

Environmental information for xenon short-arc lamps (XBO®)

• Product description and operating information

OSRAM XBO® short-arc lamps are discharge lamps filled with xenon gas in wattages from 50W to 12,000W in which the discharge arc burns in the pure gas atmosphere at a pressure of around 20 bar.

XBO® lamps have a continuous spectrum in the visible range and a high colour rendering index. They are suitable for dc operation and can be hot restarted without any problem at all.

As with all short-arc lamps, material is lost from the tips of the electrodes in XBO® lamps during normal operation. This not only causes the bulb to blacken but also increases the gap between the electrodes and therefore increases the lamp voltage. In XBO® lamps a thoriated tungsten electrode can be used to improve ignition and guarantee stability throughout the lifetime of the lamp. Small amounts of radioactive material (Th-232 < 1000 Bq per lamp) are deliberately added as thoriated tungsten to these kinds of lamps for functional reasons. Contamination is not possible.

• Environmental Impact

OSRAM XBO® short-arc lamps do not contain environmentally relevant substances and can not also cause danger from broken lamps. Regarding radiation protection, these lamps are manufactured under regulatory control as a consumer product acc. to IAEA Basic Safety Standard BSS 115. Radiological consequences (radiation exposure) for members of the public are insignificant during the entire life cycle of these lamps as demonstrated in several studies e.g. IAEA safety report and far below the natural background radiation: All affected lamps are within IAEA-10µSv-safety concept.

• Legal requirements (EU)

In the EU and several other countries, OSRAM XBO® short-arc lamps have to fulfil the requirements of EU Directive 2002/95/EC on the restriction of the use of certain hazardous substances in electrical and electronic equipment – RoHS. See www.osram.com/ile

Information on Regulation (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (aka "REACH") see www.osram.com/reach.

• Health risks

During normal operation, XBO® lamps emit high levels of UV radiation and may therefore only be used in enclosed purpose-built housings. If the lamps are used without shields they may cause serious damage to eyes and skin if they burst. The bulb of the xenon lamp is under constant high pressure. There is a risk they may burst with explosive force if knocked or damaged.

• Protective measures

To avoid health risks we recommend the following procedure:

- Keep the lamp in its protective sleeve at all times during installation
- If you are handling the lamp without its protective sleeve, always wear safety goggles, a face mask, gauntlets with wrist protectors and a breast protector.
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• Disposal of used xenon short-arc lamps

XBO® lamps do not contain any substances harmful to the environment. Follow the instructions on the enclosed leaflet. Disposal of Th-232-containing lamps according to national regulations e.g. in Europe is covered by WEEE regulations

• OSRAM contact address

If you need further information please contact your OSRAM sales partner or Environment, Health and Safety- Sustainability in Munich:

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