

## ANNEX I

## Part A

**Substances listed in the Convention and in the Protocol as well as substances listed only in the Convention**

Substance	CAS No	EC No	Specific exemption on intermediate use or other specification
Tetrabromodiphenyl ether $C_{12}H_6Br_4O$	40088-47-9 and others	254-787-2 and others	<ol style="list-style-type: none"> <li>For the purposes of this entry, point (b) of Article 4(1) shall apply to concentrations of Tetrabromodiphenyl ether equal to or below 10 mg/kg (0,001 % by weight) where it is present in substances.</li> <li>For the purposes of the entries on tetra-, penta-, hexa-, hepta- and decaBDE, point (b) of Article 4(1) shall apply to the sum of the concentration of those substances up to 500 mg/kg where they are present in mixtures or articles, subject to review and assessment by the Commission by 16 July 2021. This review shall assess, inter alia, all relevant impacts with regard to health and the environment.</li> <li>By way of derogation, the manufacturing, placing on the market and use of the following shall be allowed: electrical and electronic equipment within the scope of Directive 2011/65/EC of the European Parliament and of the Council <sup>(1)</sup>.</li> <li>Use of articles already in use in the Union before 25 August 2010 containing Tetrabromodiphenyl ether shall be allowed. Article 4(2), third and fourth subparagraphs shall apply in relation to such articles.</li> </ol>
Pentabromodiphenyl ether $C_{12}H_5Br_5O$	32534-81-9 and others	251-084-2 and others	<ol style="list-style-type: none"> <li>For the purposes of this entry, point (b) of Article 4(1) shall apply to concentrations of pentabromodiphenyl ether equal to or below 10 mg/kg (0,001 % by weight) where it is present in substances.</li> <li>For the purposes of the entries on tetra-, penta-, hexa-, hepta- and decaBDE, point (b) of Article 4(1) shall apply to the sum of the concentration of those substances up to 500 mg/kg where they are present in mixtures or articles, subject to review and assessment by the Commission by 16 July 2021. This review shall assess, inter alia, all relevant impacts with regard to health and the environment.</li> <li>By way of derogation, the manufacturing, placing on the market and use of the following shall be allowed: electrical and electronic equipment within the scope of Directive 2011/65/EC.</li> <li>Use of articles already in use in the Union before 25 August 2010 containing Pentabromodiphenyl ether shall be allowed. Article 4(2), third and fourth subparagraphs shall apply in relation to such articles.</li> </ol>
Hexabromodiphenyl ether $C_{12}H_4Br_6O$	36483-60-0 and others	253-058-6 and others	<ol style="list-style-type: none"> <li>For the purposes of this entry, point (b) of Article 4(1) shall apply to concentrations of hexabromodiphenyl ether equal to or below 10 mg/kg (0,001 % by weight) where it is present in substances.</li> </ol>

Substance	CAS No	EC No	Specific exemption on intermediate use or other specification
			<ol style="list-style-type: none"> <li>For the purposes of the entries on tetra-, penta-, hexa-, hepta- and decaBDE, point (b) of Article 4(1) shall apply to the sum of the concentration of those substances up to 500 mg/kg where they are present in mixtures or articles, subject to review and assessment by the Commission by 16 July 2021. This review shall assess, inter alia, all relevant impacts with regard to health and the environment.</li> <li>By way of derogation, the manufacturing, placing on the market and use of the following shall be allowed: electrical and electronic equipment within the scope of Directive 2011/65/EC.</li> <li>Use of articles already in use in the Union before 25 August 2010 containing Hexabromodiphenyl ether shall be allowed. Article 4(2), third and fourth subparagraphs shall apply in relation to such articles.</li> </ol>
Heptabromodiphenyl ether $C_{12}H_3Br_7O$	68928-80-3 and others	273-031-2 and others	<ol style="list-style-type: none"> <li>For the purposes of this entry, point (b) of Article 4(1) shall apply to concentrations of heptabromodiphenyl ether equal to or below 10 mg/kg (0,001 % by weight) where it is present in substances.</li> <li>For the purposes of the entries on tetra-, penta-, hexa-, hepta- and decaBDE, point (b) of Article 4(1) shall apply to the sum of the concentration of those substances up to 500 mg/kg where they are present in mixtures or articles, subject to review and assessment by the Commission by 16 July 2021. This review shall assess, inter alia, all relevant impacts with regard to health and the environment.</li> <li>By way of derogation, the manufacturing, placing on the market and use of the following shall be allowed: electrical and electronic equipment within the scope of Directive 2011/65/EC.</li> <li>Use of articles already in use in the Union before 25 August 2010 containing Heptabromodiphenyl ether shall be allowed. Article 4(2), third and fourth subparagraphs shall apply in relation to such articles.</li> </ol>
Bis(pentabromophenyl) ether (decabromodiphenyl ether; decaBDE)	1163-19-5	214-604-9	<ol style="list-style-type: none"> <li>For the purposes of this entry, point (b) of Article 4(1) shall apply to concentrations of decaBDE equal to or below 10 mg/kg (0,001 % by weight) where it is present in substances.</li> <li>For the purposes of the entries on tetra-, penta-, hexa-, hepta- and decaBDE, point (b) of Article 4(1) shall apply to the sum of the concentrations of those substances up to 500 mg/kg where they are present in mixtures or articles, subject to review and assessment by the Commission by 16 July 2021. This review shall assess, inter alia, all relevant impacts with regard to health and the environment.</li> <li>By way of derogation, the manufacturing, placing on the market and use of decaBDE shall be allowed for the following purposes, provided that Member States report to the Commission by December 2019 in accordance with the Convention: <ol style="list-style-type: none"> <li>in the manufacturing of an aircraft, for which type approval has been applied for before 2 March 2019 and has been received before December 2022, until 18 December 2023, or, in cases where the continuing need is justified, until 2 March 2027;</li> </ol> </li> </ol>

