



Brussels, **XXX**  
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**COMMISSION DELEGATED DIRECTIVE (EU) .../...**

**of **XXX****

**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 hexavalent chromium as an anticorrosion agent of the carbon steel cooling system in absorption refrigerators**

(Text with EEA relevance)

## EXPLANATORY MEMORANDUM

### 1. CONTEXT OF THE DELEGATED ACT

This Commission Delegated Directive amends, for the purpose of adapting to technical progress, Annex III of Directive 2011/65/EU of the European Parliament and of the Council on the restriction of the use of certain hazardous substances in electrical and electronic equipment (recast)<sup>1</sup> (RoHS 2) as regards an exemption for specific applications containing hexavalent chromium.

RoHS 2 restricts the use of certain hazardous substances in electrical and electronic equipment, as provided for in its Article 4. It entered into force on 21 July 2011.

The currently restricted substances as listed in Annex II to RoHS 2 are the following: lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyls (PBB), polybrominated diphenyl ethers (PBDE), bis(2-ethylhexyl) phthalate (DEHP), butyl benzyl phthalate (BBP), dibutyl phthalate (DBP) and diisobutyl phthalate (DIBP). Annexes III and IV to RoHS 2 list the materials and components of electrical and electronic equipment (EEE) for specific applications exempted from the substance restriction of RoHS 2 Article 4(1).

Article 5 makes provision for the adaptation to scientific and technical progress (inclusion, renewal, amendments and revoking of exemptions) of Annexes III and IV. Pursuant to Article 5(1)(a), exemptions are to be included in Annexes III and IV only if such inclusion does not weaken the environmental and health protection afforded by Regulation (EC) No 1907/2006<sup>2</sup> and where any of the following conditions is fulfilled: their elimination or substitution via design changes or materials and components which do not require any of the materials or substances listed in Annex II is scientifically or technically impracticable; the reliability of substitutes is not ensured; or the total negative environmental, health and consumer safety impacts caused by substitution are likely to outweigh the total environmental, health and consumer safety benefits thereof.

Furthermore, Article 5(1) provides that the European Commission (the Commission) shall include materials and components of EEE for specific applications in the lists in Annexes III and IV by means of individual delegated acts in accordance with Article 20. Article 5(3) and Annex V establish the procedure for submitting applications for granting, renewing, or revoking an exemption.

### 2. CONSULTATIONS PRIOR TO THE ADOPTION OF THE ACT

Since the publication of RoHS 2, the Commission has received numerous<sup>3</sup> requests from economic operators, according to the provisions in Article 5(3) and Annex V, for both granting new and renewing existing exemptions.

The current Annex III exemption 9 permits the use of hexavalent chromium as an anticorrosion agent of the carbon steel cooling system. The Commission received one application for renewal of this exemption in January 2015. While exemption 9 had 21 July 2016 as expiration date for categories 1 to 7 and 10<sup>4</sup>, in line with the requirements of the

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

<sup>2</sup> OJ L 396, 30.12.2006, p. 1

<sup>3</sup> The list is given at: [http://ec.europa.eu/environment/waste/rohs\\_eee/adaptation\\_en.htm](http://ec.europa.eu/environment/waste/rohs_eee/adaptation_en.htm)

<sup>4</sup> These categories are namely: 1. Large household appliances; 2. Small household appliances; 3. IT and telecommunications equipment; 4. Consumer equipment; 5. Lighting equipment; 6. Electrical and electronic tools; 7. Toys, leisure and sports equipment; 10. Automatic dispensers. EEE categories are listed in Annex I to the RoHS Directive.

RoHS Directive (Article 5(5), second subparagraph), it continues to apply until a decision on the renewal application is taken by the Commission.

With a view to evaluating the application for exemption, the Commission launched a study to carry out the required technical and scientific assessment, including an eight-week online open-ended stakeholder consultation<sup>5</sup> on the application. One contribution was made to the stakeholder consultation.

The final report containing the assessment of the application was published<sup>6</sup>; stakeholders were notified.

Subsequently, the Commission consulted the Member States expert group for delegated acts under RoHS 2 in written form<sup>7</sup>. The experts agreed with the draft presented by the Commission, with a large majority of silent members. All necessary steps relating to exemptions from the substance restriction pursuant to Articles 5(3) to 5(7) have been performed.<sup>8</sup> The Council and the European Parliament were notified of all activities.

