

# DIRECTIVES

## 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**

(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 prohibits the use of lead in electrical and electronic equipment placed on the market.
- (2) Lead is used for electrical connections in cryogenic sensors for medical devices and monitoring and control instruments to prevent the formation of thick intermetallic phases, whiskers, and tin pest. Those sensors are used in some applications to measure very low temperatures for short periods.
- (3) Lead-free solders cannot be used in cryogenic applications, as they are prone to tin pest, which seriously affects the reliability of the appliances. It has been proven that, in typically operated cryogenic sensors, no alternative connection technologies other than soldering are both reliable and available.
- (4) Lead solders in the external contacts of temperature sensors that are used periodically at temperatures below – 150 °C should therefore be exempted until 30 June 2021, as the exemption in point 26 of Annex IV to Directive 2011/65/EU. In view of the innovation cycles for medical devices and monitoring and control instruments, duration of this exemption is unlikely to have adverse impacts on innovation.
- (5) Directive 2011/65/EU should therefore be amended accordingly,

HAS ADOPTED THIS DIRECTIVE:

### *Article 1*

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

### *Article 2*

1. Member States shall bring into force the laws, regulations and administrative provisions necessary to comply with this Directive by 30 April 2017 at the latest. They shall forthwith communicate to the Commission the text of those provisions.

<sup>(1)</sup> OJ L 174, 1.7.2011, p. 88.

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, 19 April 2016.

*For the Commission*  
*The President*  
Jean-Claude JUNCKER

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#### ANNEX

In Annex IV to Directive 2011/65/EU, point 26 is replaced by the following:

‘26. Lead in the following applications that are used durably at a temperature below – 20 °C under normal operating and storage conditions:

- (a) solders on printed circuit boards;
- (b) termination coatings of electrical and electronic components and coatings of printed circuit boards;
- (c) solders for connecting wires and cables;
- (d) solders connecting transducers and sensors.

Lead in solders of electrical connections to temperature measurement sensors in devices which are designed to be used periodically at temperatures below – 150 °C.

These exemptions expire on 30 June 2021.’

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