Substance	CAS No	EC No	Specific exemption on intermediate use or other specification
			<p>(b) in the manufacturing of spare parts for either of the following:</p> <p>(i) an aircraft, for which type approval has been applied for before 2 March 2019 and has been received before December 2022, produced before 18 December 2023, or, in cases where the continuing need is justified, produced before 2 March 2027, until the end of service life of that aircraft;</p> <p>(ii) motor vehicles within the scope of Directive 2007/46/EC of the European Parliament and of the Council <sup>(2)</sup>, produced before 15 July 2019, either until 2036 or the end of service life of those motor vehicles, whichever date comes earlier;</p> <p>(c) electric and electronic equipment within the scope of Directive 2011/65/EC.</p> <p>4. The specific exemptions for spare parts for use in motor vehicles referred to in point 2(b)(ii) shall apply for the manufacturing and use of commercial decaBDE falling into one or more of the following categories:</p> <p>(a) powertrain and under-hood applications such as battery mass wires, battery interconnection wires, mobile air condition (MAC) pipes, powertrains, exhaust manifold bushings, under-hood insulation, wiring and harness under-hood (engine wiring, etc.), speed sensors, hoses, fan modules and knock sensors;</p> <p>(b) fuel system applications such as fuel hoses, fuel tanks and fuel tanks under body;</p> <p>(c) pyrotechnical devices and applications affected by pyrotechnical devices such as airbag ignition cables, seat covers/fabrics, only if airbag relevant and airbags (front and side).</p> <p>5. Use of articles already in use before 15 July 2019 in the Union containing decaBDE shall be allowed. Article 4(2), third and fourth subparagraphs shall apply in relation to such articles.</p> <p>6. Without prejudice to the application of other Union provisions on the classification, packaging and labelling of substances and mixtures, articles in which decaBDE is used shall be identifiable by labelling or other means throughout its life cycle.</p> <p>7. The placing on the market and use of articles containing decaBDE imported for the purposes of the specific exemptions in point 2 shall be allowed until the expiry of those exemptions. Point 6 shall apply as if such articles were produced pursuant to the exemption in point 2. Such articles already in use by the date of expiry of the relevant exemption may continue to be used.</p> <p>8. For the purposes of this entry 'aircraft' means the following:</p> <p>(a) a civil aircraft produced in accordance with a type certificate issued under Regulation (EC) No 216/2008 of the European Parliament and of the Council <sup>(3)</sup> or with a design approval issued under the national regulations of a contracting state of ICAO, or for which a certificate of airworthiness has been issued by an ICAO Contracting State under Annex 8 to the Convention on International Civil Aviation;</p> <p>(b) a military aircraft.</p>

