

## SCHEDULE 2

Regulation 12

### Schedules A1 and A2 to the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations 2012

#### “SCHEDULE A1

Regulation 3

Restricted substances referred to in regulation 3 and maximum concentration values tolerated by weight in homogeneous materials

Lead (0.1%)

Mercury (0.1%)

Cadmium (0.1%)

Hexavalent chromium (0.1%)

Polybrominated biphenyls (PBB) (0.1%)

Polybrominated diphenyl ethers (PBDE) (0.1%)

Bis (2-ethylexyl) phthalate (DEHP) (0.1%)

Butyl benzyl phthalate (BBP) (0.1%)

Dibutyl phthalate (DBP) (0.1%)

Diisobutyl phthalate (DIBP) (0.1%)

The restriction of DEHP, BBP, DBP and DIBP does not apply to—

- (a) medical devices, including *in vitro* medical devices;
- (b) monitoring and control instruments, including industrial monitoring and control instruments;
- (c) cables or spare parts for the repair, the reuse, the updating of functionalities or upgrading of capacity of EEE placed on the market before 22nd July 2019.

The restriction of DEHP, BBP and DBP does not apply to toys which are already subject to the restriction of DEHP, BBP and DBP through entry 51 of Annex 17 to Regulation [\(EC\) No 1907/2006\(1\)](#).

## SCHEDULE A2

Regulation 3

Applications exempted from the restriction in regulation 3(1)

### **The tables of exempted applications**

#### **1. In this Schedule—**

- (a) Table 1 sets out exemptions from the restriction in regulation 3(1) for applications of restricted substances in EEE, other than exemptions for applications for spare parts for EEE;
- (b) Table 2 sets out exemptions from the restriction in regulation 3(1) for applications of restricted substances in spare parts for EEE.

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(1) EUR 2006/1907.

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### Interpretation of the tables

2. The following provisions apply for the purposes of interpreting Tables 1 and 2.
3. In Table 1, in the column headed “corresponding EU exemption”, a reference to a numbered Annex, followed by another number, is a reference to the exemption with that number in that Annex to [Directive 2011/65/EU](#).
4. In Tables 1 and 2, in the column headed “categories of EEE to which exemption applies”, the entries indicate the categories of EEE to which an exemption applies, as follows—
  - (a) a number from 1 to 11, which is not followed by any letters, means the category of EEE with that number in Part 1 of Schedule 1;
  - (b) “8iv” and “8x” are sub-categories of category 8 (medical devices) with the following meanings—
    - (i) 8iv means in vitro diagnostic medical devices;
    - (ii) 8x means medical devices, other than in vitro diagnostic medical devices;
  - (c) “9ind” and “9x” are sub-categories of category 9 (monitoring and control instruments) with the following meanings—
    - (i) 9ind means industrial monitoring and control instruments;
    - (ii) 9x means monitoring and control instruments, other than for industrial use.
5. In Table 1, in the column headed “expiry date or status”—
  - (a) a date, in relation to an exemption and a category of EEE, is the expiry date of the exemption for that category of EEE, that is, the date on which the exemption expires subject to regulation 5(8) of the 2020 Regulations;
  - (b) “transitional case”, in relation to an exemption and a category of EEE, means that the exemption for that category of EEE is a transitional case for the purposes of regulation 10 of the 2020 Regulations.
6. For the purposes of entries 1 to 9 in Table 1 (entries related to lighting) a lamp is for “general lighting purposes” if it is designed for the purpose of illuminating a room or space in order to provide or improve visibility, and it is for “special purposes” if it is designed for any other purpose.
7. In paragraph 5, “the 2020 Regulations” means the Hazardous Substances and Packaging (Legislative Functions and Amendment) (EU Exit) Regulations 2020.

**Table 1**

**Table of exempted applications**

<i>No.</i>	<i>Application</i>	<i>Maximum quantity exempted (if any)</i>	<i>Corresponding EU exemption</i>	<i>Categories of EEE to which exemption applies</i>	<i>Expiry date or status</i>
1	Mercury in single capped (compact) fluorescent lamps:				
1.1	For general lighting purposes < 30 W	2.5 mg per burner	Annex 3, 1(a)	all categories	transitional case

(1) OJ No L 326, 19.12.1969, p.36, as last amended by Council [Directive 2006/96/EC](#) (OJ No L 363, 20.12.2006, p.81).

(2) EUR 2016/1628.

