therefore also the bioaccumulative (B) criterion). Reported fish BCF values from older studies with C₁₅, C₁₆ and C₁₈ chlorinated alkanes with various levels of chlorination also indicated high bioaccumulation potential. This was supported by a BCF of >5000 L/kg for the aquatic invertebrate *Daphnia magna* in a non-standard study with C₁₄₋₁₇ chlorinated paraffins, 45% Cl wt., and field monitoring data, demonstrating that all chain lengths are bioavailable and detected in biota.

Toxicity

The most sensitive reliable endpoint reported was a 21-day NOEC of 0.0087 mg/L for *Daphnia magna* with C₁₄₋₁₇ chlorinated n-alkane, 52% Cl wt. (Environment Agency, 2019; UNEP, 2022). Based on this study, MCCPs fulfil the T criteria of Annex 13 of UK REACH (long-term NOEC for marine or freshwater organisms < 0.01 mg/L).

Conclusion

Based on the previous assessments of the hazard properties of MCCPs, the Agency concludes that:

- (i) Substances or mixtures that contain linear chloroalkanes with carbon chain lengths in the range C₁₄₋₁₇ and chlorination levels at or exceeding 45 per cent chlorine by weight; or
- (ii) Substances or mixtures that contain linear C₁₄₋₁₇ chloroalkanes of the following molecular formulae: C₁₄H_(30-y)Cl_y where y ≥ 5; C₁₅H_(32-y)Cl_y where y ≥ 5; C₁₆H_(34-y)Cl_y where y ≥ 6; C₁₇H_(36-y)Cl_y where y ≥ 6

fulfil the PBT and vPvB criteria of Annex 13 of UK REACH and can therefore be identified as an SVHC in accordance with Article 57(d) and Article 57(e) of UK REACH.

Due to their method of manufacture, this conclusion is assumed to apply to all MCCP product types because they will contain constituents with PBT/vPvB properties above 0.1% w/w, unless a manufacturer or importer can demonstrate that their product does not meet the definition.

2. Justification

2.1 Identity of the substance and physical and chemical properties

2.1.1 Name and other identifiers of the substance

Chlorinated paraffins have different chain length distributions and degrees of chlorination depending on the paraffin feedstock and intended application. The POPs listing covers MCCPs when they meet the definition in (i), (ii), or both (i) and (ii) below:

(i) Substances or mixtures that contain linear chloroalkanes with carbon chain lengths in the range C₁₄₋₁₇ and chlorination levels at or exceeding 45 per cent chlorine by weight;

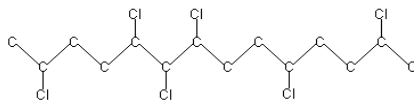
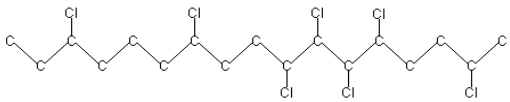
(ii) Substances or mixtures that contain linear C₁₄₋₁₇ chloroalkanes of the following molecular formulae: C₁₄H_(30-y)Cl_y where y ≥ 5; C₁₅H_(32-y)Cl_y where y ≥ 5; C₁₆H_(34-y)Cl_y where y ≥ 6; C₁₇H_(36-y)Cl_y where y ≥ 6.

The same definition is used by the Agency for this Annex 15 report.

Various chemical identifiers have been used for chlorinated paraffins in the range C₁₄₋₁₇, the principal constituents of MCCPs. The chemical identifiers in Table 1 are the EC and CAS numbers most commonly used in Europe. These cover a broader range of chlorination than the scope of the hazard assessment in this document.

