

*Suppliment tal-Gazzetta tal-Gvern ta' Malta Nru. 20,208, 6 ta' Ġunju, 2019*

*Taqsimha B*

**L.N. 119 of 2019**

**PRODUCT SAFETY ACT  
(CAP. 427)**

**Restriction of Use of Hazardous Substances in Electrical and Electronic Equipment (Amendment) Regulations, 2019**

IN EXERCISE of the powers conferred by articles 38 and 39 of the Product Safety Act, the Minister for Justice, Culture and Local Government, on the advice of the Director General (Technical Regulations), has made the following regulations:-

**1.** (1) The title of these regulations is the Restriction of Use of Hazardous Substances in Electrical and Electronic Equipment (Amendment) Regulations, 2019, and these regulations shall be read and construed as one with the Restriction of Use of Hazardous Substances in Electrical and Electronic Equipment Regulations, hereinafter referred to as "the principal regulations".

Title and commencement.  
S.L. 427.57.

(2) Regulations 3(b) to 3(e), 5 and 6 shall apply from the 12th June 2019; regulations 7(a) to 7(e), 7(m) and 7(p) shall apply from the 1st July 2019; regulation 7(r) shall apply from the 22nd July 2019 and regulations 7(f) to 7(h), 7(j) to 7(l), 7(n), 7(o) and 7(q) shall apply from the 1st March 2020.

**2.** (1) The scope of these regulations is to implement Directive (EU) 2017/2102 of the European Parliament and of the Council of 15 November 2017 and Commission Delegated Directives (EU) 2018/736 of 27 February 2018, 2018/737 of 27 February 2018, 2018/738 of 27 February 2018, 2018/739 of 1 March 2018, 2018/740 of 1 March 2018, 2018/741 of 1 March 2018, 2018/742 of 1 March 2018, 2019/169 of 16 November 2018, 2019/170 of 16 November 2018, 2019/171 of 16 November 2018, 2019/172 of 16 November 2018, 2019/173 of 16 November 2018, 2019/174 of 16 November 2018, 2019/175 of 16 November 2018, 2019/176 of 16 November 2018, 2019/177 of 16 November 2018 and 2019/178 of 16 November 2018.

Scope and applicability.

(2) These regulations shall apply to equipment falling within the scope of the principal regulations.

**3.** Regulation 2 of the principal regulations shall be amended as follows:

Amends regulation 2 of the principal regulations.

(a) sub-regulation (1A) shall be substituted by the

following:

"(1A) These regulations also implement the European Union legislation listed in Schedule VIII.";

(b) in sub-regulation (2) thereof, the words ", subject to sub-regulation (3)," shall be deleted;

(c) sub-regulation (3) thereof, shall be deleted;

(d) sub-regulations (4) and (5) thereof, shall be renumbered as sub-regulations (3) and (4) respectively;

(e) in paragraph (j) of sub-regulation (4) thereof, as renumbered, the word "basis." shall be substituted by the word "basis;" and immediately thereafter there shall be added the following new paragraph:

"(k) pipe organs."

Deletes regulation 2A of the principal regulations.

**4.** Regulation 2A of the principal regulations shall be deleted.

Amends regulation 3 of the principal regulations.

**5.** In regulation 3 of the principal regulations, the definition "non-road mobile machinery made available exclusively for professional use" shall be substituted by the following:

" "non-road mobile machinery made available exclusively for professional use" means machinery, with an on-board power source or with a traction drive powered by an external power source, the operation of which requires either mobility or continuous or semi-continuous movement between a succession of fixed working locations while working, and which is made available exclusively for professional use;"

Amends regulation 4 of the principal regulations.

**6.** Regulation 4 of the principal regulations shall be amended as follows:

(a) sub-regulation (3) thereof shall be substituted by the following:

"(3) Sub-regulation (1) shall apply to medical devices and monitoring and control instruments which are placed on the market from 22 July 2014, to *in vitro* diagnostic medical devices which are placed on the market from 22 July 2016, to industrial monitoring and control instruments which are placed on the market from 22 July 2017, and to all other electrical and electronic equipment

that was outside the scope of Directive 2002/95/EC and which is placed on the market from 22 July 2019.";

(b) in sub-regulation (4) thereof:

(i) in paragraph (a):

(aa) sub-paragraph (vi) shall be renumbered as sub-paragraph (vii);

(bb) immediately after sub-paragraph (v), there shall be added the following new sub-paragraph:

"(vi) all other electrical and electronic equipment that was outside the scope of Directive 2002/95/EC and which is placed on the market before 22 July 2019;"

(ii) paragraph (b) thereof, shall be substituted by the following:

"(b) the following reused spare parts, provided that reuse takes place in auditable closed-loop business-to-business return systems, and that the reuse of spare parts is notified to the consumer:

(i) recovered from electrical and electronic equipment placed on the market before 1 July 2006 and used in electrical and electronic equipment placed on the market before 1 July 2016;

(ii) recovered from medical devices or monitoring and control instruments placed on the market before 22 July 2014 and used in electrical and electronic equipment placed on the market before 22 July 2024;

(iii) recovered from *in vitro* diagnostic medical devices placed on the market before 22 July 2016 and used in electrical and electronic equipment placed on the market before 22 July 2026;

(iv) recovered from industrial monitoring and control instruments placed on

the market before 22 July 2017 and used in electrical and electronic equipment placed on the market before 22 July 2027;

(v) recovered from all other electrical and electronic equipment that was outside the scope of Directive 2002/95/EC and which is placed on the market before 22 July 2019, and used in electrical and electronic equipment placed on the market before 22 July 2029."

Amends  
Schedule III to  
the principal  
regulations.

7. Schedule III to the principal regulations shall be amended as follows:

(a) item 6(a) shall be substituted by the following:

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| "6(a)  | Lead as an alloying element in steel for machining purposes and in galvanised steel containing up to 0,35% lead by weight   | Expires on:<br>— 21 July 2021 for categories 8 and 9 other than <i>in vitro</i> diagnostic medical devices and industrial monitoring and control instruments;<br>— 21 July 2023 for category 8 <i>in vitro</i> diagnostic medical devices;<br>— 21 July 2024 for category 9 industrial monitoring and control instruments, and for category 11. |
| 6(a)-I | Lead as an alloying element in steel for machining purposes containing up to 0,35% lead by weight and in batch hot dip galvanised steel components containing up to 0,2% lead by weight | Expires on 21 July 2021 for categories 1-7 and 10.";  |

(b) item 6(b) shall be substituted by the following:

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|-------|---|---|
| "6(b) | Lead as an alloying element in aluminium containing up to 0,4% lead by weight | Expires on:<br>— 21 July 2021 for categories 8 and 9 other than <i>in vitro</i> diagnostic medical devices and industrial monitoring and control instruments,<br>— 21 July 2023 for category 8 <i>in vitro</i> diagnostic medical devices,<br>— 21 July 2024 for category 9 industrial monitoring and control instruments, and for category 11. |
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- 6(b)-I Lead as an alloying element in aluminium containing up to 0,4% lead by weight, provided it stems from lead-bearing aluminium scrap recycling Expires on 21 July 2021 for categories 1-7 and 10.
- 6(b)-II Lead as an alloying element in aluminium for machining purposes with a lead content up to 0,4% by weight Expires on 18 May 2021 for categories 1-7 and 10.";

(c) item 6(c) shall be substituted by the following:

- "6(c) Copper alloy containing up to 4% lead by weight Expires on:
- 21 July 2021 for categories 1-7 and 10,
  - 21 July 2021 for categories 8 and 9 other than *in vitro* diagnostic medical devices and industrial monitoring and control instruments,
  - 21 July 2023 for category 8 *in vitro* diagnostic medical devices,
  - 21 July 2024 for category 9 industrial monitoring and control instruments, and for category 11.";

(d) item 7(a) shall be substituted by the following:

- "7(a) Lead in high melting temperature type solders (i.e. lead-based alloys containing 85% by weight or more lead) Applies to categories 1-7 and 10 (except applications covered by item 24 of this Annex) and expires on 21 July 2021.  
For categories 8 and 9 other than *in vitro* diagnostic medical devices and industrial monitoring and control instruments expires on 21 July 2021.  
For category 8 *in vitro* diagnostic medical devices expires on 21 July 2023.  
For category 9 industrial monitoring and control instruments, and for category 11 expires on 21 July 2024.";

(e) item 7(c)-I shall be substituted by the following:

"7(c)-I	Electrical and electronic components containing lead in a glass or ceramic other than dielectric ceramic in capacitors, e.g. piezo-electronic devices, or in a glass or ceramic matrix compound	Applies to categories 1-7 and 10 (except applications covered under item 34) and expires on 21 July 2021. For categories 8 and 9 other than <i>in vitro</i> diagnostic medical devices and industrial monitoring and control instruments expires on 21 July 2021. For category 8 <i>in vitro</i> diagnostic medical devices expires on 21 July 2023. For category 9 industrial monitoring and control instruments, and for category 11 expires on 21 July 2024.";
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(f) item 7(c)-II shall be substituted by the following:

