



**DIRECTIVE 2011/65/EU¹ ON THE RESTRICTION OF THE USE OF CERTAIN HAZARDOUS
SUBSTANCES IN ELECTRICAL AND ELECTRONIC EQUIPMENT (ROHS).**

REQUESTS FOR ADDITIONAL EXEMPTION

**PROPOSALS FOR FURTHER EXEMPTIONS FROM THE REQUIREMENTS OF ARTICLE 4(1) OF
DIRECTIVE 2011/65/EU FOR SPECIFIC APPLICATIONS OF LEAD, MERCURY, CADMIUM,
HEXAVALENT CHROMIUM.**

Mercury in cold cathode fluorescent lamps for luminous sign for advertising or decorative purposes (Category 5).

Submitted by: ANIE Federazione with one of its federated associations - Associazione Nazionale Produttori Illuminazione

ANIE Federazione represents the electrotechnical and electronic companies operating in Italy. With its 10 Associations, ANIE unites strategic players to deliver significant support to the growth of the national industry network and to contribute to its success on international markets. The Federation promotes the competitiveness of member companies with reference to different production factors. It maintains relations with Italian and international authorities and institutions to protect the sector's interests.

Criteria	Information: Please provide supporting technical and scientific evidence
a) Name address and contact details of the applicant;	ANIE Federazione Via Vincenzo Lancetti, 43 20158 Milano, Italy Phone: +39 02.3264.317 Fax: +39 02.3264.212
b) Information on the material or component and the specific	Cold Cathode Fluorescent Lamps for Luminous Sign for Advertising or decorative purposes are very different, as per

¹ OJ L 174, 1.7.2011, p. 88

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<p>uses of the substance in the material and component for which an exemption, or its revocation, is requested and its particular characteristics;</p>	<p>technical and constructional characteristics and electrical values from the CCFLs to which the Commission Decision n.571 of 24th September 2010 refers in id. 3(a), 3(b) and 3(c). Such differences are because of the applications and the users are different. In fact the CCFLs which the Decision n.571 refers are lamps having diameter <u>up to 5 mm</u> and Current intensity <u>up to 15 mA</u>.</p> <p>Specific constructional characteristics for CCFLs for advertising or decorative purposes are:</p> <ol style="list-style-type: none"> 1. Dimensions: Lamps often are curved tubes. Diameters and lengths varies a lot from case to case. In most cases, diameters vary from 6 to 38 mm and lengths are not definable in advance. 2. Electricals: Current intensity in-between 20 and 100 mA in order to emit the proper flux according to the intended use and the dimensions of the lamps. Operating voltage varies from 250 V to 1500 V. 3. Switchings do not affect CCFLs electrodes so these lamps are suitable for <i>unlimited</i> switches 4. Lamp life is longer than hot cathode fluorescent lamps and not less than 50000 h <p>Due to environmental condition (such as low ambient temperature, humidity,...) which are more severe than ordinary (e.g. indoor general lighting), a slight greater mercury content in tubes is necessary to guarantee proper starting and operating of the CCFLs.</p> <p>CCFLs require mercury vapours mixed in rare gasses of the tube in order to operate. "Electrons are emitted from an electrode colliding with mercury atoms and so transferring energy to the atoms which elevates them to an excited state. When these atoms fall back to their original status they emit photons (packages of energy), normally not in the range of visible light. Ultraviolet photons excite the fluorescent powders, which are coated on the inside of the tube, with a high degree of efficiency. As a result these emit visible radiation in a range of colors. Lamps based on these principles and operating at low internal gas pressure are called 'fluorescent lamps.'"</p>
<p>c) verifiable and referenced justification for an exemption, or its revocation, in line with the conditions established in Article 5;</p>	<p>Cold Cathode Fluorescent Lamps for Luminous Sign for Advertising or decorative purposes cannot be considered totally excluded from the RoHS Directive scope because many of them are designed to operate with a voltage rating not exceeding 1000 V (a.c.) and also when they are exceeding such limit, the final product or installation in which they have to operate will be supplied by 230 V a.c., so the limitation for hazardous substances maybe be applied to the whole system.</p> <p>The existing exemptions seem have been issued after having studied the situation relevant to the CCFLs proper to have backlight in</p>

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	<p>specific application (e.g. LCD monitors). Such exemption does not allow to CCFLs for Advertising or decorative purposes anymore.</p> <p>The present proposal for a new exemption would be proper for this kind of lamps which can contribute to optimize and reduce the energy consumption in lighting systems for back lighted luminous signs or letter boxes; they operate at lowest current and have less maintenance (and so less waste). The LCA for the whole system shows the high competitiveness with luminous signs provided with standard fluorescent lamps.</p>
<p>d) an analysis of possible alternative substances, materials or designs on a life-cycle basis, including, when available, information about independent research, peer-review studies and development activities by the applicant and an analysis of the availability of such alternatives;</p>	<p>At present time do not exist alternatives to mercury to be used in CCFLs.</p>
<p>e) information on the possible preparation for reuse or recycling of materials from waste EEE, and on the provisions relating to the appropriate treatment of waste according to Annex II to Directive 2002/96/EC;</p>	<p>Increasing the amount of mercury in CCFLs does not require any change in the normal procedure for disposal, recovery, preparation for re-use of these equipment in respect to usual treatments already established to the purposes of the WEEE Directive 2002/96/EC.</p>
<p>f) other relevant information;</p>	<p>n.a.</p>
<p>g) the proposed actions to develop, request the development and/or to apply possible alternatives including a timetable for such actions by the applicant;</p>	<p>n.a.</p>
<p>h) where appropriate, an indication of the information</p>	<p>n.a.</p>

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which should be regarded as proprietary accompanied by verifiable justification;				
<p>i) when applying for an exemption, proposal for a precise and clear wording for the exemption;</p>	<p>Cold Cathode Fluorescent Lamps for Luminous Sign for Advertising or decorative purposes are very different, as per technical and constructional characteristics and electrical values from the CCFLs to which the Commission Decision n. 571 of 24th September 2010 refers in id. 3(a), 3(b) and 3(c); such differences are because of applications (environmental harsh conditions).</p> <p>Therefore we propose to add to the Annex III the following new exemption.</p> <table border="1" data-bbox="639 860 1474 983"> <tr> <td data-bbox="639 860 759 983">3 (e)</td> <td data-bbox="759 860 1217 983">Mercury in cold cathode fluorescent lamps for luminous sign for advertising or decorative purposes</td> <td data-bbox="1217 860 1474 983">1,3 mg per 100 mm</td> </tr> </table>	3 (e)	Mercury in cold cathode fluorescent lamps for luminous sign for advertising or decorative purposes	1,3 mg per 100 mm
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j) a summary of the application.	<p>See attached file: RoHS Exemption proposals for CCFL_technical file.doc (point 2.)</p>			

Additional guidelines

To support your application, it may be useful to provide, in addition, an assessment of your application from an independent expert. These should be accompanied by information that will allow the Commission and TAC to be satisfied that the consultant is independent and is qualified to assess the application.

Explain the reasons why potential alternative materials, designs or processes are unsuitable with quantitative data wherever possible. If possible, provide photographs or diagrams to illustrate claims. Sources of information should be referenced where possible.