

ILLUSIONS AUSTRALIA

SAFE WORK PROCEDURE

SWP 040 – HOT CUTTING KNIFE

1. PURPOSE AND SCOPE

This Safe Work Procedure establishes minimum requirements for safe use of electrically heated cutting knives at Illusions Australia.

It applies to cutting approved foam, synthetic fabrics and other materials specifically suitable for hot-knife cutting.

2. AUTHORISATION AND COMPETENCY

Only instructed workers may use a hot cutting knife.

Operators must understand hot-blade burns, fumes, material compatibility, electrical safety and fire risk.

3. REQUIRED PPE

The following PPE must be worn as appropriate:

- Safety glasses where required.
- Safety footwear.
- Heat-resistant gloves where handling hot material is necessary and compatible with safe tool control.
- Respiratory protection where required by the assessed material/exposure.

4. PRE-START CHECKS

Before commencing work, confirm that:

- Material is identified and approved for hot cutting.
- Knife, blade, lead, plug and temperature controls are serviceable.
- Blade is securely fitted.
- Ventilation/extraction is available.
- Work surface is heat resistant and stable.
- Combustibles are controlled.
- A safe resting stand/location is available.

5. SAFE OPERATING PROCEDURE

1. Start ventilation/extraction before heating.
2. Set the minimum effective blade temperature.
3. Secure the material and establish a stable cutting position.
4. Keep the free hand out of the cutting path.
5. Guide the hot knife smoothly without excessive force.
6. Avoid dwelling in one location where material may burn.
7. Place the tool only on its designed stand/heat-resistant surface.
8. Switch off immediately after use.

9. Allow the blade to cool before cleaning, blade changes or storage.

6. PROHIBITED PRACTICES

Workers must not:

- Cut unidentified or unsuitable plastics.
- Touch the heated blade.
- Leave the tool energised unattended.
- Place the hot knife on combustible surfaces.
- Use without ventilation where fumes are generated.
- Force the blade through material.
- Change blades while hot or energised.

7. FUMES AND MATERIAL COMPATIBILITY

Heating synthetic materials can produce irritating or hazardous decomposition products.

- Confirm material suitability.
- Use effective ventilation/extraction.
- Stop if unexpected smoke, odour or irritation occurs.

8. BURNS AND FIRE

The blade remains capable of causing severe burns after power is switched off.

- Use the designated stand.
- Keep combustibles clear.
- Allow full cooling before handling the blade.

9. FAULTS, DAMAGE AND ABNORMAL CONDITIONS

Stop for blade damage, electrical fault, uncontrolled temperature, smoke, burning material or extraction failure.

Isolate defective equipment and do not reuse until rectified.

10. SHUTDOWN AND HOUSEKEEPING

- Switch off and unplug/isolate.
- Allow blade to cool fully.
- Remove residue safely.
- Clean and store tool/blades.
- Report defects.

11. EMERGENCY AND INCIDENT RESPONSE

1. Stop the equipment or activity immediately.
2. Isolate the hazard or energy source where safe to do so.
3. Provide or obtain first aid as required.
4. Notify the Foreman, Leading Hand or other authorised Illusions Australia representative.
5. Call emergency services where required.

6. Do not recommence until the incident, defect or unsafe condition has been addressed.

12. STOP WORK REQUIREMENT

Work must stop where:

- Material identity is uncertain.
- Ventilation/extraction is unavailable.
- Blade or electrical components are defective.
- Combustibles cannot be controlled.
- Unexpected fumes or burning occurs.

No production requirement or deadline takes priority over safe work.

DOCUMENT CONTROL

Document	SWP 040 – Hot Cutting Knife
Document Type	Safe Work Procedure
Prepared By	Aidan McDonnell
Approved By	Managing Director
Status	Controlled Document