



Mercury Safety Instructions for Short Arc Lamps

Product & Operation Description

EXFO short arc lamps for AC or DC operation burn in an atmosphere of mercury vapour at high pressure. In cold lamps (i.e. at room temperature) metallic droplets of mercury can be seen in the lamp bulb. During operation of the lamp the mercury vaporizes due to heating of the discharge tube (lamp body) and the gas between the electrodes approaches temperatures of up to 10000°C. The temperature of the discharge tube reaches approximately 800°C. After the lamp is in thermal equilibrium (5 to 10 minutes after ignition), the vaporized mercury gives rise to a pressure of 30 to 75 times the atmospheric pressure.

Health Hazards

Inhaling mercury vapour or small particles of mercury or its compounds can be harmful to lungs, kidneys and the nervous system. Injuries to one's health can also arise due to penetration of the skin or resorption via the gastro-enteric tract.

Lamp Breakage

In the rare case that short arc lamps break or burst and the mercury content is released, we recommend to consider the following security instructions:

- All personnel should leave the surrounding area at once, to ensure that no mercury is inhaled.
- The area should be ventilated thoroughly (at least 20 to 30 minutes).
- The current Occupational Safety and Health Administration (OSHA) permissible exposure limit (PEL) for mercury vapor is 0.1 milligram per cubic meter (mg/m³) of air.
See: <http://www.osha.gov/SLTC/healthguidelines/mercuryvapor/recognition.html> for further details.
- Mercury analyzers are available to measure the amount of mercury in the air, such as example: *Jerome 431-X Mercury Vapor Analyzer* (source Arizona Instruments, Tel: 800-390-1414 http://www.azic.com/products_431.asp)
- After the lamp housing has cooled, any mercury residue should be picked up with a special adsorbent such as, *Mercon Mercury Spill Kit 2* (source EPS Chemicals, 1-800-663-8303, www.epsross.com) or *Mercurisorb* (source Karl Roth GmbH & Co. KG) or *SpillSolv, Mercury Spill Kit* (source EMD Chemicals) or *Mercury Spill Clean-Up Kit* (source Mallinckrodt)

Disposal of Short Arc Lamps

HG – LAMP CONTAINS MERCURY, manage in accord with Disposal Laws, see: www.lamprecycle.org or 1-800-668-8752.

Mercury fillings for EXFO short arc lamps

Wattages	Mercury (mg)
50W – versions	9.54
100W – versions	Max. 20
120W – versions	Max. 20
200W – versions	Max. 42

Lamps may be returned to EXFO in their original packaging. EXFO will dispose of them in the appropriate manner.

Contact EXFO – Technical Support

For information on lamp disposal, or in the case of a lamp burst please contact:

Technical Support & Service Department @ e-mail: techsupport.exfo.psi@exfo.com
 Tel: 905-821-2600 (choose option 6) or Toll Free: 1-800-668-8752 (choose option 6)