Substance	CAS No	EC No	Specific exemption on intermediate use or other specification
Perfluorooctane sulfonic acid and its derivatives (PFOS) $C_8F_{17}SO_2X$ (X = OH, Metal salt (O-M+), halide, amide, and other derivatives including polymers)	1763-23-1 2795-39-3 29457-72-5 29081-56-9 70225-14-8 56773-42-3 251099-16-8 4151-50-2 31506-32-8 1691-99-2 24448-09-7 307-35-7 and others	217-179-8 220-527-1 249-644-6 249-415-0 274-460-8 260-375-3 223-980-3 250-665-8 216-887-4 246-262-1 206-200-6 and others	<ol style="list-style-type: none"> <li>For the purposes of this entry, point (b) of Article 4(1) shall apply to concentrations of PFOS equal to or below 10 mg/kg (0,001 % by weight) where it is present in substances or in mixtures.</li> <li>For the purposes of this entry, point (b) of Article 4(1) shall apply to concentrations of PFOS in semi-finished products or articles, or parts thereof, if the concentration of PFOS is lower than 0,1 % by weight calculated with reference to the mass of structurally or micro-structurally distinct parts that contain PFOS or, for textiles or other coated materials, if the amount of PFOS is lower than 1 µg/m<sup>2</sup> of the coated material.</li> <li>Use of articles already in use in the Union before 25 August 2010 containing PFOS shall be allowed. Article 4(2), third and fourth subparagraphs shall apply in relation to such articles.</li> <li>If the quantity released into the environment is minimised, manufacturing and placing on the market is allowed for the following specific uses provided that Member States report to the Commission every four years on progress made to eliminate PFOS: <ul style="list-style-type: none"> <li>mist suppressants for non-decorative hard chromium (VI) plating in closed loop systems.</li> </ul> <p>Where such a derogation concerns production or use in an installation within the scope of Directive 2008/1/EC of the European Parliament and of the Council <sup>(4)</sup>, the relevant best available techniques for the prevention and minimisation of emissions of PFOS described in the information published by the Commission pursuant to Article 17(2), second subparagraph, of Directive 2008/1/EC shall apply.</p> <p>As soon as new information on details of uses and safer alternative substances or technologies becomes available, the Commission shall review the derogation in the second subparagraph so that:</p> <ol style="list-style-type: none"> <li>the uses of PFOS will be phased out as soon as the use of safer alternatives is technically and economically feasible;</li> <li>a derogation can only be continued for essential uses for which safer alternatives do not exist and where the efforts undertaken to find safer alternatives have been reported on;</li> <li>releases of PFOS into the environment have been minimised by applying best available techniques.</li> </ol> </li> <li>Once standards are adopted by the European Committee for Standardisation (CEN) they shall be used as the analytical test methods for demonstrating the conformity of substances, mixtures and articles to points 1 and 2. Any other analytical method for which the user can prove equivalent performance could be used as an alternative to the CEN standards.</li> </ol>
DDT (1,1,1-trichloro-2,2-bis (4-chlorophenyl)ethane)	50-29-3	200-024-3	—
Chlordane	57-74-9	200-349-0	—
Hexachlorocyclohexanes, including lindane	58-89-9	200-401-2	—

Substance	CAS No	EC No	Specific exemption on intermediate use or other specification
	319-84-6	206-270-8	
	319-85-7	206-271-3	
	608-73-1	210-168-9	
Dieldrin	60-57-1	200-484-5	—
Endrin	72-20-8	200-775-7	—
Heptachlor	76-44-8	200-962-3	—
Endosulfan	115-29-7 959-98-8 33213-65-9	204-079-4	1. Placing on the market and use of articles already in use before or on 10 July 2012 containing endosulfan shall be allowed. 2. Article 4(2), third and fourth subparagraphs shall apply to articles referred to in point 1.
Hexachlorobenzene	118-74-1	204-273-9	—
Chlordecone	143-50-0	205-601-3	—
Aldrin	309-00-2	206-215-8	—
Pentachlorobenzene	608-93-5	210-172-0	—
Polychlorinated Biphenyls (PCB)	1336-36-3 and others	215-648-1 and others	Without prejudice to Directive 96/59/EC, articles already in use at the time of the entry into force of this Regulation are allowed to be used. Member States shall identify and remove from use equipment (e.g. transformers, capacitors or other receptacles containing liquid stocks) containing more than 0,005 % PCBs and volumes greater than 0,05 dm <sup>3</sup> , as soon as possible but no later than 31 December 2025.
Mirex	2385-85-5	219-196-6	—
Toxaphene	8001-35-2	232-283-3	—
Hexabromobiphenyl	36355-01-8	252-994-2	—
1 Hexabromocyclododecane 'Hexabromocyclododecane' means: hexabromocyclododecane, 1,2,5,6,9,10-hexabromocyclododecane and its main diastereoisomers: alpha-hexabromocyclododecane; beta-hexabromocyclododecane; and gamma-hexabromocyclododecane	25637-99-4, 3194-55-6, 134237-50-6, 134237-51-7, 134237-52-8	247-148-4, 221-695-9	1. For the purposes of this entry, point (b) of Article 4(1) shall apply to concentrations of hexabromocyclododecane equal to or below 100 mg/kg (0,01 % by weight) where it is present in substances, mixtures, articles or as constituents of the flame-retarded articles, subject to review by the Commission by 22 March 2019.

