

Japan Lighting Manufacturers Association Joint Position Paper on Revision of Minamata Convention

30 July 2020

The Japan Lighting Manufacturers Association (JLMA) submits a letter to express our opinion on the amendments to Annex A, Part I of the Minamata Convention.

Currently, the Minamata Convention provides for an exemption for lamps and restrict the use of certain fluorescent lamps with Mercury above a certain threshold. The information provided here is a technical proposal for the future of the regulation.

JLMA would like to provide the following technical information in addition to the LightingEurope position paper (22 July 2020). There have been suggestions to replace fluorescent lamps with LEDs, but we believe that there are technical issues with this substitution due to the incompatibility between fluorescent luminaires and certain LED lamps, which poses technical non-functioning and safety (fire) related issues.

A provisional translation of reports from the Consumer Affairs Agency of Japan and the Tokyo Fire Department on safety issues is attached.

The JLMA would like to make the following recommendations for revisions to Annex A, Part I of the Minamata Convention from a technical perspective, taking safety into account.

(1) Maintenance and repair parts for sold fixtures

Non-integrated fluorescent lamps without a (electronic) ballast/control gear i.e. linear fluorescent lamps (LFL) and also named non-integrated CFL lamps (CFL-ni) are considered to be maintenance or repair parts for luminaires, and the Japanese government requires that the supply of spare parts comply with the lighting industry's standards of 10-year lifetime of a luminaire. Similar regulations are expected to exist in many countries around the world, and a ban on non-integrated fluorescent lamps would cause conflicts with national laws and regulations, which would make it difficult to get approval within the UN Minamata Convention.

JLMA believes that it would be difficult to ban non-integrated fluorescent lamps as maintenance parts. To reduce the demand for mercury-containing lamps, we believe it would be better to prohibit luminaires that use non-integrated fluorescent lamps for general lighting and allow non-integrated fluorescent lamps as repair parts for installed luminaires.

(2) Safety (fire) related issues with LED retrofit lamps

There are no safety-guaranteed LED lamps that can be attached to existing light fixtures.

The luminaires or fixtures, designed for non-integrated lamps (e.g. CFL-ni or LFL), are equipped with an (electronic) ballast/control gear and the life and safety tests are conducted with the original fluorescent lamps installed. The electrical characteristics of alternative LED lamps are so various

that it is impossible to test the safety of all the alternative LED lamps. Also, it is impossible for the alternative LED manufacturers to test the safety of all lighting fixtures, supplied by many different small companies and which include a large variety of electronic control gears.

Therefore, it is not possible to ensure the safety of alternative LED lamps for installed electronic control gear in the fixture. To illustrate the safety issues which occur in the market, reports on safety (fire) issues and warnings are published by the Governmental Consumer Affairs Agency of Japan (https://www.caa.go.jp/en/about_us/) and the Tokyo Fire Department. See attached files.

(3) Compact Fluorescent Lamps for general lighting:

There is no safety issue for compact fluorescent lamp types with a (electronic) ballast/control gear , also named integrated CFL lamps (CFL-i), which are mostly equipped with a screw based lamp cap (e.g. E-type or B-type), directly connected to the mains voltage. Additionally, several LED based alternatives are nowadays available and affordable for these CFL-i lamp types. Therefore, we propose to reduce the CFL-i lamps with having a transition period, taking into account the global presence of CFL-i manufacturers.

(4) Special purpose lamps

Special purpose lamps are used as light sources for e.g. UV disinfection, UV curing, projection, gastric endoscopes, automobile headlamps, analyzers, and banknote appraisers, etc. There are many applications that cannot be physically replaced by LEDs, such as requirements for light of a specific color/wavelength as well as brightness. Since the applications are diverse and the amount of mercury in circulation is small, the environmental impact of the amount of mercury is considered to be limited compared to the benefits for the society There is no need to establish additional regulations at this time.

Proposed Regulation Example:

- Prohibit: luminaires for non-integrated fluorescent lamps for general lighting (202X -)
- Allow: current exemptions for all non-integrated lamps, e.g. CFL-ni, LFL, CCFL and EEFL
- Allow: special purpose lamps and fixtures described in (4) above
- Reduce with having a transition period : integrated single capped compact fluorescent lamps (CFL-i) ≤ 30 watts with a (electronic) ballasts/control gear for general lighting purposes