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No.	Application	Maximum quantity exempted (if any)	Corresponding EU exemption	Categories of EEE to which exemption applies	Expiry date or status
1.2	For general lighting purposes $\geq 30$ W and $< 50$ W	3.5 mg per burner	Annex 1(b)	3, all categories	transitional case
1.3	For general lighting purposes $\geq 50$ W and $< 150$ W	5 mg per burner	Annex 1(c)	3, all categories	transitional case
1.4	For general lighting purposes $\geq 150$ W	15 mg per burner	Annex 1(d)	3, all categories	transitional case
1.5	For general lighting purposes with circular or square structural shape and tube diameter $\leq 17$ mm	7 mg per burner	Annex 1(e)	3, all categories	transitional case
1.6	For special purposes	5 mg per burner	Annex 1(f)	3, 1-7, 8x, 9x, 10 8iv 9ind, 11	transitional case 21st July 2023 21st July 2024
1.7	For general lighting purposes $< 30$ W with a lifetime equal or above 20,000 h	3.5 mg per burner	Annex 1(g)	3, all categories	transitional case
2	Mercury in double-capped linear fluorescent lamps for general lighting purposes:				
2.1	Tri-band phosphor with normal lifetime ( $< 25,000$ h) and a tube diameter $< 9$ mm (e.g. T2)	4 mg per lamp	Annex 2(a)(1)	3, all categories	transitional case
2.2	Tri-band phosphor with normal lifetime ( $< 25,000$ h) and a tube diameter $\geq 9$ mm and $\leq 17$ mm (e.g. T5)	3 mg per lamp	Annex 2(a)(2)	3, all categories	transitional case
2.3	Tri-band phosphor with normal lifetime ( $< 25,000$ h) and a tube diameter $> 17$ mm and $\leq 28$ mm (e.g. T8)	3.5 mg per lamp	Annex 2(a)(3)	3, all categories	transitional case
2.4	Tri-band phosphor with normal lifetime ( $< 25,000$ h) and a tube diameter $> 28$ mm (e.g. T12)	3.5 mg per lamp	Annex 2(a)(4)	3, all categories	transitional case
2.5	Tri-band phosphor with long lifetime ( $\geq 25,000$ h)	5 mg per lamp	Annex 2(a)(5)	3, all categories	transitional case
3	Mercury in other fluorescent lamps:				

(1) OJ No L 326, 19.12.1969, p.36, as last amended by Council Directive 2006/96/EC (OJ No L 363, 20.12.2006, p.81).

(2) EUR 2016/1628.

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No.	Application	Maximum quantity exempted (if any)	Corresponding EU exemption	Categories of EEE to which exemption applies	Expiry date or status
3.1	Non-linear tri-band phosphor lamps with tube diameter > 17 mm (e.g. T9).	15 mg per lamp	Annex 2(b)(3)	3, 1-7, 8x, 9x, 10	transitional case
				8iv	21st July 2023
				9ind, 11	21st July 2024
3.2	Lamps for other general lighting and special purposes (e.g. induction lamps).	15 mg per lamp	Annex 2(b)(4)	3, 1-7, 8x, 9x, 10	transitional case
				8iv	21st July 2023
				9ind, 11	21st July 2024
4	Mercury in cold cathode fluorescent lamps and external electrode fluorescent lamps (CCFL and EEFL) for special purposes:				
4.1	Short length ( $\leq 500$ mm)	3.5 mg per lamp	Annex 3(a)	3, 1-7, 8x, 9x, 10	transitional case
				8iv	21st July 2023
				9ind, 11	21st July 2024
4.2	Medium length ( $> 500$ mm and $\leq 1500$ mm)	5 mg per lamp	Annex 3(b)	3, 1-7, 8x, 9x, 10	transitional case
				8iv	21st July 2023
				9ind, 11	21st July 2024
4.3	Long length ( $> 1500$ mm)	13 mg per lamp	Annex 3(c)	3, 1-7, 8x, 9x, 10	transitional case
				8iv	21st July 2023
				9ind, 11	21st July 2024
5	Mercury in other low pressure discharge lamps.	15 mg per lamp	Annex 4(a)	3, 1-7, 8x, 9x, 10	transitional case

(1) OJ No L 326, 19.12.1969, p.36, as last amended by Council Directive 2006/96/EC (OJ No L 363, 20.12.2006, p.81).