"7(c)-II	Lead in dielectric ceramic in capacitors for a rated voltage of 125 V AC or 250 V DC or higher	Does not apply to applications covered by point 7(c)-I and 7(c)-IV of this Annex. Expires on: <ul style="list-style-type: none"> <li>— 21 July 2021 for categories 1-7 and 10;</li> <li>— 21 July 2021 for categories 8 and 9 other than <i>in vitro</i> diagnostic medical devices and industrial monitoring and control instruments;</li> <li>— 21 July 2023 for category 8 <i>in vitro</i> diagnostic medical devices;</li> <li>— 21 July 2024 for category 9 industrial monitoring and control instruments, and for category 11.";</li> </ul>
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(g) item 7(c)-IV shall be substituted by the following:

"7(c)-IV	Lead in PZT based dielectric ceramic materials for capacitors which are part of integrated circuits or discrete semiconductors	Expires on: <ul style="list-style-type: none"> <li>— 21 July 2021 for categories 1-7 and 10;</li> <li>— 21 July 2021 for categories 8 and 9 other than <i>in vitro</i> diagnostic medical devices and industrial monitoring and control instruments;</li> <li>— 21 July 2023 for category 8 <i>in vitro</i> diagnostic medical devices;</li> <li>— 21 July 2024 for category 9 industrial monitoring and control instruments, and for category 11.";</li> </ul>
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(h) item 8(b) shall be substituted by the following:

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| "8(b)  | Cadmium and its compounds in electrical contacts  | Applies to categories 8, 9 and 11 and expires on: <ul style="list-style-type: none"> <li>— 21 July 2021 for categories 8 and 9 other than <i>in vitro</i> diagnostic medical devices and industrial monitoring and control instruments;</li> <li>— 21 July 2023 for category 8 <i>in vitro</i> diagnostic medical devices;</li> <li>— 21 July 2024 for category 9 industrial monitoring and control instruments, and for category 11.</li> </ul> |
| 8(b)-I | 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>- 6 A and more at 250 V AC and more, or</li> <li>- 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> | Applies to categories 1 to 7 and 10 and expires on 21 July 2021.";   |

(i) item 13(b) shall be substituted by the following:

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| "13(b)    | Cadmium and lead in filter glasses and glasses used for reflectance standards | Applies to categories 8, 9 and 11; expires on: <ul style="list-style-type: none"> <li>— 21 July 2023 for category 8 <i>in vitro</i> diagnostic medical devices;</li> <li>— 21 July 2024 for category 9 industrial monitoring and control instruments and for category 11;</li> <li>— 21 July 2021 for other subcategories of categories 8 and 9.</li> </ul> |
| 13(b)-(I) | Lead in ion coloured optical filter glass types                               | Applies to categories 1 to 7 and 10; expires on 21 July 2021 for categories 1 to 7 and 10.  |

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|-------------|---|--|
| 13(b)-(II)  | Cadmium in striking optical filter glass types; excluding applications falling under point 39 of this Annex | Applies to categories 1 to 7 and 10; expires on 21 July 2021 for categories 1 to 7 and 10.   |
| 13(b)-(III) | Cadmium and lead in glazes used for reflectance standards   | Applies to categories 1 to 7 and 10; expires on 21 July 2021 for categories 1 to 7 and 10."; |

(j) item 15 shall be substituted by the following:

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| "15   | Lead in solders to complete a viable electrical connection between semiconductor die and carrier within integrated circuit flip chip packages  | <p>Applies to categories 8, 9 and 11 and expires on:</p> <ul style="list-style-type: none"> <li>— 21 July 2021 for categories 8 and 9 other than <i>in vitro</i> diagnostic medical devices and industrial monitoring and control instruments;</li> <li>— 21 July 2023 for category 8 <i>in vitro</i> diagnostic medical devices;</li> <li>— 21 July 2024 for category 9 industrial monitoring and control instruments, and for category 11.</li> </ul> |
| 15(a) | <p>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:</p> <ul style="list-style-type: none"> <li>— a semiconductor technology node of 90nm or larger;</li> <li>— a single die of 300mm<sup>2</sup> or larger in any semiconductor technology node;</li> <li>— stacked die packages with die of 300mm<sup>2</sup> or larger, or silicon interposers of 300mm<sup>2</sup> or larger.</li> </ul> | Applies to categories 1 to 7 and 10 and expires on 21 July 2021.";  |



(k) item 18(b) shall be substituted by the following:

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| "18(b)  | Lead as activator in the fluorescent powder (1% lead by weight or less) of discharge lamps when used as sun tanning lamps containing phosphors such as BSP ( $\text{BaSi}_2\text{O}_5\text{:Pb}$ )              | Expires on:<br>— 21 July 2021 for categories 1-7 and 10;<br>— 21 July 2021 for categories 8 and 9 other than <i>in vitro</i> diagnostic medical devices and industrial monitoring and control instruments;<br>— 21 July 2023 for category 8 <i>in vitro</i> diagnostic medical devices;<br>— 21 July 2024 for category 9 industrial monitoring and control instruments, and for category 11. |
| 18(b)-I | Lead as activator in the fluorescent powder (1% lead by weight or less) of discharge lamps containing phosphors such as BSP ( $\text{BaSi}_2\text{O}_5\text{:Pb}$ ) when used in medical phototherapy equipment | Applies to categories 5 and 8, excluding applications covered by entry 34 of Annex IV, and expires on 21 July 2021.";  |

(l) item 21 shall be substituted by the following:

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| "21   | Lead and cadmium in printing inks for the application of enamels on glasses, such as borosilicate and soda lime glasses  | Applies to categories 8, 9 and 11 and expires on:<br>— 21 July 2021 for categories 8 and 9 other than <i>in vitro</i> diagnostic medical devices and industrial monitoring and control instruments;<br>— 21 July 2023 for category 8 <i>in vitro</i> diagnostic medical devices;<br>— 21 July 2024 for category 9 industrial monitoring and control instruments, and for category 11. |
| 21(a) | 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 | Applies to categories 1 to 7 and 10 except applications covered by entry 21(b) or entry 39 and expires on 21 July 2021.   |
| 21(b) | Cadmium in printing inks for the application of enamels on glasses, such as borosilicate and soda lime glasses   | Applies to categories 1 to 7 and 10 except applications covered by entry 21(a) or entry 39 and expires on 21 July 2021.   |

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- 21(c) Lead in printing inks for the application of enamels on other than borosilicate glasses Applies to categories 1 to 7 and 10 and expires on 21 July 2021.";

(m) item 24 shall be substituted by the following:

- "24 Lead in solders for the soldering to machined through hole discoidal and planar array ceramic multilayer capacitors Expires on:  
 — 21 July 2021 for categories 1-7 and 10,  
 — 21 July 2021 for categories 8 and 9 other than *in vitro* diagnostic medical devices and industrial monitoring and control instruments,  
 — 21 July 2023 for category 8 *in vitro* diagnostic medical devices,  
 — 21 July 2024 for category 9 industrial monitoring and control instruments, and for category 11.";

(n) item 29 shall be substituted by the following:

- "29 Lead bound in crystal glass as defined in First Schedule (Categories 1, 2, 3 and 4) of the Crystal Glass Order (S.L. 427.04) Expires on:  
 — 21 July 2021 for categories 1-7 and 10;  
 — 21 July 2021 for categories 8 and 9 other than *in vitro* diagnostic medical devices and industrial monitoring and control instruments;  
 — 21 July 2023 for category 8 *in vitro* diagnostic medical devices;  
 — 21 July 2024 for category 9 industrial monitoring and control instruments, and for category 11.";

(o) item 32 shall be substituted by the following:

- "32 Lead oxide in seal frit used for making window assemblies for Argon and Krypton laser tubes Expires on:  
 — 21 July 2021 for categories 1-7 and 10;  
 — 21 July 2021 for categories 8 and 9 other than *in vitro* diagnostic medical devices and industrial monitoring and control instruments;  
 — 21 July 2023 for category 8 *in vitro* diagnostic medical devices;  
 — 21 July 2024 for category 9 industrial monitoring and control instruments, and for category 11.";

(p) item 34 shall be substituted by the following:

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| "34 | Lead in cermet-based trimmer potentiometer elements | Applies to all categories; expires on: <ul style="list-style-type: none"> <li>— 21 July 2021 for categories 1-7 and 10,</li> <li>— 21 July 2021 for categories 8 and 9 other than <i>in vitro</i> diagnostic medical devices and industrial monitoring and control instruments,</li> <li>— 21 July 2023 for category 8 <i>in vitro</i> diagnostic medical devices,</li> <li>— 21 July 2024 for category 9 industrial monitoring and control instruments, and for category 11.";</li> </ul> |
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(q) item 37 shall be substituted by the following:

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| "37 | Lead in the plating layer of high voltage diodes on the basis of a zinc borate glass body | Expires on: <ul style="list-style-type: none"> <li>— 21 July 2021 for categories 1-7 and 10;</li> <li>— 21 July 2021 for categories 8 and 9 other than <i>in vitro</i> diagnostic medical devices and industrial monitoring and control instruments;</li> <li>— 21 July 2023 for category 8 <i>in vitro</i> diagnostic medical devices;</li> <li>— 21 July 2024 for category 9 industrial monitoring and control instruments, and for category 11.";</li> </ul> |
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(r) item 42 shall be added:

- "42      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  $\geq$  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.
- Applies to category 11, excluding applications covered by entry 6(c) of this Annex.  
Expires on 21 July 2024."