Substance	CAS No	EC No	Specific exemption on intermediate use or other specification
			<p>2. Expanded polystyrene articles containing hexabromocyclododecane already in use in buildings before 21 February 2018 in accordance with Commission Regulation (EU) 2016/293 <sup>(5)</sup> and Commission Implementing Decision No 2016/C 12/06 <sup>(6)</sup>, and extruded polystyrene articles containing hexabromocyclododecane already in use in buildings before 23 June 2016 may continue to be used. Article 4(2), third and fourth subparagraphs shall apply to such articles.</p> <p>3. Without prejudice to the application of other Union provisions on the classification, packaging and labelling of substances and mixtures, expanded polystyrene placed on the market after 23 March 2016 in which hexabromocyclododecane was used shall be identifiable by labelling or other means throughout its life cycle.</p>
Hexachlorobutadiene	87-68-3	201-765-5	<p>1. Placing on the market and use of articles already in use before or on 10 July 2012 containing hexachlorobutadiene shall be allowed.</p> <p>2. Article 4(2), third and fourth subparagraphs shall apply to articles referred to in point 1.</p>
Pentachlorophenol and its salts and esters	87-86-5 and others	201-778-6 and others	
Polychlorinated naphthalenes <sup>(7)</sup>	70776-03-3 and others	274-864-4 and others	<p>1. Placing on the market and use of articles already in use before or on 10 July 2012 containing polychlorinated naphthalenes shall be allowed.</p> <p>2. Article 4(2), third and fourth subparagraphs shall apply to articles referred to in point 1.</p>
Alkanes C <sub>10</sub> -C <sub>13</sub> , chloro (short-chain chlorinated paraffins) (SCCPs)	85535-84-8 and others	287-476-5	<p>1. By way of derogation, the manufacturing, placing on the market and use of substances or mixtures containing SCCPs in concentrations lower than 1 % by weight or articles containing SCCPs in concentrations lower than 0,15 % by weight shall be allowed.</p> <p>2. Use shall be allowed in respect of:</p> <ul style="list-style-type: none"> <li>(a) conveyor belts in the mining industry and dam sealants containing SCCPs already in use before or on 4 December 2015; and</li> <li>(b) articles containing SCCPs other than those referred to in point (a) already in use before or on 10 July 2012.</li> </ul> <p>3. The third and fourth subparagraphs of Article 4(2) shall apply to the articles referred to in point 2.</p>

<sup>(1)</sup> Directive 2011/65/EU of the European Parliament and of the Council of 8 June 2011 on the restriction of the use of certain hazardous substances in electrical and electronic equipment (OJ L 174, 1.7.2011, p. 88).

<sup>(2)</sup> Directive 2007/46/EC of the European Parliament and of the Council of 5 September 2007 establishing a framework for the approval of motor vehicles and their trailers, and of systems, components and separate technical units intended for such vehicles (Framework Directive) (OJ L 263, 9.10.2007, p.1).

<sup>(3)</sup> Regulation (EC) No 216/2008 of the European Parliament and of the Council of 20 February 2008 on common rules in the field of civil aviation and establishing a European Aviation Safety Agency, and repealing Council Directive 91/670/EEC, Regulation (EC) No 1592/2002 and Directive 2004/36/EC (OJ L 79, 19.3.2008, p. 1).

<sup>(4)</sup> Directive 2008/1/EC of the European Parliament and of the Council of 15 January 2008 concerning integrated pollution prevention and control (OJ L 24, 29.1.2008, p. 8).

<sup>(5)</sup> Commission Regulation (EU) 2016/293 of 1 March 2016 amending Regulation (EC) No 850/2004 of the European Parliament and of the Council on persistent organic pollutants as regards Annex I (OJ L 55, 2.3.2016, p. 4).

<sup>(6)</sup> OJ C 10, 13.1.2016, p. 3.

<sup>(7)</sup> Polychlorinated naphthalenes means chemical compounds based on the naphthalene ring system, where one or more hydrogen atoms have been replaced by chlorine atoms.

**Part B****Substances listed only in the Protocol**

Substance	CAS No	EC No	Specific exemption on intermediate use or other specification

## ANNEX II

## LIST OF SUBSTANCES SUBJECT TO RESTRICTIONS

**Part A****Substances listed in the Convention and in the Protocol**

Substance	CAS No	EC No	Conditions of restriction

**Part B****Substances listed only in the Protocol**

Substance	CAS No	EC No	Conditions of restriction



## ANNEX III

## LIST OF SUBSTANCES SUBJECT TO RELEASE REDUCTION PROVISIONS

## PART A

Substance (CAS No)

Polychlorinated dibenzo-p-dioxins and dibenzofurans (PCDD/PCDF)

Polychlorinated biphenyls (PCB)

## PART B

Hexachlorobenzene (HCB) (CAS No 118-74-1)

Polycyclic aromatic hydrocarbons (PAHs) <sup>(1)</sup>

Pentachlorobenzene (CAS No 608-93-5)

Hexachlorobutadiene (CAS No 87-68-3)

Polychlorinated naphthalenes (CAS No 70776-03-3 and others)

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<sup>(1)</sup> For the purpose of emission inventories, the following four compound indicators shall be used: benzo(a)pyrene, benzo(b) fluoranthene, benzo(k)fluoranthene and indeno(1,2,3-cd)pyrene.