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No.	Application	Maximum quantity exempted (if any)	Corresponding EU exemption	Categories of EEE to which exemption applies	Expiry date or status
				8iv	21st July 2023
				9ind, 11	21st July 2024
6	Mercury in High Pressure Sodium (vapour) lamps for general lighting purposes in lamps with improved colour rendering index Ra > 60:				
6.1	P ≤ 155 W	30 mg per burner	Annex 4(b)-I	3, all categories	transitional case
6.2	155 W < P ≤ 405 W	40 mg per burner	Annex 4(b)-II	3, all categories	transitional case
6.3	P > 405 W	40 mg per burner	Annex 4(b)-III	3, all categories	transitional case
7	Mercury in other High Pressure Sodium (vapour) lamps for general lighting purposes:				
7.1	P ≤ 155 W	25 mg per burner	Annex 4(c)-I	3, all categories	transitional case
7.2	155 W < P ≤ 405 W	30 mg per burner	Annex 4(c)-II	3, all categories	transitional case
7.3	P > 405 W	40 mg per burner	Annex 4(c)-III	3, all categories	transitional case
8	Mercury in metal halide lamps.		Annex 4(e)	3, 1–7, 10	transitional case
				8x, 9x	21st July 2021
				8iv	21st July 2023
				9ind, 11	21st July 2024
9	Mercury in other discharge lamps for special purposes not specifically mentioned in another entry in this Table.		Annex 4(f)	3, 1-7, 8x, 9x, 10	transitional case
				8iv	21st July 2023
				9ind, 11	21st July 2024

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No.	Application	Maximum quantity exempted (if any)	Corresponding EU exemption	Categories of EEE to which exemption applies	Expiry date or status
10	Lead in glass of cathode ray tubes.		Annex 5(a)	3, 8x, 9x	21st July 2021
				8iv	21st July 2023
				9ind, 11	21st July 2024
11	Lead in glass of fluorescent tubes.	0.2% lead by weight	Annex 5(b)	3, 1-7, 10	transitional case
				8x, 9x	21st July 2021
				8iv	21st July 2023
				9ind, 11	21st July 2024
12	Lead as an alloying element in steel for machining purposes and in galvanised steel.	0.35% lead by weight	Annex 6(a)	3, 8, 9	transitional case
				11	21st July 2024
13	Lead as an alloying element in steel for machining purposes.	0.35% lead by weight	Annex 6(a)-I	3, 1-7, 10	transitional case
14	Lead as an alloying element in batch hot dip galvanised steel components.	0.2% lead by weight	Annex 6(a)-I	3, 1-7, 10	transitional case
15	Lead as an alloying element in aluminium.	0.4% lead by weight	Annex 6(b)	3, 8, 9	transitional case
				11	21st July 2024
16	Lead as an alloying element in aluminium, provided it stems from lead-bearing aluminium scrap recycling.	0.4% lead by weight	Annex 6(b)-I	3, 1-7, 10	transitional case
17	Lead as an alloying element in aluminium for machining purposes.	0.4% lead by weight	Annex 6(b)-II	3, 1-7, 10	transitional case
18	Copper alloy containing lead.	4% lead by weight	Annex 6(c)	3, 1-10	transitional case
				11	21st July 2024

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No.	Application	Maximum quantity exempted (if any)	Corresponding EU exemption	Categories of EEE to which exemption applies	Expiry date or status
19	Lead in high melting temperature type solders, i.e. lead-based alloys containing 85% by weight or more lead.  This entry does not apply to applications covered by entry 42.	Annex 7(a)	3,	1-10	transitional case 21st July 2024
20	Lead in solders for servers, storage and storage array systems, network infrastructure equipment for switching, signalling, transmission, and network management for telecommunications.	Annex 7(b)	3, 8x, 9x	8iv	21st July 2023 21st July 2024
21	Electrical and electronic components containing lead in a glass or ceramic other than dielectric ceramic in capacitors, e.g. piezoelectronic devices, or in a glass or ceramic matrix compound.  This entry does not apply to applications covered by entry 49.	Annex 7(c)-I	3,	1-10	transitional case 21st July 2024
22	Lead in dielectric ceramic in capacitors for a rated voltage of 125 V AC or 250 V DC or higher.  This entry does not apply to applications covered by entry 21 or 23.	Annex 7(c)-II	3,	1 – 10	transitional case 21st July 2024
23	Lead in PZT based dielectric ceramic materials for capacitors which are part of integrated circuits or discrete semiconductors.	Annex 7(c)-IV	3, 1-7, 8x, 9x, 10	8iv	21st July 2023 21st July 2024
24	Cadmium and its compounds in electrical contacts.	Annex 8(b)	3,	8, 9	transitional case 21st July 2024

(1) OJ No L 326, 19.12.1969, p.36, as last amended by Council Directive 2006/96/EC (OJ No L 363, 20.12.2006, p.81).

