



# Risk Advisory Notice

## RAN 03: Use of Electrical Adaptors



### Introduction

The use of extension leads/adaptors should be avoided where at all possible. There have been some safety concerns in relation to adaptors and, in particular, with the overloading of multiple outlet adaptors. Adaptors are typically for domestic use and/or temporary works. The State Claims Agency recognises that use cannot be avoided in all circumstances. In these cases, the following advices should be followed.

### What is an adaptor?

An adaptor is a portable accessory intended for domestic use. It has plug pins to engage with the contacts of a socket-outlet, and has socket-outlet contacts to accommodate one or more plugs. It is commonly referred to as an “extension lead”.



Figure 1: Fused multi socket board adaptor



Figure 2: Multiple socket outlet adaptor



Figure 3: Reeled extension lead

### Best Practice Standards:

The controls outlined below are some of the key safety measures that need to be implemented when using electrical adaptors. The controls ensure tasks can be completed safely and will reduce the risk of accidents occurring.

### Risk Assessment:

Extension leads introduce risks that can be avoided through use of a direct socket outlet. These risks include:

- **tripping or falling** over taut, over stretched cables;
- Over-use of multiple socket outlet adaptors/multi socket board adaptors can increase the risk of **fire**;

- Leads from power tools often become tangled; this can result in one of the conductors failing and potentially cause an **electric shock**.

### Risk Management Controls:

#### Principles of Prevention:

- Move the equipment to the nearest possible source of electricity;
- If the equipment is to remain in its position permanently, then a mains socket should be provided as close as possible - eliminate the need for an adaptor;
- If the equipment cannot be moved use an appropriate extension lead and secure the extension lead to a fixed surface e.g. cable ties;
- Ensure low voltage electrical equipment is CE marked and portable appliances undergo regular inspection;

#### Before Use Ensure:

- The lead is in good condition and that there are no cracks or live conductors showing;
- Connections at either end are securely fastened with the correctly rated fuse installed.

### Control Measures:

- Keep extension leads away from any water hazard;
- Keep extension leads away from any moving objects or parts;
- Adaptors should be periodically inspected (annually) to ensure they are fit for purpose;
- Check that the cable/mains lead is secure at the tool/appliance and plug including where covers can be removed;
- Check that the cores are secure and correctly connected, with no excess insulation removed and with no bare loose strands;
- Check that fusing is correct on the adaptor, where fitted;
- Extension leads must be positioned carefully, away from any walkways or enclosed by a suitable or proprietary highly visible protective cover;
- Do not plug one extension lead into another;
- Use of multiple socket outlet adaptors (Fig. 2) should be avoided as they are not normally fused. If two or more of an adaptor's sockets are used it is possible to draw a total current in excess of the 13 amps maximum for the wall socket which could lead to damage to the wiring of the building and a risk of fire;
- If using cable reeled extension leads (Fig. 3), they must be fully unwound in use;
- Ensure lead or socket end is secure and not hanging down;
- Stop using equipment immediately if it appears to be faulty;
- Remove faulty equipment from use and have it checked by a competent person.



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