EEE

HCT-202509-02

European Commission Adopts Several Draft Amendments to RoHS Lead Exemptions

On September 8, 2025, the European Commission adopted three draft amendments to the RoHS Directive, covering lead exemptions in steel, aluminum, and copper alloys, high melting temperature solders, as well as glass and ceramics in electrical and electronic components. The next step will be the official publication of the amended RoHS Directive in the Official Journal of the European Union, after which these exemptions will be formally updated. The main contents of the draft amendments are as follows:

The proposed exemptions for steel alloys, aluminum alloys, and copper alloys are revised as follows:

In Annex III to Directive 2011/65/EU, points 6(a), 6(a)-I, 6(b), 6(b)-I, 6(b)-II and 6(c) are replaced by the following:

Clause	Exemptions	Scope and dates of applicability
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 [PO: 12 months after entry into force of the Delegated Directive].
6(a)-I	Lead as an alloying element in steel for machining purposes containing up to 0,35% lead by weight*	Expires on **30 June 2027** for all categories.
6(a)-II	Lead as an alloying element in batch hot-dip galvanised steel components containing up to 0,2% lead by weight*	Expires on **30 June 2027** for all categories.
6(b)	Lead as an alloying element in aluminium containing up to 0,4% lead by weight	Expires on [PO: **18 months** after entry into force of the Delegated Directive].
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 [PO: 12 months after the entry into force of the Delegated Directive] for categories 1-7, 10. Expires on **30 June 2027** for categories 9 industrial monitoring and control instruments, and 11.
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 [PO: 18 months after the entry into force of the Delegated Directive] for categories 1-7, 10.

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		Expires on **30 June 2027** for categories 9 industrial monitoring and control instruments and 11.*
6(b)-III	Lead as an alloying element in aluminium casting alloys containing up to 0,3% lead by weight provided it stems from lead-bearing aluminium scrap recycling*	Expires on **30 June 2027** for categories 1-8, 9 other than industrial monitoring and control instruments, and 10.
6(c)	Copper alloy containing up to 4% lead by weight*	Expires on **30 June 2027**.

* The exemption shall not cover EEE for supply to the general public where the EEE or accessible part thereof may, during normal or foreseeable conditions of use, be placed in the mouth by children. However, the exemption shall apply where the following can be both demonstrated:

the rate of lead release from such an EEE or any accessible part, whether coated or uncoated, does not exceed 0,05 μg/cm^2 per hour (equivalent to 0,05 μg/g/h),

for coated articles, that the coating is sufficient to ensure that this release rate is not exceeded for a period of at least two years of normal or reasonably foreseeable conditions of use of the EEE.

For the purpose of this footnote, it is considered that an EEE or accessible part of an EEE may be placed in the mouth by children if it is smaller than 5 cm in one dimension or has a detachable or protruding part of that size.

The proposed exemptions for high-melting-point solders are revised as follow:

In Annex III to Directive 2011/65/EU, point 7(a) is replaced by the following:

Clause	Exemptions	Scope and dates of applicability
7(a)	Lead in high melting temperature type solders (i.e., lead-based alloys containing 85% by weight or more lead)	Applies to all categories (except applications covered by point 24 of this Annex) and expires on **30 June 2027**.
7(a)-I	7(a)-I Lead in high melting temperature type solders (i.e., lead-based alloys containing 85% by weight or more lead) for internal interconnections for attaching die, or other components along with a die in semiconductor assembly with steady state or transient/impulse currents of 0.1 A or greater or blocking voltages beyond 10 V, or die edge sizes larger than 0.3 mm x 0.3 mm	Applies to all categories (except applications covered by point 24 of this Annex) and expires on 31 December 2027.