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No.	Application	Maximum quantity exempted (if any)	Corresponding EU exemption	Categories of EEE to which exemption applies	Expiry date or status
25	Cadmium and its compounds in electrical contacts used in: <ul style="list-style-type: none"> <li>— circuit breakers,</li> <li>— thermal sensing controls,</li> <li>— thermal motor protectors (excluding hermetic thermal motor protectors),</li> <li>— AC switches rated at:               <ul style="list-style-type: none"> <li>(a) 6 A and more at 250 V AC and more, or</li> <li>(b) 12 A and more at 125 V AC and more,</li> </ul> </li> <li>— DC switches rated at 20 A and more at 18 V DC and more, and</li> <li>— switches for use at voltage supply frequency <math>\geq 200</math> Hz.</li> </ul>	Annex 8(b)-I	3, 1-7, 10	transitional case	
26	Hexavalent chromium as an anticorrosion agent of the carbon steel cooling system in absorption refrigerators up to 0.75 % by weight in the cooling solution.	Annex 3, 9	8x, 9x	21st July 2021 <del>8iv 21st July 2023</del> 9ind, 11 21st July 2024	
27	Lead in bearing shells and bushes for refrigerant-containing compressors for heating, ventilation, air conditioning and refrigeration (HVACR) applications.	Annex 9(b)	3, 8x, 9x	21st July 2021 <del>8iv 21st July 2023</del> 9ind, 11 21st July 2024	
28	Lead in white glasses used for optical applications.	Annex 13(a)	3, all categories	transitional case	
29	Cadmium and lead in filter glasses and glasses used for reflectance standards.	Annex 13(b)	3, 8, 9, 11	transitional case	
30	Lead in ion coloured optical filter glass types.	Annex 13(b)-(I)	3, 1-7, 10	transitional case	

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No.	Application	Maximum quantity exempted (if any)	Corresponding EU exemption	Categories of EEE to which exemption applies	Expiry date or status
31	Cadmium in striking optical filter glass types.		Annex 3, 13(b)-(II)	1-7, 10	transitional case
32	Cadmium and lead in glazes used for reflectance standards.		Annex 3, 13(b)-(III)	1-7, 10	transitional case
33	Lead in solders to complete a viable electrical connection between semiconductor die and carrier within integrated circuit flip chip packages.		Annex 3, 15	8, 9 11	transitional case 21st July 2024
34	Lead in solders to complete a viable electrical connection between the semiconductor die and carrier within integrated circuit flip chip packages where at least one of the following criteria applies:  — a semiconductor technology node of 90 nm or larger;  — a single die of 300 mm <sup>2</sup> or larger in any semi-conductor technology node;  — stacked die packages with die of 300 mm <sup>2</sup> or larger, or silicon interposers of 300mm <sup>2</sup> or larger.		Annex 3, 15(a)	1-7, 10	transitional case
35	Lead halide as radiant agent in high intensity discharge (HID) lamps used for professional reprography applications.		Annex 3, 17	8x, 9x	21st July 2021
				8iv	21st July 2023
				9ind, 11	21st July 2024
36	Lead as activator in the fluorescent powder of discharge lamps containing phosphors such as BSP (BaSi <sub>2</sub> O <sub>5</sub> :Pb) when used as sun tanning lamps.	1% lead by weight or less	Annex 3, 18(b)	1-7, 8x, 9x, 10	transitional case
				8iv	21st July 2023
				9ind, 11	21st July 2024
37	Lead as activator in the fluorescent powder of discharge lamps containing phosphors such as BSP (BaSi <sub>2</sub> O <sub>5</sub> :Pb)	1% lead by weight or less	Annex 3, 18(b)-I	5, 8	transitional case

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No.	Application	Maximum quantity exempted (if any)	Corresponding EU exemption	Categories of EEE to which exemption applies	Expiry date or status
	when used in medical phototherapy equipment.				
	This entry does not apply to applications covered by entry 88.				
38	Lead and cadmium in printing inks for the application of enamels on glasses, such as borosilicate and soda lime glasses.	Annex 21	3, 8x, 9x	8iv	21st July 2021 21st July 2023
			9ind, 11		21st July 2024
39	Cadmium when used in colour printed glass to provide filtering functions, used as a component in lighting applications installed in displays and control panels of EEE.	Annex 21(a)	3, 1–7, 10		21st July 2021
40	Cadmium in printing inks for the application of enamels on glasses, such as borosilicate and soda lime glasses.	Annex 21(b)	3, 1–7, 10		21st July 2021
41	Lead in printing inks for the application of enamels on other than borosilicate glasses.	Annex 21(c)	3, 1–7, 10		21st July 2021
42	Lead in solders for the soldering to machined through hole discoidal and planar array ceramic multilayer capacitors.	Annex 24	3, 1–10		transitional case 21st July 2024
43	Lead oxide in surface conduction electron emitter displays (SED) used in structural elements, notably in the seal frit and frit ring.	Annex 25	3, 8x, 9x	8iv	21st July 2021 21st July 2023
			9ind, 11		21st July 2024
44	Lead bound in crystal glass as defined in Annex I (Categories 1, 2, 3 and 4) of Council Directive 69/493/EEC <sup>(1)</sup> .	Annex 29	3, 1–7, 10, 11		transitional case 21st July 2021
			8x, 9x	8iv	21st July 2021 21st July 2023