Table 1: Substance identity

EC number:	287-477-0*
EC name:	Alkanes, C ₁₄₋₁₇ , chloro*
SMILES ^a :	Example for C ₁₄ H ₂₄ Cl ₆ : CC(Cl)CCC(Cl) C(Cl) C(Cl)CC C(Cl)CC C(Cl) C(Cl)
CAS number:	85535-85-9*
CAS name:	Chloroalkanes C ₁₄ -C ₁₇
IUPAC ^b name:	Alkanes, C ₁₄₋₁₇ , chloro*
Index number in GB Mandatory Classification and Labelling (MCL) List ^c :	602-095-00-X

Molecular formula:	$C_xH_{(2x-y+2)}Cl_y$, where $x = 14 - 17$ and $y = \geq 5 - 17$
Molecular weight range:	370 - 826 g/mol (approximately)
Synonyms:	Medium-chain chlorinated paraffins MCCPs Chlorinated paraffins, C_{14-17}
Structural formula:	Example structures (hydrogen atoms removed for simplicity) include  $C_{14}H_{24}Cl_6$  $C_{17}H_{29}Cl_7$

* Example chemical identifiers. Various other chemical identifiers have also been used for chlorinated paraffins in the range C_{14-17} (Appendix A).

^a SMILES: Simplified Molecular Input Line Entry System

^b IUPAC: International Union of Pure and Applied Chemistry

^c GB MCL list in accordance with the retained Regulation (EC) No 1272/2008 as amended for Great Britain

2.1.2 Composition of the substance

Name: MCCPs

Description: MCCP is a substance of “unknown or variable composition, complex reaction products or biological materials” (hereinafter ‘UVCB’). It contains linear chloroalkanes predominantly in the range of C_{14-17} with chlorination levels in the range of 40-70% by weight. A UVCB substance technically does not contain impurities but some constituents outside of the C_{14-17} range may be present in small amounts.

The chain length distribution reflects the hydrocarbon feedstock that is used in its manufacture. In contrast, chlorinated paraffins produced by some suppliers outside of Europe are differentiated based on their chlorine content or viscosity rather than by the carbon chain lengths of their constituent congeners.

The chlorination process is random, and so MCCPs contains many thousands of constituents. The chlorine content of the commercially available product types is generally within the range 40% to 63% by weight, with the majority of product types having a chlorine content between 45% and 52% by weight. The main constituents in most product types have between five and seven chlorine atoms per molecule. Nevertheless, it should be noted that percentage chlorine content only represents an average level of chlorination, and so a wider range of constituents may be present in any particular product.

2.1.3 Identity and composition of degradation products/metabolites relevant for the SVHC assessment

The Agency does not consider it necessary to consider transformation products due to the findings for the parent compound.

2.1.4 Identity and composition of structurally related substances (used in grouping or read-across approach)

Short-chain chlorinated paraffins (SCCPs) containing C_{10–13} carbon chain lengths and long-chain chlorinated paraffins (LCCPs) containing C_{18–30} carbon chain lengths are structural analogues of MCCPs. Data for both is referred to in UNEP (2022).

SCCPs was listed as a POP in the Stockholm Convention in 2017.

2.1.5 Physicochemical properties

Physicochemical property information for MCCPs from the POP Risk Profile are summarised in Table 2. Refer to the Risk Profile for details of data reliability (UNEP, 2022).

Table 2: Overview of physicochemical properties

Property	Value
Physical state at 20°C and 101.3 kPa	Liquid
Melting/freezing point (°C)	Pour point -50 to 25 (chlorination dependent)
Boiling point (°C)	Decomposition ~200 before boiling
Vapour pressure (Pa)	C_{14–17} (52% Cl wt.) 1.3×10^{-4} - 2.7×10^{-4} (20 °C) C_{14–17} (52% Cl wt.) 1.1×10^{-3} (45 °C) 6.0×10^{-3} (60 °C) 0.051 (80 °C) C₁₇ Cl_{1–15} $<1 \times 10^{-6}$ – 0.0042
Water solubility	0.0061 mg/L at 20 °C for C₁₄ chlorinated n-alkane, 50% Cl wt. 0.005–0.027 mg/L at 20 °C for C₁₅ chlorinated n-alkane, 51% Cl wt.