The final report highlighted in particular the following technical information and assessment:

- Hexavalent chromium (Cr(VI)) acts as an anticorrosion agent of the carbon steel cooling system in absorption refrigerators. It is used to create a layer on the interior surface of the steel tubes to protect them from the cooling solution that contains corrosive ammonia.
- A substitute for Cr(VI) has become available for absorption refrigerators using low boiler temperature applications (approximately 140-180°C). Substitution in other applications using higher boiler temperature is expected to require a longer period as reliability of alternatives is still under evaluation.

The evaluation results for categories 1 to 7 and 10 show that at least one of the relevant criteria specified in Article 5(1)(a) is met by the exemption request relating to entry 9 in Annex III.

In order to differentiate between low and high boiler applications and make the exemption consistent with the respective REACH authorisations<sup>9</sup>, the wording of the current exemption has been split. As the boiler temperature could be easily adjusted through the operating pressure, the temperature was not considered sufficiently reliable for RoHS enforcement purposes. Instead, the power input, which is closely related to boiling temperature, is considered easier to monitor and more reliable to represent the different categories of application.

As for applications with power input < 75 W (corresponding to low boiler temperature products), reliable substitutes have become available, the exemption shall expire 12 months after the publication of this Delegated Directive in the *Official Journal of the European Union*, in line with Article 5(6) of the RoHS Directive.

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<sup>5</sup> [Consultation period](#): from 21.08.2015 to 16.10.2015

<sup>6</sup> <https://bookshop.europa.eu/en/assistance-to-the-commission-on-technological-socio-economic-and-cost-benefit-assessment-related-to-exemptions-from-the-substance-restrictions-in-electrical-and-electronic-equipment-pbKH0416554/>

<sup>7</sup> Consultations were carried out from 14 December 2018 until 21 January 2019.

<sup>8</sup> A list of the required administrative steps is available on the [Commission website](#). Current stage of the procedure can be viewed for each draft delegated act in the Interinstitutional Registry of Delegated Acts at <https://webgate.ec.europa.eu/regdel/#/home>.

<sup>9</sup> Commission Decision C(2017) 665

For applications with power input  $\geq 75$  W and for systems fully operating with non-electrical heaters (corresponding to high boiler temperature applications), a validity period of the exemption until 21 July 2021, which may be renewed as per Article 5(2) first paragraph, is justified.

The exemption is consistent with REACH authorisations REACH/17/7/0 – REACH/1/7/73. No negative socioeconomic impacts of substitution are to be anticipated for the granted validity period. It is also not expected to have adverse impacts on innovation.

For categories other than categories 1 to 7 and 10, the existing exemption remains as per the validity periods set out in Article 5(2). The specific exemption does not weaken the environmental and health protection afforded by Regulation (EC) No 1907/2006 (REACH), in accordance with Article 5 of Directive 2011/65/EU.

### **3. LEGAL ELEMENTS OF THE DELEGATED ACT**

The Delegated Directive grants an exemption from the restrictions in Article 4(1), to be listed in Annex III of Directive 2011/65/EU, for the use of hexavalent chromium in specific applications.

The instrument is a Delegated Directive, as provided for by Directive 2011/65/EU, and in particular meeting the relevant requirements of Article 5(1)(a) thereof.

The objective of the Delegated Directive is to contribute to the protection of human health and the environment and approximate the provisions for the functioning of the internal market in the field of electrical and electronic equipment, by allowing the use of otherwise banned substances for specific applications, in line with the provisions and under the conditions of RoHS 2 and the therein established procedure for the adaptation of the Annexes III and IV to scientific and technical progress.

In accordance with the principle of proportionality, the measure does not go beyond what is necessary to achieve its objective.

The proposal has no implications for the EU budget.

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**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 hexavalent chromium as an anticorrosion agent of the carbon steel cooling system in absorption refrigerators**

(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>10</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 the hazardous substances listed in Annex II to that Directive. That restriction does not apply to the exempted applications listed in Annex III to Directive 2011/65/EU.
- (2) The categories of electrical and electronic equipment to which Directive 2011/65/EU applies are listed in Annex I to that Directive.
- (3) Hexavalent chromium is a restricted substance listed in Annex II to Directive 2011/65/EU.
- (4) An exemption from the restriction for the use of 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 (“the exemption”) is included in Annex III to Directive 2011/65/EU. For categories 1 to 7 and 10, the exemption was to expire on 21 July 2016 in accordance with the second subparagraph of Article 5(2) of that Directive.
- (5) The Commission received an application for renewal of the exemption (“the renewal request”) on 20 January 2015, that is within the time limit laid down in Article 5(5) of Directive 2011/65/EU. In accordance with that provision, the exemption remains valid until a decision on the renewal request has been adopted.
- (6) The evaluation of the renewal request included stakeholder consultations in accordance with Article 5(7) of Directive 2011/65/EU. The evaluation, taking into account the Commission Decisions on authorisations for the placing on the market for the use and/or for use of substances listed in Annex XIV to Regulation (EC) No 1907/2006<sup>11</sup>, led to the conclusion that the current exemption with regard to categories

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<sup>10</sup> OJ L 174, 1.7.2011, p. 88.