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No.	Application	Maximum quantity exempted (if any)	Corresponding EU exemption	Categories of EEE to which exemption applies	Expiry date or status
				9ind	21st July 2024
45	Cadmium alloys as electrical/mechanical solder joints to electrical conductors located directly on the voice coil in transducers used in high-powered loudspeakers with sound pressure levels of 100 dB (A) and more.	Annex 30	3, 8x, 9x	8iv	21st July 2021 21st July 2023
				9ind, 11	21st July 2024
46	Lead in soldering materials in mercury free flat fluorescent lamps (which e.g. are used for liquid crystal displays, design or industrial lighting).	Annex 31	3, 8x, 9x	8iv	21st July 2021 21st July 2023
				9ind, 11	21st July 2024
47	Lead oxide in seal frit used for making window assemblies for Argon and Krypton laser tubes.	Annex 32	3, 1–7, 8x, 9, 10	8iv	transitional case 21st July 2023
				11	21st July 2024
48	Lead in solders for the soldering of thin copper wires of 100 µm diameter and less in power transformers.	Annex 33	3, 8x, 9x	8iv	21st July 2021 21st July 2023
				9ind, 11	21st July 2024
49	Lead in cermet-based trimmer potentiometer elements.	Annex 34	3, 1–10	transitional case	transitional case
				11	21st July 2024
50	Lead in the plating layer of high voltage diodes on the basis of a zinc borate glass body.	Annex 37	3, 1–7, 8x, 9x, 10	8iv	21st July 2021 21st July 2023
				9ind, 11	21st July 2024

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No.	Application	Maximum quantity exempted (if any)	Corresponding EU exemption	Categories of EEE to which exemption applies	Expiry date or status
51	Cadmium and cadmium oxide in thick film pastes used on aluminium bonded beryllium oxide.		Annex 38	3, 8x, 9x 8iv 9ind, 11	21st July 2021 21st July 2023 21st July 2024
52	Cadmium selenide in downshifting cadmium-based semiconductor nanocrystal quantum dots for use in display lighting applications (< 0.2 µg Cd per mm <sup>2</sup> of display screen area).		Annex 39(a)	3, all categories	transitional case
53	Lead in solders and termination finishes of electrical and electronic components and finishes of printed circuit boards used in ignition modules and other electrical and electronic engine control systems, which for technical reasons must be mounted directly on or in the crankcase or cylinder of hand-held combustion engines (category NRSh in Regulation (EU) 2016/1628 of the European Parliament and of the Council <sup>(2)</sup> ).		Annex 41	3, 1–7, 10, 11 8x, 9x 8iv 9ind	31st March 2022 21st July 2021 21st July 2023 21st July 2024
54	Lead in bearings and bushes of diesel or gaseous fuel powered internal combustion engines applied in non-road professional use equipment:  — with engine total displacement ≥ 15 litres; or  — with engine total displacement < 15 litres and the engine is designed to operate in applications where the time between signal to start and full load is required to be less than 10 seconds; or regular maintenance is typically performed in a harsh and dirty outdoor environment, such as mining, construction, and agriculture applications.		Annex 42	3, 8x, 9x 11	transitional case 21st July 2024

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No.	Application	Maximum quantity exempted (if any)	Corresponding EU exemption	Categories of EEE to which exemption applies	Expiry date or status
	This entry does not apply to applications covered by entry 18.				
55	Bis(2-ethylhexyl) phthalate in rubber components in engine systems, designed for use in equipment that is not intended solely for consumer use and provided that no plasticised material comes into contact with human mucous membranes or into prolonged contact with human skin.		Annex 3, 9ind 43	11	15th July 2023  21st July 2024
	This entry applies where the concentration value of bis(2-ethylhexyl) phthalate does not exceed:				
	30 % by weight of the rubber for:				
	gasket coatings;				
	solid-rubber gaskets; or				
	rubber components included in assemblies of at least three components using electrical, mechanical or hydraulic energy to do work, and attached to the engine.				
	10% by weight of the rubber for rubber-containing components not referred to in point (a).				
	For the purposes of this entry, ‘prolonged contact with human skin’ means continuous contact of more than 10 minutes duration or intermittent contact over a period of 30 minutes, per day.				
56	Lead in solder of sensors, actuators, and engine control units of combustion engines within the scope of Regulation (EU) 2016/1628 of the European Parliament and of the Council, installed in equipment used at fixed positions while in operation which is designed		Annex 3, 11 44		21st July 2024

