

Personal computer CPU and CRT monitor: Nominal bill of materials

Reference: Williams, E., "Environmental Impacts in the Production of Personal Computers," Computers and the Environment: Understanding and Managing Their Impacts, 2003.

The central processing unit (CPU) of a personal computer contains several components: housing, internal structure, hard drives, disk drives, circuit boards, microchips, and electrical devices.

Table 1. Nominal materials for CPU production

Material	Use in CPU	Mass (grams)
Steel	Housing	6,050
Copper	Wires, circuit boards	670
Aluminum	HD, circuit boards	440
Plastics	Housings, CD-ROM	650
Epoxy	Circuit boards	1,040
Tin	Solder	47
Lead	Solder	27
Nickel	Disk drive	18
Silver	Circuit boards	1.4
Gold	Circuit boards	0.36
Other		96
Total		9,040

(Please see Table 5, page 60 for associated energy use in production of materials)

The monitor of a personal computer typically contains cathode ray tubes (CRT), housing, circuit boards, and peripheral components.

Table 2. Content in production of materials for CRT monitor

Material	Use in CRT	Mass (grams)
Glass	Picture tube	6,817
Steel	Housing	2,830
Copper	Wires, circuit boards	700
Ferrite	Deflection yoke	480
Aluminum	Heat sinks	240
Plastics	Housing	3,530
Epoxy resin	Circuit boards	140
Tin	Solder (circuit boards)	20
Lead	Glass, solder	593
Silver	Circuit boards	1.24
Gold	Circuit boards	0.31
Other		98
Total		15,450

(Please see Table 6, page 61 for associated energy use in production of materials)