	0.01 mg/L in freshwater and 0.004 mg/L in seawater at 16–20 °C for C₁₆ chlorinated n-alkane, 52% Cl wt. 1.90–272 µg/L for C₁₄ with Cl_{1–12} 0.50–68.1 µg/L for C₁₅ with Cl_{1–13} 0.15–42.2 µg/L for C₁₆ with Cl_{1–13} 0.72–12.7 µg/L for C₁₇ with Cl_{1–15}
n-Octanol–water partition coefficient (log K _{ow})	6.58 ± 0.09 for C₁₄ chlorinated n-alkane, 50% Cl wt. 6.30 (5.56–7.71) C₁₄, 47.0% Cl wt. 6.65 (5.84–7.81) C₁₅, 50.4% Cl wt. 6.81 (5.78–8.38) C₁₆, 61.0% Cl wt. 6.67 (5.57–7.90) C_{14–17}, 46.7% Cl wt. 7.2 (4.7–8.3) for C₁₆ chlorinated n-alkane, 35% Cl wt. 5.52 to 8.21 for C_{14–17} chlorinated n-alkane, 45% Cl wt. 5.47 to 8.01 for C_{14–17} chlorinated n-alkane, 52% Cl wt. 7.93–10.21 for C₁₄ with Cl_{1–16} 8.49–10.91 for C₁₅ with Cl_{1–17} 9.04–11.16 for C₁₆ with Cl_{1–16} 9.60–11.84 for C₁₇ with Cl_{1–18} 6.2–8.25 for C₁₄ with Cl_{1–14} 6.63–8.76 for C₁₅ with Cl_{1–15} 7.07–9.28 for C₁₆ with Cl_{1–16} 7.33–9.8 for C₁₇ with Cl_{1–17} 7.94–9.1 for C₁₄ with Cl_{4–10} 8.43–9.84 for C₁₅ with Cl_{4–11} 8.92–10.36 for C₁₆ with Cl_{4–12} 9.59–11.04 for C₁₇ with Cl_{5–13}

Data source: UNEP (2022)

2.2 Mandatory classification and labelling

Table 3: Mandatory classification in the GB MCL list

Index No	International Chemical Identification	EC No	CAS No	GB MCL list Classification		Aligned with EU CLH ^a
				Hazard Class and Category Code(s)	Hazard statement code(s)	
602-095-00-X	alkanes, C ₁₄₋₁₇ , chloro; chlorinated paraffins, C ₁₄₋₁₇	287-477-0	85535-85-9	Lact. Aquatic Acute 1 Aquatic Chronic 1	H362 H400 H410	Y

^a EU CLH is harmonised classification and labelling in accordance with Regulation (EC) 1272/2008

2.3 Environmental hazard assessment

In September 2022, the POPRC adopted the Risk Profile for MCCPs, which summarises the available data (UNEP, 2022). As the Risk Profile was authored by the UK and the data have been extensively discussed and agreed internationally, the full study details are not repeated in this dossier, to avoid unnecessary duplication.

2.4 Conclusions on the SVHC properties

2.4.1 PBT and vPvB assessment

The conclusions of the POP Risk Profile (UNEP, 2022) are reported here.

2.4.1.1 Persistence

UNEP (2022) states “CPs with carbon chain lengths in the range C₁₄–17 and chlorination levels at or exceeding 45 per cent chlorine by weight meet the persistence criteria of the Convention. The C₁₄ chain length is considered to have a half-life exceeding 180 days in two types of aerobic sediment based on a laboratory test. Assessment of the persistence screening data indicates that the constituents with chlorination levels at or exceeding 45% chlorine by weight would also be expected to be persistent in sediment. Persistence in sediment is supported by sediment core monitoring data, where “MCCPs” can be detected at similar orders of magnitude across horizons spanning the last 8 years (and longer) in the same core. The persistence conclusion for the C₁₄ chain length can be applied to the C₁₅–17 chain lengths because they will be more adsorptive based on the measured and

predicted trends for water solubility and log K_{ow}. This is supported by the detection of these chain lengths in sediment, and notably, where data are available, the congener profile detected reflects that in commercial substances.”

The POP criterion for persistence (half-life >180 days in sediment) is the same as the vP criterion for freshwater sediment in Annex 13 of UK REACH. The Agency concludes that MCCPs containing constituents with at least a 45% chlorination level fulfil the P and vP criteria of Annex 13 of UK REACH.

