

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 (Text with EEA relevance)

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

(Text with EEA relevance)

THE EUROPEAN COMMISSION,

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

Having regard to 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<sup>(1)</sup> and in particular Article 5(1)(a) thereof,

Whereas:

- (1) Directive 2011/65/EU requires Member States to ensure that electrical and electronic equipment placed on the market does not contain lead.
- (2) Point 24 of Annex III to Directive 2011/65/EU exempted the use of lead in solders for the soldering to machined through hole discoidal and planar array ceramic multilayer capacitors until 21 July 2016. The Commission received an application for renewal of this exemption in relation to categories 1 to 7 and 10 before 21 January 2015, in accordance with Article 5(5) of Directive 2011/65/EU.
- (3) Discoidal and planar array capacitors are derivations of multi-layer ceramic capacitors. They are specialist capacitors used in electromagnetic interference filters and electromagnetic interference filtered connectors for high end applications, where the elimination of electrical interference is critical. Typical applications for assemblies incorporating those components include professional audio equipment, maritime monitoring and video surveillance systems.
- (4) Lead-containing solders used in discoidal and planar array capacitors provide the combination of a suitable melting point and ductility. The ductility of that solder avoids cracking of the ceramic layer during and after soldering due to thermal mismatch between the ceramic capacitor and the copper pin.
- (5) Currently, the substitution of lead is scientifically and technically impracticable.

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- (6) Since for the applications concerned in categories 1 to 7 and 10, no sufficiently reliable alternatives are available on the market or are likely to be available on the market in the near future, validity period until 21 July 2021 is justified. For categories other than categories 1 to 7 and 10, the existing exemption is valid as per the validity periods set out in the second subparagraph of Article 5(2) of Directive 2011/65/EU.
- (7) Directive 2011/65/EU should therefore be amended accordingly,

HAS ADOPTED THIS DIRECTIVE:

*Article 1*

Annex III to Directive 2011/65/EU is amended as set out in the Annex to this Directive.

*Article 2*

1 Member States shall adopt and publish, by 30 June 2019 at the latest, the laws, regulations and administrative provisions necessary to comply with this Directive. They shall forthwith communicate to the Commission the text of those provisions.

They shall apply those provisions from 1 July 2019.

When Member States adopt those provisions, they shall contain a reference to this Directive or be accompanied by such a reference on the occasion of their official publication. Member States shall determine how such reference is to be made.

2 Member States shall communicate to the Commission the text of the main provisions of national law which they adopt in the field covered by this Directive.

*Article 3*

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

*Article 4*

This Directive is addressed to the Member States.

Done at Brussels, 27 February 2018.

*For the Commission*

*The President*

Jean-Claude JUNCKER

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## ANNEX

In Annex III to Directive 2011/65/EU, point 24 is replaced 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 <i>in vitro</i> diagnostic medical devices and industrial monitoring and control instruments, — 21 July 2023 for category 8 <i>in vitro</i> diagnostic medical devices, — 21 July 2024 for category 9 industrial monitoring and control instruments, and for category 11.
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- (1) [OJ L 174, 1.7.2011, p. 88.](#)