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	for professionals, but also used by non-professional users.				
57	Lead, cadmium and mercury in detectors for ionising radiation.		Annex 4, 1	8x, 9x, 9ind 8iv	transitional case 21st July 2023
58	Lead bearings in X-ray tubes.		Annex 4, 2	8x, 9x 8iv 9ind	transitional case 21st July 2023 21st July 2024
59	Lead in electromagnetic radiation amplification devices:  micro-channel plate and capillary plate.		Annex 4, 3	8, 9	transitional case
60	Lead in glass frit of X-ray tubes and image intensifiers and lead in glass frit binder for assembly of gas lasers and for vacuum tubes that convert electromagnetic radiation into electrons.		Annex 4, 4	8x, 9x 8iv 9ind	21st July 2021 21st July 2023 21st July 2024
61	Lead in shielding for ionising radiation.		Annex 4, 5	8x, 9 8iv	transitional case 21st July 2023
62	Lead in X-ray test objects.		Annex 4, 6	8x, 9x 8iv 9ind	21st July 2021 21st July 2023 21st July 2024
63	Lead stearate X-ray diffraction crystals.		Annex 4, 7	8x, 9x 8iv	21st July 2021 21st July 2023

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				9ind	21st July 2024
64	Radioactive cadmium isotope source for portable X-ray fluorescence spectrometers.		Annex 4, 8	8x, 9x	21st July 2021
				8iv	21st July 2023
				9ind	21st July 2024
65	Lead and cadmium in ion selective electrodes including glass of pH electrodes.		Annex 1a	4, 8x, 9	transitional case
				8iv	21st July 2023
66	Lead anodes in electrochemical oxygen sensors.		Annex 1b	4, 8x, 9	transitional case
				8iv	21st July 2023
67	Lead, cadmium and mercury in infra-red light detectors.		Annex 1c	4, 8, 9	transitional case
68	Mercury in reference electrodes: low chloride mercury chloride, mercury sulphate and mercury oxide.		Annex 1d	4, 8x, 9x	21st July 2021
				8iv	21st July 2023
				9ind	21st July 2024
69	Cadmium in helium-cadmium lasers.		Annex 4, 9	8x, 9x	21st July 2021
				8iv	21st July 2023
				9ind	21st July 2024
70	Lead and cadmium in atomic absorption spectroscopy lamps.		Annex 10	4, 8x, 9x	21st July 2021
				8iv	21st July 2023
				9ind	21st July 2024

(1) OJ No L 326, 19.12.1969, p.36, as last amended by Council Directive 2006/96/EC (OJ No L 363, 20.12.2006, p.81).

(2) EUR 2016/1628.

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No.	Application	Maximum quantity exempted (if any)	Corresponding EU exemption	Categories of EEE to which exemption applies	Expiry date or status
71	Lead in alloys as a superconductor and thermal conductor in MRI.	Annex 11	4,	8x, 9x	transitional case
				8iv	21st July 2023
				9ind	21st July 2024
72	Lead and cadmium in metallic bonds creating superconducting magnetic circuits in MRI, SQUID, NMR (Nuclear Magnetic Resonance) or FTMS (Fourier Transform Mass Spectrometer) detectors.	Annex 12	4,	8x, 9	transitional case
				8iv	30th June 2021
73	Lead in counterweights.	Annex 13	4,	8x, 9x	transitional case
				8iv	21st July 2023
				9ind	21st July 2024
74	Lead in single crystal piezoelectric materials for ultrasonic transducers.	Annex 14	4,	8x, 9x	transitional case
				8iv	21st July 2023
				9ind	21st July 2024
75	Lead in solders for bonding to ultrasonic transducers.	Annex 15	4,	8x, 9x	transitional case
				8iv	21st July 2023
				9ind	21st July 2024
76	Mercury in very high accuracy capacitance and loss measurement bridges and in high frequency RF switches and relays in monitoring and control instruments.	Annex 16	4,	8x, 9x	21st July 2021
				8iv	21st July 2023
				9ind	21st July 2024

