

Recommendation

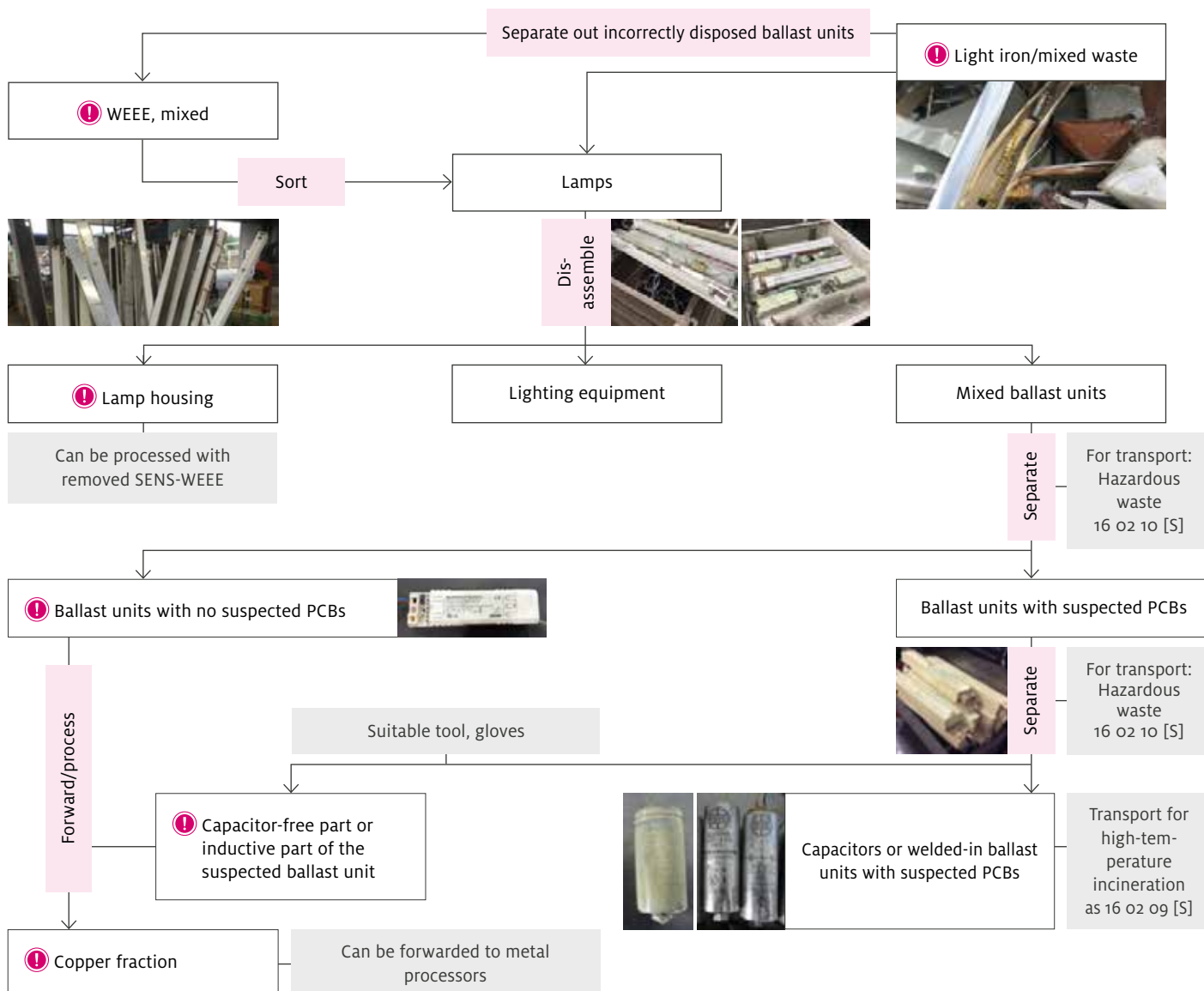
Handling ballast units containing PCBs

Polychlorinated biphenyls (PCBs) are persistent pollutants that pose a risk to humans and animals even at trace levels. Although the use of PCBs has been banned since 1986, **capacitors containing PCBs** are still found in waste electrical and electronic equipment (WEEE). Currently, PCB-containing capacitors are mainly found in **ballast units used in lamps**. It is therefore essential to remove these capacitors before recycling WEEE.

Identifying capacitors suspected of containing PCBs in ballast units is challenging. The following points are therefore very important for collection points, disassembly facilities and recycling companies: **training courses, experienced personnel, knowledge of ballast unit types and quality assurance.**

SENS recommends the following steps for the detection and disposal of PCB-containing capacitors from ballast units:

❗ = for this fraction, quality control is important before forwarding or processing.



How can you identify ballast units with suspected PCBs?

Ballast units come in a **wide range of types, sizes and shapes**. Not all ballast units have suspect capacitors. However, if a capacitor is present, it probably contains PCBs. To be on the safe side, **it's better to separate out too many ballast units than too few**.



Store the ballast unit in a separate container and then separate out the ballast units with a capacitor.



"Cap." indicates the presence of a capacitor (capacitive part).

Possible indications and characteristics of PCB-containing capacitors in a ballast unit:

- The ballast unit is old (manufactured prior to 1982). Rusting or yellowish-brownish colours are often a sign of this.
- The capacitor is shown on the **electrical diagram** on the ballast unit. It contains the abbreviated word "cap.", for example.
- Part or all of the ballast unit is **cylindrical/round**. You can see this shape when you look at the ballast unit from the ends.
- The ballast unit is magnetic, not electronic. So it may be **heavy** if there is a copper coil.
- The housing is made of metal (not plastic). One end may be heavier than the other.

Please note: Capacitors from magnetic ballast units are either a) open and freely accessible, b) covered but easily accessible or c) welded into the housing.

Sample images of ballast units with capacitors in fluorescent lamps

Photos from: Dr Elmar Kuhn and Roland Arnet, 1998, PCBs in ballast units for fluorescent lamps.



Fig. 1a: Capacitive ballast units from Knobel, Ennenda.



Fig. 1b: Capacitive ballast units from Knobel, Ennenda. The same devices as in Fig. 1a after the removal of the capacitor cover.
Length (top appliance) = 40.7 cm

Contact

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