Amends  
Schedule IV to  
the principal  
regulations.

**8.** Schedule IV to the principal regulations shall be amended as follows:

(a) in item 31 thereof, the words " '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.", shall be deleted;

(b) item 39 thereof shall be substituted by the following:

"39. Lead in micro-channel plates (MCPs) used in equipment where at least one of the following properties is present:

(a) a compact size of the detector for electrons or ions, where the space for the detector is limited to a maximum of 3mm/MCP (detector thickness + space for installation of the MCP), a maximum of 6mm in total, and an alternative design yielding more space for the detector is scientifically and technically impracticable;

(b) a two-dimensional spatial resolution for detecting electrons or ions, where at least one of the

following applies:

- (i) a response time shorter than 25ns;
- (ii) a sample detection area larger than 149mm<sup>2</sup>;
- (iii) a multiplication factor larger than  $1,3 \times 10^3$ ;
- (c) a response time shorter than 5ns for detecting electrons or ions;
- (d) a sample detection area larger than 314mm<sup>2</sup> for detecting electrons or ions;
- (e) a multiplication factor larger than  $4,0 \times 10^7$ .

The exemption expires on the following dates:

- (a) 21 July 2021 for medical devices and monitoring and control instruments;
- (b) 21 July 2023 for *in vitro* diagnostic medical devices;
- (c) 21 July 2024 for industrial monitoring and control instruments."

9. Immediately after Schedule VII to the principal regulations, there shall be added the following new Schedule:

Adds new Schedule VIII to the principal regulations.

"Schedule VIII

List of European Union legislation transposed by these regulations  
[Regulation 2(1A)]

- The requirements of Article 14(2)(e), Article 14(4), Article 15(2) and Annex IX of Directive 2012/19/EU of the European Parliament and of the Council of 4 July 2012 on waste electrical and electronic equipment (WEEE) (recast).
- Commission Delegated Directive 2014/1/EU of 18 October 2013 amending, for the purposes of adapting to technical progress, the Annex IV to Directive 2011/65/EU of the European Parliament and of the Council as regards an exemption for lead as an alloying element for bearings and wear surfaces in medical equipment exposed to ionising radiation.
- Commission Delegated Directive 2014/2/EU of 18 October 2013

amending, for the purposes of adapting to technical progress, the Annex IV to Directive 2011/65/EU of the European Parliament and of the Council as regards an exemption for cadmium in phosphor coatings in image intensifiers for X-ray images until 31 December 2019 and in spare parts for X-ray systems placed on the EU market before 1 January 2020.

- Commission Delegated Directive 2014/3/EU of 18 October 2013 amending, for the purposes of adapting to technical progress, the Annex IV to Directive 2011/65/EU of the European Parliament and of the Council as regards an exemption for lead acetate marker for use in stereotactic head frames for use with CT (Computed Tomography) and MRI and in positioning systems for gamma beam and particle therapy equipment.
- Commission Delegated Directive 2014/4/EU of 18 October 2013 amending, for the purposes of adapting to technical progress, the Annex IV to Directive 2011/65/EU of the European Parliament and of the Council as regards an exemption for lead enabling vacuum tight connections between aluminium and steel in X-ray image intensifiers.
- Commission Delegated Directive 2014/5/EU of 18 October 2013 amending, for the purposes of adapting to technical progress, Annex IV to Directive 2011/65/EU of the European Parliament and of the Council as regards an exemption for lead in solders on printed circuit boards, termination coatings of electrical and electronic components and coatings of printed circuit boards, solders for connecting wires and cables, solders connecting transducers and sensors that are used durably at a temperature below -20°C under normal operating and storage conditions.
- Commission Delegated Directive 2014/6/EU of 18 October 2013 amending, for the purposes of adapting to technical progress, the Annex IV to Directive 2011/65/EU of the European Parliament and of the Council as regards an exemption for lead in the surface coatings of pin connector systems requiring non-magnetic connectors which are used durably at a temperature below -20°C under normal operating and storage conditions.
- Commission Delegated Directive 2014/7/EU of 18 October 2013 amending, for the purposes of adapting to technical progress, Annex IV to Directive 2011/65/EU of the European Parliament and of the Council as regards an exemption for lead in solders, termination coatings of electrical and electronic components and printed circuit boards, connections of electrical wires, shields and enclosed connectors which are used (a) in 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 (b) in magnetic fields within 1 m distance from the external surfaces of cyclotron magnets, magnets for beam transport and beam direction control applied for particle therapy.

