

# ELECTRICAL SAFETY

## General

- Under the Code of Practice for electric work, all works shall undertaken by a Registered Electrical Workers for all permanent and temporary electrical installations.
- The design of the circuits shall in every respect comply with the current Code of Practice for the Electricity (wiring) Regulations.
- Starting from 1 July 2009, new colour cables must be used for all fixed electrical installations.
- All outgoing electric wiring shall be properly protected.
- Ensure all connections are firmly wired up and the protective conductors are grounded.
- Earth leakage circuit breakers should be installed to trip the supply when overloading of the circuit or earth leakage occurs.
- Lockout & tag-out system shall be used for isolation of electrical supply if applicable.
- Use plugs, adaptors and extension units which comply with the safety requirements.

## Tools

- Use only tools that are properly grounded or double-insulated.
- Electrical appliances with double insulation bear the “回” mark. Make sure the casings of double-insulated tools are not cracked or broken.
- In a wet working environment or when working outdoors, the portable electric tools equipped with ground fault circuit interrupter and waterproof plugs and cables must be used.
- In construction sites, electric portable hand-tools shall be from a 110v or less supply from isolation transformers with output windings centre-tapped to earth.
- Any shock or tingle, no matter how slight, means that the tool or equipment should be checked and repaired.

- Before drilling, nailing, cutting, or sawing, make sure that there was no live wires, pipe or equipment behind the walls, ceilings and floors.

## Cord

- Make sure that tool cords, extension cords, and plugs are in good condition.
- Never cut off, bend back, or cheat the ground pin on three-prong plugs.
- Make sure that extension cords are the right gauge for the job to prevent overheating, voltage drops, and tool burnout.
- Check extension cords and outlets with a circuit-tester before use.
- Use cords fitted with dead front plugs. These present less risk of shock and short circuit than open front plugs.
- Do not use cords that are defective or have been improperly repaired.
- Do not wire cords into outlets. Disconnecting takes too long in an emergency.
- Protect cords from traffic.
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## Panels

- Temporary panel boards must be securely mounted, protected from weather and water, accessible to workers, and kept clear of obstruction.
- Use only fuses or breakers of the recommended amperage.
- Follow regulated procedures for tagging and locking out panels when required by standard work or emergency situations.

## References

- Electricity (Wiring) Regulations, EMSD
- Electricity (Registration) Regulations, EMSD
- Installation Guidelines – New Cable Colour Code for fixed electrical installation, EMSD.
- F&IU(Electricity) Regulations, Labour Department
- Construction Site Safety Handbook, Development Bureau