## ANNEX IV

**List of substances subject to waste management provisions set out in Article 7**

Substance	CAS No	EC No	Concentration limit referred to in Article 7(4)(a)
Endosulfan	115-29-7 959-98-8 33213-65-9	204-079-4	50 mg/kg
Hexachlorobutadiene	87-68-3	201-765-5	100 mg/kg
Polychlorinated naphthalenes <sup>(1)</sup>			10 mg/kg
Alkanes C <sub>10</sub> -C <sub>13</sub> , chloro (short-chain chlorinated paraffins) (SCCPs)	85535-84-8	287-476-5	10 000 mg/kg
Tetrabromodiphenyl ether C <sub>12</sub> H <sub>6</sub> Br <sub>4</sub> O	40088-47-9 and others	254-787-2 and others	Sum of the concentrations of tetrabromodiphenyl ether, pentabromodiphenyl ether, hexabromodiphenyl ether, heptabromodiphenyl ether and decabromodiphenyl ether: 1 000 mg/kg.  The Commission shall review that concentration limit and shall, where appropriate and in accordance with the Treaties, adopt a legislative proposal to lower that value to 500 mg/kg. The Commission shall carry out such review as soon as possible and, in any event, not later than 16 July 2021.
Pentabromodiphenyl ether C <sub>12</sub> H <sub>5</sub> Br <sub>5</sub> O	32534-81-9 and others	251-084-2 and others	
Hexabromodiphenyl ether C <sub>12</sub> H <sub>4</sub> Br <sub>6</sub> O	36483-60-0 and others	253-058-6 and others	
Heptabromodiphenyl ether C <sub>12</sub> H <sub>3</sub> Br <sub>7</sub> O	68928-80-3 and others	273-031-2 and others	
Decabromodiphenyl ether C <sub>12</sub> Br <sub>10</sub> O	1163-19-5 and others	214-604-9 and others	
Perfluorooctane sulfonic acid and its derivatives (PFOS) C <sub>8</sub> F <sub>17</sub> SO <sub>2</sub> X (X = OH, Metal salt (O-M <sup>+</sup> ), halide, amide, and other derivatives including polymers)	1763-23-1 2795-39-3 29457-72-5 29081-56-9 70225-14-8 56773-42-3 251099-16-8 4151-50-2 31506-32-8 1691-99-2 24448-09-7 307-35-7 and others	217-179-8 220-527-1 249-644-6 249-415-0 274-460-8 260-375-3 223-980-3 250-665-8 216-887-4 246-262-1 206-200-6 and others	50 mg/kg
Polychlorinated dibenzo-p-dioxins and dibenzofurans (PCDD/PCDF)			15 µg/kg <sup>(2)</sup>
DDT (1,1,1-trichloro-2,2-bis (4-chlorophenyl)ethane)	50-29-3	200-024-3	50 mg/kg
Chlordane	57-74-9	200-349-0	50 mg/kg

Substance	CAS No	EC No	Concentration limit referred to in Article 7(4)(a)
Hexachlorocyclohexanes, including lindane	58-89-9 319-84-6 319-85-7 608-73-1	210-168-9 200-401-2 206-270-8 206-271-3	50 mg/kg
Dieldrin	60-57-1	200-484-5	50 mg/kg
Endrin	72-20-8	200-775-7	50 mg/kg
Heptachlor	76-44-8	200-962-3	50 mg/kg
Hexachlorobenzene	118-74-1	204-273-9	50 mg/kg
Chlordecone	143-50-0	205-601-3	50 mg/kg
Aldrin	309-00-2	206-215-8	50 mg/kg
Pentachlorobenzene	608-93-5	210-172-0	50 mg/kg
Polychlorinated Biphenyls (PCB)	1336-36-3 and others	215-648-1	50 mg/kg <sup>(3)</sup>
Mirex	2385-85-5	219-196-6	50 mg/kg
Toxaphene	8001-35-2	232-283-3	50 mg/kg
Hexabromobiphenyl	36355-01-8	252-994-2	50 mg/kg
Hexabromocyclododecane <sup>(4)</sup>	25637-99-4, 3194-55-6, 134237-50-6, 134237-51-7, 134237-52-8	247-148-4 221-695-9	1 000 mg/kg, subject to review by the Commission by 20 April 2019

(1) Polychlorinated naphthalenes means chemical compounds based on the naphthalene ring system, where one or more hydrogen atoms have been replaced by chlorine atoms.