<sup>11</sup> Summary of European Commission Decisions on authorisations for the placing on the market for the use and/or for use of substances listed in Annex XIV to Regulation (EC) No 1907/2006 of the European

1 to 7 and 10 is to be divided into two sub-entries with wording clearly reflecting the scientific and technical progress as regards to substitution of hexavalent chromium, which differs depending on the type of application.

- (7) Hexavalent chromium (Cr(VI)) acts as an anticorrosion agent of the carbon steel cooling system in absorption refrigerators. It is used to create a layer on the interior surface of the steel tubes to protect them from the cooling solution that contains corrosive ammonia.
- (8) For applications with power input  $\geq 75$  W and for systems fully operating with non-electrical heaters (corresponding to high boiler temperature applications) which are covered by the current exemption, a substitution or elimination of hexavalent chromium is still scientifically and technically impracticable due to the lack of reliable substitutes. An exemption for these applications is in line with Regulation (EC) No 1907/2006 of the European Parliament and of the Council<sup>12</sup> and thus does not weaken the environmental and health protection afforded by it.
- (9) It is, therefore, appropriate to grant the requested renewal for applications using high boiler temperatures until 21 July 2021, in accordance with Article 4(3) and the second subparagraph of Article 5(2) of Directive 2011/65/EU. In view of the results of the ongoing efforts to find a reliable substitution, the duration of the exemption is unlikely to have adverse impacts on innovation.
- (10) For applications with power input  $< 75$  W (corresponding to low boiler temperature) currently covered by the exemption, the conditions for renewal set out in Article 5(1) of Directive 2011/65/EU are no longer fulfilled and therefore, the renewal request should be rejected. In accordance with Article 5(6) of that Directive, the exemption for those applications should expire 12 months after the date of entry into force of this Directive.
- (11) For categories 8, 9 and 11, the existing exemption remains valid as per the validity periods set out in the second subparagraph of Article 5(2) of Directive 2011/65/EU. For reasons of legal clarity, the dates of expiry should be specified in Annex III to that Directive.
- (12) 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 [\[the last day of the 12<sup>th</sup> month after the date of entry into force of this Directive\]](#) at the latest, the laws, regulations and

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Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (OJ C 48, 15.2.2017, p. 9).

<sup>12</sup> Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) and establishing a European Chemicals Agency (OJ L 396, 30.12.2006, p. 1).

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 [\[the last day of the 12<sup>th</sup> month after the date of entry into force of this Directive + 1 day\]](#).

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,

*For the Commission*

*The President*

[\[...\]](#)



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ANNEX 1

**ANNEX**

**to**

**Commission Delegated Directive**

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## ANNEX

In Annex III to Directive 2011/65/EU, entry 9 is replaced by the following:

"9	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	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 in vitro diagnostic medical devices and industrial monitoring and control instruments;</li><li>– 21 July 2023 for category 8 in vitro diagnostic medical devices;</li><li>– 21 July 2024 for category 9 industrial monitoring and control instruments, and for category 11.</li></ul>
9(a)-I	Up to 0,75% hexavalent chromium by weight, used as an anticorrosion agent in the cooling solution of carbon steel cooling systems of absorption refrigerators (including minibars) designed to operate fully or partly with electrical heater, having an average utilised power input < 75 W at constant running conditions	Expires on <a href="#">[twelve months after the publication of the Delegated Directive in the Official Journal]</a> for categories 1-7 and 10.
9(a)-II	Up to 0,75% hexavalent chromium by weight, used as an anticorrosion agent in the cooling solution of carbon steel cooling systems of absorption refrigerators: <ul style="list-style-type: none"><li>– designed to operate fully or partly with electrical heater, having an average utilised power input <math>\geq 75</math> W at constant running conditions;</li><li>– designed to fully operate with non-electrical heater.</li></ul>	Expires on 21 July 2021 for categories 1-7 and 10."