Technology: Risk Assessment Title: **Strip Heater** OCTOBER2015

**This is a generic Risk Assessment that must be modified to suit your place of work**. The Risk Assessment modifications should take into consideration the activity, age/stage/pupil ability, department/working environment and the experience of the teacher in charge. If Control Measures Required as described are implemented the risk is reduced to an acceptable level for mainstream students.

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| **Identify the Hazards** | **Who is at Risk?** | **What is the Harm?** | **Activity Taking Place** | **Control Measures Required** | **Additional Information** |
| Employees and learners should be made aware of the following hazards.  1. Inhalation of Fumes  2. Skin Burns  3. Unstable Equipment  4. Electric Shock  5. Unauthorised Use  6. Tripping Hazard  7. Fire Hazard | Technology teachers, technicians and students  Technology teachers, technicians and students  Technology teachers, technicians and students  Technology teachers, technicians and students  User  Technology teachers, technicians and students  Technology teachers, technicians and students | **Fumes can be produced by heating plastics.**  **Hot plastics and hot surfaces can cause skin burns.**  **Unstable equipment or work pieces can cause injury.**  **Strip heaters present an electric shock hazard.**  **Unauthorised use.**  **Injury due to tripping, bruises and possible limb fractures.**  **If the Strip Heater is stored uncovered, the build up of dust or debris is a fire hazard when turned on.** | Heating, bending and shaping plastics  Heating, bending and shaping plastics  Heating, bending and shaping plastics  Heating, bending and shaping plastics  Heating, bending and shaping plastics  Heating, bending and shaping plastics  Heating, bending and shaping plastics | Normal classroom ventilation can be used to remove odours from the Strip Heater. However if harmful fumes are released from any plastics used, LEV must be activated.  Appropriate materials for heating, bending and shaping should be chosen.  Guarding should be provided if practicable or if the risk of causing burns is high.  PPE, including suitable eye protection and gloves should be provided to reduce the risk of skin burns.  Strip Heater should be used on a flat stable work surface. When work pieces are placed on the Strip Heater they should be supported with scrap pieces if necessary.  Simple heat output controls should be provided as well as an adjustable work support to control the distance between the heat source and the material.  Portable strip heaters should be powered via a socket outlet protected by a residual current device. The operational effectiveness of the unit should be verified and recorded on a frequent basis, by pressing the test button in accordance with the manufacturer’s instructions. Mains plugs should conform to BS 1363-1 and should be fused in accordance with the equipment manufacturer’s instructions. Mains plugs should be removed from the socket when the equipment is not in use.  Fixed strip heaters should be provided with a means of isolation (preferably a fused isolating switch on or adjacent to the equipment).  Line bending heaters with heated tensioned resistance wire should be of SELV type and should have a transformer designed to protect against mains voltage breakdown to the secondary windings.  The equipment should be included in a planned maintenance programme that should include any appropriate electrical safety tests.  The Strip Heater should not be left energised and unsupervised. If the machine is left to cool it should be unplugged and a warning sign placed near it to alert others.  Trailing leads should not become entangled with the operator or others in the craft room.  Best practice is the use of ceiling mounted drop down sockets for use.  When the Strip Heater is being stored it should be covered or boxed to limit dust or debris on the heating elements. | Reference BS 4163:2014  Manufacturer’s instruction guide should be followed and kept within the department for future reference.  Manufacturer’s guidance on suitable materials used must always be consulted.  Heat can be transferred to objects used when bending or shaping.  Eye protection should conform to BS EN 166:2002  The risk of electric shock is reduced by good maintenance and the use of double insulated machines.  The Strip Heater should also be checked for any possible material fire risk prior to usage. |
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