(2) The limit is calculated as PCDD and PCDF according to the following toxic equivalency factors (TEFs):

PCDD	TEF	PCDF	TEF	PCDD	TEF
2,3,7,8-TeCDD	1	2,3,7,8-TeCDF	0,1	1,2,3,6,7,8-HxCDF	0,1
1,2,3,7,8-PeCDD	1	1,2,3,7,8-PeCDF	0,03	1,2,3,7,8,9-HxCDF	0,1
1,2,3,4,7,8-HxCDD	0,1	2,3,4,7,8-PeCDF	0,3	2,3,4,6,7,8-HxCDF	0,1
1,2,3,6,7,8-HxCDD	0,1	1,2,3,4,7,8-HxCDF	0,1	1,2,3,4,6,7,8-HpCDF	0,01
1,2,3,7,8,9-HxCDD	0,1			1,2,3,4,7,8,9-HpCDF	0,01
1,2,3,4,6,7,8-HpCDD	0,01			OCDF	0,0003
OCDD	0,0003				

(3) The calculation method laid down in European standards EN 12766-1 and EN 12766-2 shall apply.

(4) 'Hexabromocyclododecane' means hexabromocyclododecane, 1,2,5,6,9,10-hexabromocyclododecane and its main diastereoisomers: alpha-hexabromocyclododecane, beta-hexabromocyclododecane and gamma-hexabromocyclododecane.

## ANNEX V

## WASTE MANAGEMENT

## Part 1

## Disposal and recovery under Article 7(2)

The following disposal and recovery operations, as provided for in Annexes I and II of Directive 2008/98/EC, are permitted for the purposes of Article 7(2), when applied in such a way as to ensure that the persistent organic pollutant content is destroyed or irreversibly transformed

D9	Physico-chemical treatment.
D10	Incineration on land.
R1	Use principally as a fuel or other means to generate energy, excluding waste containing PCBs.
R4	Recycling/reclamation of metals and metal compounds, under the following conditions: The operations are restricted to residues from iron- and steel-making processes such as dusts or sludges from gas treatment or mill scale or zinc-containing filter dusts from steelworks, dusts from gas cleaning systems of copper smelters and similar wastes and lead-containing leaching residues of the non-ferrous metal production. Waste containing PCBs is excluded. The operations are restricted to processes for the recovery of iron and iron alloys (blast furnace, shaft furnace and hearth furnace) and non-ferrous metals (Waelz rotary kiln process, bath melting processes using vertical or horizontal furnaces), provided the facilities meet as minimum requirements the emission limit values for PCDDs and PCDFs laid down in accordance with Directive 2010/75/EU of the European Parliament and of the Council <sup>(1)</sup> , whether or not the processes are subject to that Directive and without prejudice to the other provisions of the Directive.

<sup>(1)</sup> Directive 2010/75/EU of the European Parliament and of the Council of 24 November 2010 on industrial emissions (integrated pollution prevention and control) (OJ L 334, 17.12.2010, p. 17).

Pre-treatment operation prior to destruction or irreversible transformation pursuant to this Part of this Annex may be performed, provided that a substance listed in Annex IV that is isolated from the waste during the pre-treatment is subsequently disposed of in accordance with this Part of this Annex. Where only part of a product or waste, such as waste equipment, contains or is contaminated with persistent organic pollutants, it shall be separated and then disposed of in accordance with the requirements of this Regulation. In addition, repackaging and temporary storage operations may be performed prior to such pre-treatment or prior to destruction or irreversible transformation pursuant to this part of this Annex.

## Part 2

## Wastes and operations to which Article 7(4)(b) applies

The following operations are permitted for the purposes of Article 7(4)(b) in respect of the wastes specified, defined by the six-digit code as classified in Commission Decision 2000/532/EC <sup>(1)</sup>.

Pre-treatment operations prior to permanent storage pursuant to this part of this Annex may be performed, provided that a substance listed in Annex IV that is isolated from the waste during the pre-treatment is subsequently disposed of in accordance with Part 1 of this Annex. In addition, repackaging and temporary storage operations may be performed prior to such pre-treatment or prior to permanent storage pursuant to this part of this Annex.

<sup>(1)</sup> Commission Decision 2000/532/EC of 3 May 2000 replacing Decision 94/3/EC establishing a list of wastes pursuant to Article 1(a) of Council Directive 75/442/EEC on waste and Council Decision 94/904/EC establishing a list of hazardous waste pursuant to Article 1(4) of Council Directive 91/689/EEC on hazardous waste (OJ L 226, 6.9.2000, p. 3).