2.4.1.2 Bioaccumulation

UNEP (2022) states “CPs with carbon chain lengths in the range C14–17 and chlorination levels at or exceeding 45 per cent chlorine by weight meet the bioaccumulation criteria of the Convention. All constituents have log K_{ow} values exceeding 5. Two recent laboratory fish bioaccumulation studies using C14 chain lengths show measured or estimated bioconcentration factor (BCF) values well above 5,000 L/kg. The available fish bioaccumulation laboratory studies for the C15, C16 and C18 chain lengths were not performed to current test guidelines nor to such a high standard as the modern tests for C14. Nevertheless, they indicate a high bioaccumulation potential for all three “MCCPs” chain lengths (although C17 was not tested, its bioaccumulation potential can be inferred to lie between that of C16 and C18). A non-guideline invertebrate bioaccumulation study using a C14–17 45% Cl wt. substance measured a BCF value well in excess of 5,000 for *Daphnia magna*. Field monitoring studies indicate that all chain lengths are bioavailable and can be detected in biota, including in top predators as well as in sensitive life stages (such as birds’ eggs). Where data are available, the congener profile in organisms is similar to the congener profile in environmental matrices such as soil and sediment, and wastewater treatment plant sludge, suggesting congener uptake reflects exposure. Overall, the bioaccumulation behaviour of the longer chain lengths appears to be broadly similar to C14. A number of field biomagnification studies are available, where biomagnification factors (BMFs) or trophic magnification factors (TMFs) both above and below 1 were calculated. Each field study has limitations, but the data indicate that the possibility of biomagnification of “MCCPs” cannot be excluded.”

The POP criterion for bioaccumulation (BCF >5000) is the same as that in the vB criteria in Annex 13 of UK REACH. The Agency concludes that MCCPs containing constituents with at least a 45% chlorination level fulfil the B and vB criteria of Annex 13 of UK REACH.

2.4.1.3 Toxicity

UNEP (2022) states “CPs with carbon chain lengths in the range C14–17 and chlorination levels at or exceeding 45 per cent chlorine by weight are shown to meet the adverse effects criteria of the Convention. A C14–17 chlorinated n-alkane, 52% Cl wt. is very toxic to *Daphnia magna* in both acute and long-term studies. This indicates significant toxicity to aquatic invertebrates which are an important part of aquatic food chains. Effects on organisms at this trophic level may reduce food availability at higher levels of the food

chain with potential population-level effects. Regulatory testing is designed to protect all organisms living in the environment, and is limited in scope for practical and ethical reasons. Therefore, high toxicity observed in one organism within a trophic level means that it cannot be excluded that others are equally or more affected (a general principal of regulatory ecotoxicology). For chemicals that are also shown to be persistent and bioaccumulative, the concern is also for unpredictable effects within the food chain. Internal haemorrhaging and death have been observed in rodent offspring in a mammalian reproduction study. This observation suggests that potential adverse effects could occur in mammals living in the environment and exposed to MCCPs via their diet. As the (eco)toxicity tests used a substance containing C_{14–17} chain lengths, all chain lengths are considered to contribute to the observed effects. The tests are also used to support regulatory submissions by suppliers covering all “MCCPs” products on the market (not just 52% Cl wt.) indicating the applicability of the studies to a broad range of chlorination levels.”

The most sensitive reliable endpoint reported was a 21-day NOEC for *Daphnia magna* with C_{14–17} chlorinated n-alkane, 52% Cl wt. of 0.0087 mg/L (Environment Agency, 2019; UNEP, 2022). Based on this study, the Agency concludes that MCCPs containing constituents with at least a 45% chlorination level fulfil the T criteria of Annex 13 of UK REACH (long-term NOEC for marine or freshwater organisms < 0.01 mg/L).

2.4.1.4 Overall conclusions on the PBT and vPvB properties

Based on the information available, the Agency concludes that MCCPs meeting the definition:

- (i) Substances or mixtures that contain linear chloroalkanes with carbon chain lengths in the range C_{14–17} and chlorination levels at or exceeding 45 per cent chlorine by weight; or
- (ii) Substances or mixtures that contain linear C_{14–17} chloroalkanes of the following molecular formulae: C₁₄H_(30–y)Cl_y where y ≥ 5; C₁₅H_(32–y)Cl_y where y ≥ 5; C₁₆H_(34–y)Cl_y where y ≥ 6; C₁₇H_(36–y)Cl_y where y ≥ 6

fulfil the PBT and vPvB criteria of Annex 13 of UK REACH and can therefore be identified as an SVHC in accordance with Article 57(d) and Article 57(e) of UK REACH.

