

## *Electrical Equipment Testing and Tagging*

Guidance on the identification of hazards, assessment of risk and requirement for inspection, testing and tagging of electrical equipment

### Guidance to support decision making for electrical safety

This guide uses risk information and definitions from the Australian Standards AS/NZ 3760 and AS/NZ 3000 and is designed to assist in the decision making that will create safe work places efficiently. Manufacturers' recommendations, plant and equipment risk assessments and other information should always be considered when making decisions on testing and tagging requirements.

Electrical appliances included in this guide are portable equipment, hand-held equipment ([Table 1](#)) and stationary equipment ([Table 2](#)), designed for connection to the low voltage supply by a supply cord, an appliance inlet or pins for insertion into a socket-outlet;

- Cord sets, cord extension sets and outlet devices (also known as electrical portable outlet devices (EPODs), or power boards);
- Flexible cords connected to fixed equipment in hostile environments;
- Portable power supplies (includes power adaptor/plug-pack, both of the safety isolating transformer and switch-mode type);
- Battery chargers including those for commercial or industrial use;
- Portable and transportable heavy duty tools such as high pressure washers and concrete grinders.

### Hazards and risk factors for electrical equipment

The frequency of repetition of testing and tagging is determined by the equipment type and by examination of the environment in which the equipment is used or working. For indicative purposes a number of different environments are provided with recommended inspection/testing frequencies. These are based on the perception of the level of hazard and the degree of abuse to which the equipment is typically exposed.

The location is one in which the equipment or appliance is normally subject to events or operating conditions likely to result in damage to the equipment or a reduction in its expected life span. This includes, but is not limited to mechanical damage, exposure to moisture, heat, vibration, corrosive chemicals, sharp or heavy impact and dust.

### New to Service

New electrical equipment that has never been put into use (i.e. other than second-hand equipment) does not have to be tested before first use. The date the electrical equipment was placed into service should be recorded on a fitted tag. Fitting a 'new to service' tag is an administrative task that can be carried out by the person purchasing or receiving the device.

**NOTE:** Medical and specialist laboratory equipment must have risk assessments based on manufacturers recommendations and have been purposely left out of this guide.

### 1. Risk assessed testing and tagging requirement guide 'Portable Equipment'

Portable Items	Location	Movement	Other risk factors	Test & Tag Cycle
Extension cords and power boards attached to stationary appliances or equipment	Office or other indoor space – no hostile environment factors	Rare, less than once per year	Cords not subject to flexing and pulling pressures, no impact risks	5 years after initial visual inspection
Extension cords and power boards not constantly connected to stationary items	Available for use, not connected to stationary portable equipment	Variable	Cords constantly subject to flexing and pulling pressures, impact and other hostile environment elements are possible	Annual - plus constant inspection for visible damage
Desk top computer	Office used by staff – no hostile environment factors	Rare, less than once per year	Cords not subject to flexing and pulling pressures, no impact risks	5 years after initial visual inspection
Desk top computer	Computer lab, shared space for student use	Rare, less than once per year	Cords not subject to flexing and pulling pressures, no impact risks	5 years after initial visual inspection
Laptops, iPads and associated portable equipment chargers	Available for use, not connected to stationary portable equipment	Variable	Cords constantly subject to flexing and pulling pressures, impact risks are higher	Annual - plus constant inspection for visible damage
Toaster, kettle, sandwich press and microwave ovens	Kitchenette or office space	Often, switched on/off and possibly unplugged multiple times daily, heat and moisture present while in use	Cords subject to flexing, pulling and heat	Annual - plus constant inspection for visible damage
Portable fan heater	Office environment	Intermittently, used as required through one season then stored. In season it could be switched on and off daily	High risk item based on known incidents of fan heaters being damaged from storage and regular use	Annual - plus constant inspection for visible damage while in use
Portable air circulating fan (floor stand or desk stand)	Office environment	Intermittently, used as required through one season then stored. In season it	High risk item based on known incidents of fan heaters being	Annual - plus constant inspection for visible damage while in use

		could be switched on and off daily	damaged from storage and regular use	
Hand tools – construction (e.g drills, sanders etc)	Workshops and indoor / outdoor construction site	Often, switched on/off and possibly unplugged multiple times daily,	Cords subject to flexing, pulling and multiple 'hostile environment' elements	Annual (minimum may require more often) - plus constant inspection for visible damage
Hand tools – beauty (e.g. hair dryers, UV & LED lamps etc)	Shop or treatment rooms	Often, switched on/off and possibly unplugged multiple times daily	Cords subject to flexing, pulling and possible hostile environment elements	Annual - plus constant inspection for visible damage
Lighting, camera and other Arts equipment loaned to students	Unpredictable indoor / outdoor	Often, switched on/off and possibly unplugged multiple times daily	Cords subject to flexing, pulling and possible hostile environment elements	6 monthly - plus inspection for visible damage every time it is hired out

## 2. Risk assessed testing and tagging requirement guide 'Fixed or Stationary Equipment'

Fixed or Stationary Appliances	Location	Movement	Other risk factors	Test & Tag Cycle
Wall mounted hand drier	Toilet / bathroom foyer space, may be subjected to limited moisture	Never, rarely switched off at the wall and unplugged	Cords not subject to flexing and pulling pressures – no hostile environment	Not required
Wall mounted instant boiling water units	Kitchenette, may be subject to moisture, heat	Never, rarely switched off at the wall and unplugged	Cords not subject to flexing and pulling pressures – no hostile environment	Not required
Photocopier / printer (large floor standing machines)	Office or shared space – no hostile environment factors	Rare, less than once per year	Cords not subject to flexing and pulling pressures	Not required
Under sink hot water units	Kitchenette, may be subject to moisture, heat	Never, rarely switched off at the wall and unplugged	Cords not subject to flexing and pulling pressures – no hostile environment	Not required
Gas heaters	Indoor rooms, spaces	Never, rarely switched off at the wall and unplugged	Cords not subject to flexing and pulling pressures – no hostile environment	Not required
Water Coolers	Indoor rooms, spaces	Never, rarely switched off at the wall and unplugged	Cords not subject to flexing and pulling pressures – no hostile environment	Not required
Fixed equipment for construction (e.g. pedestal drills, pedestal grinders, lathes etc)	Workshops	Never, rarely switched off at the wall and unplugged	Subject to multiple 'hostile environment' elements	Annual (as a minimum, may be required more often in risk assessment) - plus constant inspection for visible damage
Refrigerator	Kitchenette or office space, laboratory	Rare, less than once per year	Cords not subject to flexing and pulling pressures, low impact risks but cold and damp risks	5 years after initial visual inspection