

FACT SHEET ON MERCURY CONTENT STANDARDS FOR LAMPS

In Europe, manufacturers of electrical equipment – including lamps – are prohibited from selling products that contain lead, mercury, cadmium and other hazardous materials, unless products have been granted specific exemptions. For highly-efficient lighting equipment, including many types of fluorescent and high-intensity discharge (HID) lamps, the EU has established stringent mercury content limits based on best available technology.

Two states (California and Maine) had enacted laws that require most mercury-containing lamps to meet the EU mercury-content limits. Their rationale for doing so is the following:

- many high mercury lamps are relatively old models that are also energy-inefficient;
- low-mercury lamps reduce exposure to people and the environment to mercury – a chemical known to cause damage to the brain and nervous system – when lamps break during transportation, use or disposal; and
- low-mercury lamps are safer to manufacture because they use more accurate dosing methods such as mercury “pills” or amalgam that reduce exposure to factory workers.

Below is a summary of the mercury content limits for popular types of lamps covered under the European Union’s Restriction on Hazardous Substances (RoHS) Directive:

Lamp Type	Mercury Limit (in milligrams)	Implementation Date
Compact fluorescent lamp (CFL) up to 150 watts	5 mg	Current limit
Compact fluorescent lamp (CFL) <30 watts	3.5 mg	1/1/2012
	2.5 mg	1/1/2013
Compact fluorescent lamp (CFL) ≥30 watts <50 watts	3.5 mg	1/1/2012
Compact fluorescent lamp (CFL) ≥50 watts <150 watts	5 mg	Current limit
Compact fluorescent lamp (CFL) ≥150 watts	15 mg	Current limit
Compact fluorescent lamp (CFL) with circular or square shape	7 mg	1/1/2012
Compact fluorescent lamp (CFL) used for special purposes	5 mg	Current limit
Modern linear T5 fluorescent lamp with “normal” lifetime (Triband phosphor, <25,000 hours)	5 mg	Current limit
	3 mg	1/1/2012
Modern linear T5 fluorescent lamp with “long” lifetime (Triband phosphor, ≥25,000 hours)	8 mg	Current limit
	5 mg	1/1/2012
Modern linear T8 or T12 fluorescent lamp with “normal” lifetime (Triband phosphor, <25,000 hours)	5 mg	Current limit
	3.5 mg	1/1/2012

Lamp Type	Mercury Limit (in milligrams)	Implementation Date
Modern linear T8 or T12 fluorescent lamps with “long” lifetime (Triband phosphor, $\geq 25,000$ hours)	8 mg	Current limit
	5 mg	1/1/2012
Old (halophosphate) linear T10 and T12 fluorescent lamps (>17 mm)	10 mg	Current limit
	No longer allowed to be sold in EU	4/13/2012
Old (halophosphate) non-linear T10 and T12 fluorescent lamps (all diameters)	15 mg	Current limit
	No longer allowed to be sold in EU	4/13/2016
Modern non-linear fluorescent lamps >17 mm (Triband phosphor)	15 mg	1/1/2012
Other general purpose and special purpose fluorescent lamps (such as induction fluorescent lamps)	15 mg	1/1/2012
Cold cathode fluorescent lamps, short length (≤ 500 mm)	3.5 mg	1/1/2012
Cold cathode fluorescent lamps, medium length (>500 mm ≤ 1500 mm)	5 mg	1/1/2012
Cold cathode fluorescent lamps, long length (>1500 mm)	13 mg	1/1/2012
High-pressure sodium lamps (except high (>60) CRI models), ≤ 155 watts	25 mg	1/1/2012
High-pressure sodium lamps (except high (>60) CRI models), >155 watts ≤ 405 watts	30 mg	1/1/2012
High-pressure sodium lamps (except high (>60) CRI models), >405 watts	40 mg	1/1/2012
High-pressure mercury vapor lamps (all wattages)	No longer allowed to be sold in EU	4/13/2015

Note: there are also some lead limits in the RoHS, including, but not limited to:

- Lead in glass of fluorescent tubes exceeding 0.2% (not currently allowed)
- Lead in linear incandescent lamps with silicate coated tubes (not allowed after 9/1/2013)
- Lead as an activator in the fluorescent powder ($>1\%$) in specialty lamps used for insect traps, lithography, reprography, etc. (not allowed after 1/1/2012)
- Lead as an activator in the fluorescent powder ($>1\%$) in sun tanning lamps
- Lead in amalgam used in compact fluorescent lamps (not allowed after 6/1/2011)
- Lead oxide in the glass envelop of black lights (not allowed after 6/1/2011)

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