



ELECTRICAL SAFETY

Temporary electrical installations for construction sites must comply with the Standard AS/NZS 3012: 2003,

Electrical installations-Construction and demolition sites

Shock protection from contact with earth leakage current

All final sub-circuits that supply power to equipment, hand held power tools and lighting used in the construction industry must be protected by a safety switch or residual current device (RCD). The RCD must be installed at the switchboard where the circuits originate. To reduce the risk of injury if lighting or power is interrupted in artificially lit areas it is recommended that a separate RCD be provided for each final sub-circuit. Portable generators that supply more than one lighting point, appliance or socket outlet must have its supply protected with an RCD. All RCDs installed to protect workers from shock current should have a sensitivity of 30 milliamps or 0.03 of an amp and be marked accordingly. Flexible cords, hand-held power tools or electrical plant and equipment must be protected through a portable RCD where their supply source is from a permanently wired socket outlet (power point) and are required for construction or demolition purposes.

Temporary switchboards

Temporary switchboards for construction and demolition electrical installations.

Temporary switchboards with RCD protected final subcircuits must be used to supply all lighting and socket outlet power. Temporary switchboards in general require:

- a latching door or a non-removable lid;
- rounded and smooth-edged access holes or a recess under the door for connection of extension cords to switchboard mounted socket outlets;
- at least one 15 amp socket outlet;
- a weatherproof construction;
- protection against mechanical damage;
- a stable stand or be fixed to a wall and post mounted switchboards must be coach screwed or bolted; and
- reasonable frontal access to be maintained.

A clearance of 1.2 metres is recommended.

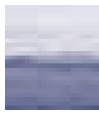
Never use any power or lighting circuit that is not protected by an RCD. Never reset an RCD which has tripped until the reasons for its disconnection of the circuit is established by an electrician.

Flexible Cord Extension Sets

All extension cord sets shall be of heavy-duty type. Leads must not exceed the lengths specified. For example a 10 amp 1.5 mm² flexible cord cannot exceed 35 metres and a 15 amp 2.5-mm² cord cannot exceed 40 metres. An electrician can give advice on cord conductor sizes.

No extension cord should run from one floor to another on multi-level sites.

Cords used around structural steel and sheet metal must be protected from possible mechanical damage. Cords should be raised on insulated stands or hooks to



protect them from damage and to provide clear access for personnel and vehicles. Cords should never run through water or be on the ground where mobile plant and Machinery is used. All three pin cord extension sockets and plugs should be of the

transparent and moulded type. A competent person or an electrician should undertake the fitting of plugs and cord extension sockets to cords. Double adaptors and piggyback plugs are not permitted on construction and demolition sites.

Inspection and tagging

All 240 and 415 volt hand-held power tools, larger portable equipment and flexible cords must be inspected and tagged prior to first use and then at the prescribed inspection intervals by a competent person or a licensed electrician set out in AS/NZS 3760: 2003, *In-service safety inspection and testing of electrical equipment*. All items tested should carry a test tag that is colour coded to indicate whether it is 'current' as follows:

January: Red
February: Blue
March: Orange
April: Green
May: White
June: Yellow
July: Blue
August: Green
September: Red
October: Yellow
November: Orange
December: White

Tags should have a valid test date that is within the nominated prescribed period of Table 4 in AS/NZS 3760:2003 or indicate a re-test date, and include either the tester's (competent person's) name, the tester's company/business name or electrical license number. It is recommended that tagging and testing for construction work be undertaken at 3 monthly intervals. Companies and/or contractors should implement suitable maintenance schedules based on the level of use and the environment. This may show that the frequency of testing needs to be increased. (e.g. monthly)
For the testing of electrical equipment at 3 monthly intervals the colours are as follows:

RED- January - March
GREEN- April - June
BLUE- July - September
YELLOW- October - December