Wastes as classified in Decision 2000/532/EC		Maximum concentration limits of substances listed in Annex IV <sup>(1)</sup>	Operation
10	WASTES FROM THERMAL PROCESSES	Alkanes C <sub>10</sub> -C <sub>13</sub> , chloro (short-chain chlorinated paraffins) (SCCPs): 10 000 mg/kg;	<p>Permanent storage shall be allowed only when all the following conditions are met:</p> <p>(1) The storage takes place in one of the following locations:</p> <ul style="list-style-type: none"> <li>— safe, deep, underground, hard rock formations,</li> <li>— salt mines,</li> <li>— a landfill site for hazardous waste, provided that the waste is solidified or partly stabilised where technically feasible as required for classification of the waste in subchapter 19 03 of Decision 2000/532/EC.</li> </ul> <p>(2) The provisions of Council Directive 1999/31/EC <sup>(4)</sup> and Council Decision 2003/33/EC <sup>(5)</sup> were respected.</p> <p>(3) It has been demonstrated that the selected operation is environmentally preferable.</p>
10 01	Wastes from power stations and other combustion plants (except 19)	Aldrin: 5 000 mg/kg;	
		Chlordane: 5 000 mg/kg;	
10 01 14 * <sup>(2)</sup>	Bottom ash, slag and boiler dust from co-incineration containing hazardous substances	Chlordecone: 5 000 mg/kg;	
		DDT (1,1,1-trichloro-2,2-bis (4-chlorophenyl) ethane): 5 000 mg/kg;	
		Dieldrin: 5 000 mg/kg;	
10 01 16 *	Fly ash from co-incineration containing hazardous substances	Endosulfan: 5 000 mg/kg;	
		Endrin: 5 000 mg/kg;	
10 02	Wastes from the iron and steel industry	Heptachlor: 5 000 mg/kg;	
		Hexabromobiphenyl: 5 000 mg/kg;	
		Hexabromocyclododecane <sup>(3)</sup> : 1 000 mg/kg;	
10 02 07 *	Solid wastes from gas treatment containing hazardous substances	Hexachlorobenzene: 5 000 mg/kg;	
		Hexachlorobutadiene: 1 000 mg/kg;	
10 03	Wastes from aluminium thermal metallurgy	Hexachlorocyclohexanes, including lindane: 5 000 mg/kg;	
		Mirex: 5 000 mg/kg;	
10 03 04 *	Primary production slags	Pentachlorobenzene: 5 000 mg/kg;	
		Perfluorooctane sulfonic acid and its derivatives (PFOS) (C <sub>8</sub> F <sub>17</sub> SO <sub>2</sub> X) (X = OH, Metal salt (O-M <sup>+</sup> ), halide, amide, and other derivatives including polymers): 50 mg/kg;	
10 03 08 *	Salt slags from secondary production	Polychlorinated Biphenyls (PCB) <sup>(6)</sup> : 50 mg/kg;	
10 03 09 *	Black drosses from secondary production	Polychlorinated dibenzo-p-dioxins and dibenzofurans: 5 mg/kg;	
10 03 19 *	Flue-gas dust containing hazardous substances	Polychlorinated naphthalenes <sup>(*)</sup> : 1 000 mg/kg;	
10 03 21 *	Other particulates and dust (including ball-mill dust) containing hazardous substances	Sum of the concentrations of tetrabromodiphenyl ether C <sub>12</sub> H <sub>6</sub> Br <sub>4</sub> O), pentabromodiphenyl ether (C <sub>12</sub> H <sub>5</sub> Br <sub>5</sub> O), hexabromodiphenyl ether (C <sub>12</sub> H <sub>4</sub> Br <sub>6</sub> O) and heptabromodiphenyl ether (C <sub>12</sub> H <sub>3</sub> Br <sub>7</sub> O): 10 000 mg/kg;	
10 03 29 *	Wastes from treatment of salt slags and black drosses containing hazardous substances	Toxaphene: 5 000 mg/kg.	
10 04	Wastes from lead thermal metallurgy		
10 04 01 *	Slags from primary and secondary production		
10 04 02 *	Dross and skimmings from primary and secondary production		
10 04 04 *	Flue-gas dust		