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7(a)-II	Lead in high melting temperature type solders (i.e., lead-based alloys containing 85% by weight or more lead) for integral (meaning internal and external) connections of die attach in electrical and electronic components, if all the following conditions are met: - the thermal conductivity of the cured/sintered dieattach material is >35W/(m*K), - the electrical conductivity of the cured/sintered dieattach material is >4.7MS/m , - solidus melting temperature is higher than 260°C	Applies to all categories (except applications covered by point 24 of this Annex) and expires on 31 December 2027.
7(a)-III	Lead in high melting temperature type solders (i.e., lead-based alloys containing 85% by weight or more lead) in first level solder joints (internal or integral connections - meaning internal and external) for manufacturing components so that subsequent mounting of electronic components onto subassemblies (i.e. modules, sub-circuit boards,substrates, or point-to-point soldering) with a secondary solder does not reflow the first level solder. This sub-entry excludes die attach applications and hermetic sealings	Applies to all categories (except applications covered by point 24 of this Annex) and expires on 31 December 2027.
7(a)-IV	Lead in high melting temperature type solders (i.e., lead-based alloys containing 85% by weight or more lead) in second level solder joints for the attachment of components to printed circuit board or lead frames: 1. in solder balls for the attachment of ceramic ball-grid-array (BGA) 2. in high temperature plastic overmouldings (> 220°C)	Applies to all categories (except applications covered by point 24 of this Annex) and expires on 31 December 2027.
7(a)-V	Lead in high melting temperature type solders (i.e., lead-based alloys containing 85% by weight or more lead) as a hermetic sealing material between: 1. a ceramic package or plug and a metal case, 2. component terminations and an internal sub-part	Applies to all categories (except applications covered by point 24 of this Annex) and expires on 31 December 2027.
7(a)-VI	Lead in high melting temperature type solders (i.e.,	Applies to all categories (except

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	lead-based alloys containing 85% by weight or more lead) for establishing electrical connections between lamp components in incandescent reflector lamps for infrared heating, high intensity discharge lamps, or oven lamps	applications covered by point 24 of this Annex) and expires on 31 December 2027.
7(a)-VII	Lead in high melting temperature type solders (i.e., lead-based alloys containing 85% by weight or more lead) for audio transducers where the peak operating temperature exceeds 200°C	Applies to all categories (except applications covered by point 24 of this Annex) and expires on 31 December 2027.

The proposed amendments to the exemption for glass-ceramics in electrical and electronic components are as follows:

Annex III to Directive 2011/65/EU is amended as follows:

(1) points 7(c)-I and 7(c)-II are replaced by the following:

Clause	Exemptions	Scope and dates of applicability
7(c)-I	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	Applies to all categories and expires on **30 June 2027**.
7(c)-II	Lead in dielectric ceramic in capacitors for a rated voltage of 125 V AC or 250 V DC or higher	Applies to all categories **(except applications covered by point 7(c)-I or 7(c)-IV)** and expires on 31 December 2027.

(2) the following points 7(c)-V and 7(c)-VI are added:

Clause	Exemptions	Scope and dates of applicability
7(c)-V	Electrical and electronic components containing lead in a glass or glass matrix compound that fulfils any of the following functions: **1) for protection and electrical insulation in glass beads of high-voltage diodes and glass layers for wafers ;** 2) for hermetic sealing between ceramic, metal and/or glass parts;	Applies to all categories and expires on 31 December 2027.

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	3) for bonding purposes in a process parameter window for < 500 °C combined with a viscosity of 1013.3 dPas ('glass-transition temperature'); 4) for use as a resistive material such as ink, with a resistivity range from 1 ohm/square to **100** megohm/square, excluding trimmer potentiometers; 5) for use in chemically modified glass surfaces for microchannel plates (MCPs), channel electron multipliers (CEMs) and resistive glass products (RGPs).	
7(c)-VI	Electrical and electronic components containing lead in a ceramic that fulfils any of the following functions: 1) for use in piezoelectric lead zirconium titanate (PZT) ceramics; 2) for providing ceramics with a positive temperature coefficient (PTC).	Applies to all categories **(except applications covered by points 7(c)-II, 7(c)-III and 7(c)-IV of this Annex as well as point 14 of Annex IV)** and expires on 31December 2027.

Original link:

Alloy:
https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/14172-Hazardous-substances-exemption-for-lead-as-an-alloying-element-in-steel-aluminium-and-copper_en

High melting temperature type solders:
https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/14170-Hazardous-substances-exemption-for-lead-in-high-melting-temperature-type-solders_en

Glass or in ceramic of electrical or electronic components:
https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/14171-Hazardous-substances-exemption-for-lead-in-glass-or-in-ceramic-of-electrical-and-electronic-components_en

HCT SOLUTION:

According to the adopted drafts, most exemption clauses will have their validity periods extended, while exemptions for certain materials will expire and become invalid. It is recommended that relevant companies promptly review whether the exempted materials they use comply with the requirements of the amended drafts, in order to proactively prepare for the changes in RoHS exemptions.

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