Due to their method of manufacture, this conclusion is assumed to apply to all MCCP product types because they will contain constituents with PBT/vPvB properties above 0.1% w/w, unless a manufacturer or importer can demonstrate that their product does not meet the definition.

3. Information on use, exposure and alternatives

3.1 UK and EU REACH registration status and tonnage

Under UK REACH, the substance is registered with an aggregated tonnage of >1000 tonnes per annum (tpa).

No Downstream User Import Notifications (DUINs²) have been submitted.

Under EU REACH, the substance is registered with an aggregated tonnage of 10,000-100,000 tpa (14 active registrants).

3.2 General description of uses and exposure

Owing to the varying chain length and chlorine content of MCCPs, they have technical properties that support their use in a wide range of industrial and professional applications. Their main application has been in plastics (particularly PVC) and rubber, with other uses in textiles, coatings, adhesives, sealants, paints and metalworking reported. They function as flame retardants and (secondary) plasticisers, but also as lubricants, coolants, viscosity modifiers and waterproofing agents. MCCPs are also found in consumer products including PVC and rubber articles, automotive fluids (e.g., lubricants/greases), painted articles, paper products, textiles and cables (ECHA, 2021).

MCCPs can be released during manufacture, formulation, industrial use, disposal/recycling and gradually during the service life of products (ECHA, 2021). Releases are associated with major applications such as in PVC, metalworking fluids, paints, rubber, adhesives, and textiles, where MCCPs can leach, volatilise, or be washed off during use and processing. Emissions primarily enter wastewater systems and are subsequently distributed to aquatic and terrestrial environments (ECHA, 2021).

3.3 Alternatives

Due to the wide range of uses and technical properties exhibited by MCCPs (e.g. flexibility, flame retardancy, lubrication), direct (drop-in) alternatives are generally not available (ECHA, 2021). Replacements can be more expensive and/or multiple substances are required to achieve the equivalent performance. That said, ECHA (2021) suggests that

² GB-based companies who imported substances from EU-based suppliers before UK REACH became law on 1 January 2021 had no EU REACH registration obligations as they were classed as Downstream Users (DUs). As they are now importers from outside of GB, they may have registration obligations under UK REACH. However, a transitional measure allows former DUs to suspend the registration until one of three deadlines (depending on tonnage and hazard). Where the identity of these imported substances was known, they could be included in a Downstream User Import Notification (DUIN) submitted to the Agency.

alternatives are available for most uses, but trade-offs in performance and/or cost would be expected and replacement is very use-specific.

References

ECHA (2021) PROPOSAL FOR IDENTIFICATION OF A SUBSTANCE OF VERY HIGH CONCERN ON THE BASIS OF THE CRITERIA SET OUT IN REACH ARTICLE 57.

Available at: <https://echa.europa.eu/documents/10162/c4c72a94-44fb-bba0-ae17-875916108cd3>

Environment Agency (2019) Substance Evaluation Conclusion as required by REACH Article 48 and Evaluation Report for Medium-chain chlorinated paraffins / alkanes, C14-17, chloro EC No 287-477-0 CAS No 85535-85-9

<https://echa.europa.eu/documents/10162/a72b228a-e417-5b53-b2b9-3b45c8e6eec5>

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.: European Commission.

Available at: <http://data.europa.eu/eli/reg/2006/1907/2022-12-17>

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 (Text with EEA relevance). European Commission.