Wastes as classified in Decision 2000/532/EC		Maximum concentration limits of substances listed in Annex IV <sup>(1)</sup>	Operation
10 04 05 *	Other particulates and dust		
10 04 06 *	Solid wastes from gas treatment		
10 05	Wastes from zinc thermal metallurgy		
10 05 03 *	Flue-gas dust		
10 05 05 *	Solid waste from gas treatment		
10 06	Wastes from copper thermal metallurgy		
10 06 03 *	Flue-gas dust		
10 06 06 *	Solid wastes from gas treatment		
10 08	Wastes from other non-ferrous thermal metallurgy		
10 08 08 *	Salt slag from primary and secondary production		
10 08 15 *	Flue-gas dust containing hazardous substances		
10 09	Wastes from casting of ferrous pieces		
10 09 09 *	Flue-gas dust containing hazardous substances		
16	WASTES NOT OTHERWISE SPECIFIED IN THE LIST		
16 11	Waste linings and refractories		
16 11 01 *	Carbon-based linings and refractories from metallurgical processes containing hazardous substances		
16 11 03 *	Other linings and refractories from metallurgical processes containing hazardous substances		
17	CONSTRUCTION AND DEMOLITION WASTES (INCLUDING EXCAVATED SOIL FROM CONTAMINATED SITES)		
17 01	Concrete, bricks, tiles and ceramics		

Wastes as classified in Decision 2000/532/EC		Maximum concentration limits of substances listed in Annex IV <sup>(1)</sup>	Operation
17 01 06 *	Mixtures of, or separate fractions of concrete, bricks, tiles and ceramics containing hazardous substances		
17 05	Soil (including excavated soil from contaminated sites), stones and dredging spoil		
17 05 03 *	Soil and stones containing hazardous substances		
17 09	Other construction and demolition wastes		
17 09 02 *	Construction and demolition wastes containing PCB, excluding PCB containing equipment		
17 09 03 *	Other construction and demolition wastes (including mixed wastes) containing hazardous substances		
19	WASTES FROM WASTE MANAGEMENT FACILITIES, OFF-SITE WASTE WATER TREATMENT PLANTS AND THE PREPARATION OF WATER INTENDED FOR HUMAN CONSUMPTION AND WATER FROM INDUSTRIAL USE		
19 01	Wastes from incineration or pyrolysis of waste		
19 01 07 *	Solid wastes from gas treatment		
19 01 11 *	Bottom ash and slag containing hazardous substances		
19 01 13 *	Fly ash containing hazardous substances		
19 01 15 *	Boiler dust containing hazardous substances		
19 04	Vitrified waste and waste from vitrification		
19 04 02 *	Fly ash and other flue-gas treatment wastes		
19 04 03 *	Non-vitrified solid phase		

<sup>(1)</sup> These limits apply exclusively to a landfill site for hazardous waste and do not apply to permanent underground storage facilities for hazardous waste, including salt mines.

<sup>(2)</sup> Any waste marked with an asterisk \* is considered as hazardous waste pursuant to Directive 2008/98/EC and is subject to the provisions of that Directive.

<sup>(3)</sup> 'Hexabromocyclododecane' means hexabromocyclododecane, 1,2,5,6,9,10-hexabromocyclododecane and its main diastereoisomers: alpha- hexabromocyclododecane, beta- hexabromocyclododecane and gamma- hexabromocyclododecane.

<sup>(4)</sup> Council Directive 1999/31/EC of 26 April 1999 on the landfill of waste (OJ L 182, 16.7.1999, p. 1).

<sup>(5)</sup> Council Decision 2003/33/EC of 19 December 2002 establishing criteria and procedures for the acceptance of waste at landfills pursuant to Article 16 of and Annex II to Directive 1999/31/EC (OJ L 11, 16.1.2003, p. 27).

<sup>(6)</sup> The calculation method laid down in European standards EN 12766-1 and EN 12766-2 shall apply.

The maximum concentration limit of polychlorinated dibenzo-p-dioxins and dibenzofurans (PCDD and PCDF) shall be calculated according to the following toxic equivalency factors (TEFs):

PCDD	TEF
2,3,7,8-TeCDD	1
1,2,3,7,8-PeCDD	1
1,2,3,4,7,8-HxCDD	0,1
1,2,3,6,7,8-HxCDD	0,1
1,2,3,7,8,9-HxCDD	0,1
1,2,3,4,6,7,8-HpCDD	0,01
OCDD	0,0003
PCDF	TEF
2,3,7,8-TeCDF	0,1
1,2,3,7,8-PeCDF	0,03
2,3,4,7,8-PeCDF	0,3
1,2,3,4,7,8-HxCDF	0,1
1,2,3,6,7,8-HxCDF	0,1
1,2,3,7,8,9-HxCDF	0,1
2,3,4,6,7,8-HxCDF	0,1
1,2,3,4,6,7,8-HpCDF	0,01
1,2,3,4,7,8,9-HpCDF	0,01
OCDF	0,0003