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77	Lead in solders in portable emergency defibrillators.	Annex 17	4, 8x, 9x	8iv 9ind	transitional case 21st July 2023 21st July 2024
78	Lead in solders of high performance infrared imaging modules to detect in the range 8-14 µm.	Annex 18	4, 8x, 9x	8iv 9ind	transitional case 21st July 2023 21st July 2024
79	Lead in liquid crystal on silicon (LCoS) displays.	Annex 19	4, 8x, 9x	8iv 9ind	21st July 2021 21st July 2024
80	Cadmium in X-ray measurement filters.	Annex 20	4, 8x, 9x	8iv 9ind	transitional case 21st July 2023 21st July 2024
81	Lead acetate marker for use in stereotactic head frames for use with CT and MRI and in positioning systems for gamma beam and particle therapy equipment.	Annex 22	4, 8, 9		30th June 2021
82	Lead as an alloying element for bearings and wear surfaces in medical equipment exposed to ionising radiation.	Annex 23	4, 8, 9		30th June 2021
83	Lead in the surface coatings of pin connector systems. requiring nonmagnetic connectors which are used durably at a temperature below	Annex 25	4, 8, 9		30th June 2021

(1) OJ No L 326, 19.12.1969, p.36, as last amended by Council Directive 2006/96/EC (OJ No L 363, 20.12.2006, p.81).

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No.	Application	Maximum quantity exempted (if any)	Corresponding EU exemption	Categories of EEE to which exemption applies	Expiry date or status
84	<p>–20 °C under normal operating and storage conditions.</p> <p>Lead in the following applications that are used durably at a temperature below –20 °C under normal operating and storage conditions:</p> <ul style="list-style-type: none"> <li>(c) solders on printed circuit boards;</li> <li>(d) termination coatings of electrical and electronic components and coatings of printed circuit boards;</li> <li>(e) solders for connecting wires and cables;</li> <li>(f) solders connecting transducers and sensors.</li> </ul> <p>Lead in solders of electrical connections to temperature measurement sensors in devices which are designed to be used periodically at temperatures below –150 °C.</p>		Annex 26	4, 8x, 9	transitional case 30th June 2021
85	<p>Lead in:</p> <ul style="list-style-type: none"> <li>— solders,</li> <li>— termination coatings of electrical and electronic components and printed circuit boards,</li> <li>— connections of electrical wires, shields and enclosed connectors,</li> </ul> <p>which are used in:</p> <ul style="list-style-type: none"> <li>(g) magnetic fields within the sphere of 1 m radius around the isocentre of the magnet in medical magnetic resonance imaging equipment, including patient monitors designed to be used within this sphere, or</li> <li>(h) magnetic fields within 1 m distance from the external surfaces of cyclotron magnets, magnets for beam transport and</li> </ul>		Annex 27	4, 8, 9x	transitional case

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No.	Application	Maximum quantity exempted (if any)	Corresponding EU exemption	Categories of EEE to which exemption applies	Expiry date or status
	beam direction control applied for particle therapy.				
86	Lead in alloys, as a superconductor or thermal conductor, used in cryo-cooler cold heads and/or in cryo-cooled cold probes and/or in cryo-cooled equipotential bonding systems, in medical devices or in industrial monitoring and control instruments.		Annex 29	4, 8x 8iv, 9ind	transitional case 30th June 2021
87	Lead, cadmium, hexavalent chromium, and polybrominated diphenyl ethers (PBDE) in spare parts recovered from and used for the repair or refurbishment of medical devices, including in vitro diagnostic medical devices, or electron microscopes and their accessories, provided that the reuse takes place in auditable closed-loop business-to-business return systems and that each reuse of parts is notified to the customer.		Annex 31a	4, 8, 9x 9ind	transitional case 21st July 2024
88	Lead as an activator in the fluorescent powder of discharge lamps when used for extracorporeal photopheresis lamps containing BSP (BaSi <sub>2</sub> O <sub>5</sub> :Pb) phosphors.		Annex 34	4, 8, 9	22nd July 2021
89	Mercury in cold cathode fluorescent lamps for back-lighting liquid crystal displays, not exceeding 5 mg per lamp, used in industrial monitoring and control instruments placed on the market before 22 July 2017.		Annex 35	4, 9ind	21st July 2024
90	Lead in platinized platinum electrodes used for conductivity measurements where at least one of the following conditions applies: (i) wide-range measurements with a conductivity range covering more than 1 order of magnitude (e.g. range between 0.1 mS/m and 5 mS/m) in laboratory applications for unknown concentrations;		Annex 37	4, 8, 9	31st December 2025