- Commission Delegated Directive 2014/8/EU of 18 October 2013 amending, for the purposes of adapting to technical progress, Annex IV to Directive 2011/65/EU of the European Parliament and of the Council as regards an exemption for lead in solders for mounting cadmium telluride and cadmium zinc telluride digital array detectors to printed circuit boards.
- Commission Delegated Directive 2014/9/EU of 18 October 2013 amending, for the purposes of adapting to technical progress, the Annex IV to Directive 2011/65/EU of the European Parliament and of the Council as regards an exemption for lead and cadmium in metallic bonds creating superconducting magnetic circuits in MRI, SQUID, NMR (Nuclear Magnetic Resonance) or FTMS (Fourier Transform Mass Spectrometer) detectors.
- Commission Delegated Directive 2014/10/EU of 18 October 2013 amending, for the purposes of adapting to technical progress, Annex IV to Directive 2011/65/EU of the European Parliament and of the Council as regards an exemption for 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 (category 8) and/or in industrial monitoring and control instruments.
- Commission Delegated Directive 2014/11/EU of 18 October 2013 amending, for the purposes of adapting to technical progress, the Annex IV to Directive 2011/65/EU of the European Parliament and of the Council as regards an exemption for hexavalent chromium in alkali dispensers used to create photocathodes in X-ray image intensifiers until 31 December 2019 and in spare parts for X-ray systems placed on the EU market before 1 January 2020.
- Commission Delegated Directive 2014/12/EU of 18 October 2013 amending, for the purposes of adapting to technical progress, the Annex IV to Directive 2011/65/EU of the European Parliament and of the Council as regards an exemption for lead in solders on printed circuit boards of detectors and data acquisition units for Positron Emission Tomographs which are integrated

into Magnetic Resonance Imaging equipment.

- Commission Delegated Directive 2014/13/EU of 18 October 2013 amending, for the purposes of adapting to technical progress, the Annex IV to Directive 2011/65/EU of the European Parliament and of the Council as regards an exemption for lead in solders on populated printed circuit boards used in Directive 93/42/EEC class IIa and IIb mobile medical devices other than portable emergency defibrillators.
- Commission Delegated Directive 2014/14/EU of 18 October 2013 amending, for the purposes of adapting to technical progress, the Annex III to Directive 2011/65/EU of the European Parliament and of the Council as regards an exemption for 3,5 mg mercury per lamp in single capped compact fluorescent lamps for general lighting purposes < 30 W with a lifetime equal to or above 20,000 h.
- Commission Delegated Directive 2014/15/EU of 18 October 2013 amending, for the purposes of adapting to technical progress, the Annex IV to Directive 2011/65/EU of the European Parliament and of the Council as regards an exemption for lead, cadmium and hexavalent chromium in reused spare parts, recovered from medical devices placed on the market before 22 July 2014 and used in category 8 equipment placed on the market before 22 July 2021, provided that reuse takes place in auditable closed-loop business-to-business return systems, and that the reuse of parts is notified to the consumer.
- Commission Delegated Directive 2014/16/EU of 18 October 2013 amending, for the purposes of adapting to technical progress, the Annex IV to Directive 2011/65/EU of the European Parliament and of the Council as regards an exemption for lead as an activator in the fluorescent powder of discharge lamps when used for extracorporeal photopheresis lamps containing BSP ( $\text{BaSi}_2\text{O}_5:\text{Pb}$ ) phosphors.
- Commission Delegated Directive 2014/69/EU of 13 March 2014 amending, for the purposes of adapting to technical progress, Annex IV to Directive 2011/65/EU of the European Parliament and of the Council as regards an exemption for lead in dielectric ceramic in capacitors for a rated voltage of less than 125 V AC or 250 V DC for industrial monitoring and control instruments.
- Commission Delegated Directive 2014/70/EU of 13 March 2014 amending, for the purposes of adapting to technical progress, Annex IV to Directive 2011/65/EU of the European Parliament



and of the Council as regards an exemption for lead in micro-channel plates (MCPs).