Available at: <http://data.europa.eu/eli/reg/2008/1272/2026-05-01>

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 (Text with EEA relevance). UK Government. Available at:

<https://www.legislation.gov.uk/eur/2008/1272/contents>

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 (Text with EEA relevance). UK Government. Available at:

<https://www.legislation.gov.uk/eur/2006/1907/contents>

UNEP (2022) Risk profile for chlorinated paraffins with carbon chain lengths in the range C14–17 and chlorination levels at or exceeding 45 per cent chlorine by weight

UNEP/POPS/POPRC.18/11/Add.3

<https://chm.pops.int/TheConvention/POPsReviewCommittee/Meetings/POPRC18/Overview/tabid/9165/ctl/Download/mid/26175/Default.aspx?id=40&ObjID=31391>

UNEP (2025a) SC-12/10: Listing of medium-chain chlorinated paraffins

<https://chm.pops.int/TheConvention/ConferenceoftheParties/ReportsandDecisions/tabid/208/ctl/Download/mid/10388/Default.aspx?id=50&ObjID=35618>

UNEP (2025b) Stockholm Convention on Persistent Organic Pollutants (POPs) text and annexes revised in 2025. <https://www.pops.int/Portals/0/download.aspx?e=UNEP-POPS-COP-CONVTEXT-2025.English.pdf>

Glossary

Agency, the	HSE
BCF	Bioconcentration factor
CAS	Chemical Abstracts Service
DT₅₀	Time taken for 50% decline in mass or concentration. If the decline is described by first order kinetics then this is also called the half-life
DU	Downstream User
DUIN	Downstream User Import Notification
ECHA	European Chemicals Agency
EC	European Community
EU	European Union
HSE	Health and Safety Executive
IUPAC	International Union of Pure and Applied Chemistry
K_{ow}	n-Octanol–water partition coefficient
LCCP	Long-chain chlorinated paraffins
MCCP	Medium-chain chlorinated paraffins
MCL	Mandatory classification and labelling
NOEC	No observed effect concentration
OECD	Organisation for Economic Cooperation and Development
PBT	Persistent, Bioaccumulative and Toxic
P	Persistent
pK_a	Acid dissociation constant (logarithmic form)
POP	Persistent organic pollutant
POPRC	Stockholm Convention POPs Review Committee
REACH	Registration, evaluation, authorisation and restriction of chemicals
SCCP	Short-chain chlorinated paraffins
SMILES	Simplified Molecular Input Line Entry System
SVHC	Substance of very high concern

TG	Test guideline
UNEP	United Nations Environment Programme
vB	Very bioaccumulative
vP	Very persistent
vPvB	Very persistent and very bioaccumulative

Appendix A

Environment Agency (2019) reports that around forty CAS numbers have been used to describe the whole chlorinated paraffin family at one time or another. Some of these are now historical, and others may be in use for the sole purpose of compliance with national or regional chemical inventories. It is possible that some may contain chlorinated alkanes in the C₁₄ to C₁₇ range, so these are presented in Table A1. This list may not necessarily be exhaustive.

Table A1. Other CAS and EC numbers associated with MCCPs

Substance	CAS number	EC number
Alkanes, chloro	61788-76-9	263-004-3
Alkanes, C ₆₋₁₈ , chloro	68920-70-7	272-924-4
Alkanes, C ₁₀₋₁₄ , chloro	85681-73-8	288-211-6
Alkanes, C ₁₀₋₂₁ , chloro	84082-38-2	281-985-6
Alkanes, C ₁₀₋₂₆ , chloro	97659-46-6	307-451-5
Alkanes, C ₁₀₋₃₂ , chloro	84776-06-7	283-930-1
Alkanes, C ₁₂₋₁₄ , chloro	85536-22-7	287-504-6
Alkanes, C ₁₄ , chloro	-	-
Alkanes, C ₁₄₋₁₆ , chloro	1372804-76-6	-
Alkanes, C ₁₆₋₂₇ , chloro	84776-07-8	283-931-7
Alkanes, C ₁₆₋₃₅ , chloro	85049-26-9	285-195-2
Reaction mass of Alkanes, C ₁₄₋₁₇ , chloro and Paraffin waxes and Hydrocarbon waxes, chloro	915-934-2	-
Paraffin oils and hydrocarbon oils, chloro	85422-92-0	287-196-3
Paraffins (petroleum), normal C>10, chloro	97553-43-0	307-202-0
Slackwax (petroleum), chloro	2097144-44-8	-
Tetradecane, chloro derivatives	198840-65-2	-

Further information

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