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	(j) measurements of solutions where an accuracy of $\pm 1\%$ of the sample range and where high corrosion resistance of the electrode are required for any of the following: <ul style="list-style-type: none"> <li>(i) solutions with an acidity <math>&lt; \text{pH } 1</math>;</li> <li>(ii) solutions with an alkalinity <math>&gt; \text{pH } 13</math>;</li> <li>(iii) corrosive solutions containing halogen gas;</li> </ul> (k) measurements of conductivities above $100 \text{ mS/m}$ that must be performed with portable instruments.				
91	Lead in micro-channel plates (MCPs) used in equipment where at least one of the following properties is present: <ul style="list-style-type: none"> <li>(l) a compact size of the detector for electrons or ions, where the space for the detector is limited to a maximum of <math>3 \text{ mm/MCP}</math> (detector thickness + space for installation of the MCP), a maximum of <math>6 \text{ mm}</math> in total, and an alternative design yielding more space for the detector is scientifically and technically impracticable;</li> <li>(m) a two-dimensional spatial resolution for detecting electrons or ions, where at least one of the following applies:               <ul style="list-style-type: none"> <li>(i) a response time shorter than <math>25 \text{ ns}</math>;</li> <li>(ii) a sample detection area larger than <math>149 \text{ mm}^2</math> ;</li> <li>(iii) a multiplication factor larger than <math>1.3 \times 10^3</math> .</li> </ul> </li> <li>(n) a response time shorter than <math>5 \text{ ns}</math> for detecting electrons or ions;</li> <li>(o) a sample detection area larger than <math>314 \text{ mm}^2</math> for detecting electrons or ions;</li> </ul>		Annex 4, 8, 9 39		transitional case

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<i>No.</i>	<i>Application</i>	<i>Maximum quantity exempted (if any)</i>	<i>Corresponding EU exemption</i>	<i>Categories of EEE to which exemption applies</i>	<i>Expiry date or status</i>
	(p) a multiplication factor larger than $4.0 \times 10^7$ .				
92	Lead as a thermal stabiliser in polyvinyl chloride (PVC) used as base material in amperometric, potentiometric and conductometric electrochemical sensors which are used in in-vitro diagnostic medical devices for the analysis of blood and other body fluids and body gases.		Annex 4, 41	8iv	31st March 2022
93	Mercury in electric rotating connectors used in intravascular ultrasound imaging systems capable of high operating frequency (> 50 MHz) modes of operation.		Annex 42	4, 8x, 9x	transitional case
94	Cadmium anodes in Hersch cells for oxygen sensors used in industrial monitoring and control instruments, where sensitivity below 10 ppm is required.		Annex 43	4, 9ind	15th July 2023
95	Cadmium in radiation tolerant video camera tubes designed for cameras with a centre resolution greater than 450 TV lines which are used in environments with ionising radiation exposure exceeding 100 Gy/hour and a total dose in excess of 100kGy.		Annex 44	4, 8x, 9	31st March 2027
(1)	OJ No L 326, 19.12.1969, p.36, as last amended by Council Directive 2006/96/EC (OJ No L 363, 20.12.2006, p.81).				
(2)	EUR 2016/1628.				

**Table 2**

**Table of exemptions for spare parts for EEE with no expiry date**

<i>No.</i>	<i>Application</i>	<i>Categories of EEE to which exemption applies</i>
1	Lead in dielectric ceramic in capacitors for a rated voltage of less than 125 V AC or 250 V DC, where used in spare parts for EEE placed on the market before 1st January 2013.	all categories
2	Cadmium and its compounds in one shot pellet type thermal cut-offs, where used in spare parts for EEE placed on the market before 1st January 2012.	all categories

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No.	Application	Categories of EEE to which exemption applies
3	Lead used in C-press compliant pin connector systems, where used in spare parts for EEE placed on the market before 24th September 2010.	all categories
4	Lead used in other than C-press compliant pin connector systems, where used in spare parts for EEE placed on the market before 1st January 2013.	all categories
5	Lead as a coating material for the thermal conduction module C-ring, where used in spare parts for EEE placed on the market before 24th September 2010.	all categories
6	Lead in solders consisting of more than two elements for the connection between the pins and the package of microprocessors with a lead content of more than 80% and less than 85% by weight, where used in spare parts for EEE placed on the market before 1st January 2011.	all categories
7	Lead in finishes of fine pitch components other than connectors with a pitch of 0.65 mm and less, where used in spare parts for EEE placed on the market before 24th September 2010.	all categories
8	Cadmium in phosphor coatings in image intensifiers for X-ray images, in spare parts for X-ray systems placed on the market before 1st January 2020.	8, 9
9	Hexavalent chromium in alkali dispensers used to create photocathodes in X-ray image intensifiers, where used in spare parts for X-ray systems placed on the market before 1st January 2020.	8, 9
10	Lead used in other than C-press compliant pin connector systems, where used in spare parts for industrial monitoring and control instruments placed on the market before 1st January 2021.	9ind
11	Lead in dielectric ceramic in capacitors for a rated voltage of less than 125 V AC or 250 V DC, where used in spare parts for industrial monitoring and control instruments placed on the market before 1st January 2021.	9ind”