- Commission Delegated Directive 2014/71/EU of 13 March 2014 amending, for the purposes of adapting to technical progress, Annex IV to Directive 2011/65/EU of the European Parliament and of the Council as regards an exemption for lead in solder in one interface of large area stacked die elements.
- Commission Delegated Directive 2014/72/EU of 13 March 2014 amending, for the purposes of adapting to technical progress, Annex III to Directive 2011/65/EU of the European Parliament and of the Council as regards an exemption for 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.
- Commission Delegated Directive 2014/73/EU of 13 March 2014 amending, for the purposes of adapting to technical progress, Annex IV to Directive 2011/65/EU of the European Parliament and of the Council as regards an exemption for lead in platinised platinum electrodes used for conductivity measurements.
- Commission Delegated Directive 2014/74/EU of 13 March 2014 amending, for the purposes of adapting to technical progress, Annex IV to Directive 2011/65/EU of the European Parliament and of the Council as regards an exemption for lead used in other than C-press compliant pin connector systems for industrial monitoring and control instruments.
- Commission Delegated Directive 2014/75/EU of 13 March 2014 amending, for the purposes of adapting to technical progress, Annex IV to Directive 2011/65/EU of the European Parliament and of the Council as regards an exemption for mercury in cold cathode fluorescent lamps (CCFLs) 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.
- Commission Delegated Directive 2014/76/EU of 13 March 2014 amending, for the purposes of adapting to technical progress, Annex III to Directive 2011/65/EU of the European Parliament and of the Council as regards an exemption for Mercury in hand crafted luminous discharge tubes (HLDTs) used for signs, decorative or architectural and specialist lighting and light-artwork.

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- Commission Delegated Directive (EU) 2015/573 of 30 January 2015 amending, for the purposes of adapting to technical progress, Annex IV to Directive 2011/65/ EU of the European Parliament and of the Council as regards an exemption for lead in polyvinyl chloride sensors in in-vitro diagnostic medical devices.
- Commission Delegated Directive (EU) 2015/574 of 30 January 2015 amending, for the purposes of adapting to technical progress, Annex IV to Directive 2011/65/ EU of the European Parliament and of the Council as regards an exemption for mercury in intravascular ultrasound imaging systems.
- Commission Delegated Directive (EU) 2015/863 of 31 March 2015 amending Annex II to Directive 2011/65/ EU of the European Parliament and of the Council as regards the list of restricted substances.
- Commission Delegated Directive (EU) 2016/585 of 12 Feb 2016 amending, for the purposes of adapting to technical progress, Annex IV to Directive 2011/65/EU of the European Parliament and of the Council as regards an exemption for lead, cadmium, hexavalent chromium, and polybrominated diphenyl ethers (PBDE) in spare parts recovered from and used for the repair or refurbishment of medical devices or electron microscopes.
- Commission Delegated Directive (EU) 2016/1028 of 19 April 2016 amending, for the purposes of adapting to technical progress, Annex IV to Directive 2011/65/ EU of the European Parliament and of the Council as regards an exemption for lead in solders of electrical connections to temperature measurement sensors in certain devices.
- Commission Delegated Directive (EU) 2016/1029 of 19 April 2016 amending, for the purposes of adapting to technical progress, Annex IV to Directive 2011/65/EU of the European Parliament and of the Council as regards an exemption for cadmium anodes in Hersch cells for certain oxygen sensors used in industrial monitoring and control instruments.
- Commission Delegated Directive (EU) 2017/1009 of 13 March 2017 amending, for the purposes of adapting to technical progress, Annex III to Directive 2011/65/EU of the European Parliament and of the Council as regards an exemption for cadmium and lead in filter glasses and glasses used for reflectance standards.

- Commission Delegated Directive (EU) 2017/1010 of 13 March 2017 amending, for the purposes of adapting to technical progress, Annex III to Directive 2011/65/EU of the European Parliament and of the Council as regards an exemption for lead in bearing shells and bushes for certain refrigerant-containing compressors.
- Commission Delegated Directive (EU) 2017/1011 of 15 March 2017 amending, for the purposes of adapting to technical progress, Annex III to Directive 2011/65/EU of the European Parliament and of the Council as regards an exemption for lead in white glasses used for optical applications.
- Commission Delegated Directive (EU) 2017/1975 of 7 August 2017 amending, for the purposes of adapting to scientific and technical progress, Annex III to Directive 2011/65/EU of the European Parliament and of the Council as regards an exemption for cadmium in colour converting light-emitting diodes (LEDs) for use in display systems.
- Directive (EU) 2017/2102 of the European Parliament and of the Council of 15 November 2017 amending Directive 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment\* .
- Commission Delegated Directive (EU) 2018/736 of 27 February 2018 amending, for the purposes of adapting to scientific and technical progress, Annex III to Directive 2011/65/EU of the European Parliament and of the Council as regards an exemption for certain electrical and electronic components containing lead in glass or ceramic\*\* .
- Commission Delegated Directive (EU) 2018/737 of 27 February 2018 amending, for the purposes of adapting to scientific and technical progress, Annex III to Directive 2011/65/EU of the European Parliament and of the Council as regards an exemption for lead in solders for the soldering to machined through hole discoidal and planar array ceramic multilayer capacitors\*\* .
- Commission Delegated Directive (EU) 2018/738 of 27 February 2018 amending, for the purposes of adapting to scientific and technical progress, Annex III to Directive 2011/65/EU of the European Parliament and of the Council as regards an exemption for lead in cermet-based trimmer potentiometer elements\*\* .
- Commission Delegated Directive (EU) 2018/739 of 1 March 2018 amending, for the purposes of adapting to scientific and

technical progress, Annex III to Directive 2011/65/EU of the European Parliament and of the Council as regards an exemption for lead as an alloying element in steel<sup>\*\*</sup> .

