PRODUCT SAFETY BULLETIN

ELECTRICAL CONNECTIONS TO WATER HEATING PRODUCTS

A large number of installed water heating products will have electrical connections to them – usually to the thermal controls (thermostat and thermal cut-out) and, where fitted, to an electrical immersion heater. Following recent events such as the Grenfell Tower fire the *Hot Water Association* feels it is timely to remind installers, landlords and end users of the importance of the correct electrical installation of water heating products and their associated on-going maintenance.

Incorrectly made electrical connections can result in over-heating and hence a fire risk. When installing the product, please ensure the wiring is adequate to minimise risk of overheating. Please ensure you have:

- Used the correct type and cross sectional area cable to meet manufacturer and Wiring Regulation requirements.
- When stripping the insulation from the individual conductors, taken care to not damage the strands of the conductor wire, which would reduce the cross sectional area of the conductor.
- Ensured the conductors are tightly and securely connected to the controls or immersion heater
- Ensured the bared conductors are correctly inserted into the terminals, to avoid bearing on the insulation sleeving or only partially clamping the conductors.
- Securely anchored the supply cable using the means provided to avoid exerting any external strain to the cable and hence to the terminals.
- Checked to ensure the product is earthed correctly; the Live and Neutral connections are to the correct terminals, and the Residual Current Device (RCD) operates correctly.
- Regularly checked the electrical connections as part of the maintenance schedule, to ensure the wires remain in good condition and terminations remain secure. Ensure any spare parts used during maintenance of the product are an authorised spare part and meet the manufacturers' requirements.

The manufacturers' wiring instructions must always be followed.

THERMAL CUT-OUTS

Any new water heater or immersion heater must be fitted with a thermal cut-out which will operate should the normal control thermostat fail, to prevent the water heater from possibly continuing to heat and leading to components over-heating. In the case of vented products the thermal cut-out would prevent the unit from boiling. If the unit is supposed to be manually filled or topped up, a thermal cut out is particularly crucial to avoid the risk of overheating the exposed immersion heater in the event of the user forgetting to top up.

Some older types of vented water heater or immersion heater may not have been factory supplied with a thermal cut-out device. Please check all products for the presence of a thermal cut-out device and, if one is not present, ensure one is fitted. If it is not possible to add a thermal cut-out device, you may need to update the immersion heater assembly to one that incorporates a thermal cut-out.

If you are unsure whether the product includes a thermal cut-out please contact the manufacturer of the product in question for further advice.

THE *HOT WATER ASSOCIATION*

The *Hot Water Association* (HWA) is the UK's largest association of water heating product manufacturers and suppliers. They supply water heating products that meet UK and European constructional and safety standards which, when installed and maintained correctly, give many years of exceptional hot water delivery performance. However, as with many household and commercial appliances and equipment, many will require electrical connections to enable them to work correctly. Their continued safe operation will rely on the correct connection to the electrical supply and regular inspection to check the integrity of electrical connections and components.

If in doubt, further advice should be sought from the manufacturer of the water heater or immersion heater. **Any electrical work must be carried out in a safe manner by a person qualified to do so.**