- Commission Delegated Directive (EU) 2018/740 of 1 March 2018 amending, for the purposes of adapting to scientific and technical progress, Annex III to Directive 2011/65/EU of the European Parliament and of the Council as regards an exemption for lead as an alloying element in aluminium<sup>\*\*</sup> .
- Commission Delegated Directive (EU) 2018/741 of 1 March 2018 amending, for the purposes of adapting to scientific and technical progress, Annex III to Directive 2011/65/EU of the European Parliament and of the Council as regards an exemption for lead as an alloying element in copper<sup>\*\*</sup> .
- Commission Delegated Directive (EU) 2018/742 of 1 March 2018 amending, for the purposes of adapting to scientific and technical progress, Annex III to Directive 2011/65/EU of the European Parliament and of the Council as regards an exemption for lead in high melting temperature solders<sup>\*\*</sup> .
- Commission Delegated Directive (EU) 2019/169 of 16 November 2018 amending, for the purposes of adapting to scientific and technical progress, Annex III to Directive 2011/65/EU of the European Parliament and of the Council as regards an exemption for lead in dielectric ceramic in certain capacitors<sup>\*\*\*</sup> .
- Commission Delegated Directive (EU) 2019/170 of 16 November 2018 amending, for the purposes of adapting to scientific and technical progress, Annex III to Directive 2011/65/EU of the European Parliament and of the Council as regards an exemption for lead in PZT based dielectric ceramic materials for certain capacitors<sup>\*\*\*</sup> .
- Commission Delegated Directive (EU) 2019/171 of 16 November 2018 amending, for the purposes of adapting to scientific and technical progress, Annex III to Directive 2011/65/EU of the European Parliament and of the Council as regards an exemption for cadmium and its compounds in electrical contacts<sup>\*\*\*</sup> .
- Commission Delegated Directive (EU) 2019/172 of 16 November 2018 amending, for the purposes of adapting to scientific and technical progress, Annex III to Directive 2011/65/EU of the European Parliament and of the Council as regards an exemption for lead in solders to complete a viable electrical

connection between semiconductor die and carrier within integrated circuit flip chip packages<sup>\*\*\*</sup>.

- Commission Delegated Directive (EU) 2019/173 of 16 November 2018 amending, for the purposes of adapting to scientific and technical progress, Annex III to Directive 2011/65/EU of the European Parliament and of the Council as regards an exemption for lead and cadmium in printing inks for the application of enamels on glasses<sup>\*\*\*</sup>.
- Commission Delegated Directive (EU) 2019/174 of 16 November 2018 amending, for the purposes of adapting to scientific and technical progress, Annex III to Directive 2011/65/EU of the European Parliament and of the Council as regards an exemption for lead bound in crystal glass as defined in Directive 69/493/EEC<sup>\*\*\*</sup>.
- Commission Delegated Directive (EU) 2019/175 of 16 November 2018 amending, for the purposes of adapting to scientific and technical progress, Annex III to Directive 2011/65/EU of the European Parliament and of the Council as regards an exemption for lead oxide in seal frit used for making window assemblies for certain laser tubes<sup>\*\*\*</sup>.
- Commission Delegated Directive (EU) 2019/176 of 16 November 2018 amending, for the purposes of adapting to scientific and technical progress, Annex III to Directive 2011/65/EU of the European Parliament and of the Council as regards an exemption for lead in the plating layer of certain diodes<sup>\*\*\*</sup>.
- Commission Delegated Directive (EU) 2019/177 of 16 November 2018 amending, for the purposes of adapting to scientific and technical progress, Annex III to Directive 2011/65/EU of the European Parliament and of the Council as regards an exemption for lead as activator in the fluorescent powder of discharge lamps containing phosphors<sup>\*\*\*</sup>.
- Commission Delegated Directive (EU) 2019/178 of 16 November 2018 amending, for the purposes of adapting to scientific and technical progress, Annex III to Directive 2011/65/EU of the European Parliament and of the Council as regards an exemption for lead in bearings and bushes applied in certain non-road professional use equipment<sup>\*\*\*\*</sup>.

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\* Applicable as from 12th June, 2019.

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- \*\* Applicable as from 1st July, 2019.
  - \*\*\* Applicable as from 1st March, 2020.
  - \*\*\*\* Applicable as from 22nd July, 2019. "
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