
ELE-3COP-575

Title – Installation of TP EM (Rayrim) Edging Material using a Hot Air Gun

Before starting work please read this document carefully and note the guidance given.

1 Purpose and Scope

This COP describes the procedure to be used when installing TP EM edging material using a hot air gun. The instructions in this document take preference over IPC/WHMA requirements, as do the drawing and any customer documentation.

It is good working practice that where trained operators have not installed this product for over 6 months, a sample installation should be carried out by the operator to refresh installation practice. Performance of the sample can be checked using the inspection standards described within this document.

2 Performance Objective

This code of practice is produced to support operators already trained in the installation of heat shrinkable and harnessing products. It identifies the procedure to be used when installing TP EM edging material on a range of substrates using a hot air gun. It also details the preparation of the substrates.

Note

It is recommended that the size selected for an application should be the largest size that will fit snugly on the edge of the substrate.

3 Materials and Equipment:

Appropriate size TP EM product.

Degreasing Agent isopropyl alcohol or isopropanol (IPA) impregnated tissue wipe.

Heavy duty tissues.

Heat Gun CV1981 or equivalent. Other hot air guns may be used but these must be capable of delivering the temperatures required for installation of the product. This also includes hot air guns with temperature displays.

Reflector PR 26 or equivalent.

Heat Resistant Gloves.

Safety Glasses.

4 Health and Safety

Adhere to local Codes and Regulations relating to Safe Working practices. For the U.K. adhere to requirements of the Health and Safety at Work Act 1974 and subsequent amendments.

The installation should be carried out in a well ventilated area.

Always wear heat resistant safety gloves when handling hot plastics and adhesives.

The use of suitable protective gloves and barrier cream is recommended when using solvents.

Avoid prolonged repeated skin contact with solvents and always wash hands after using solvents.

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Care should be taken to wear safety glasses when using and handling chemical solvents. If eyes do become contaminated, flush with water and obtain medical assistance immediately. Always ensure all equipment is calibrated before use.

5 Procedure – Preparation

To ensure the best possible bond between the TPEM and the substrate, degrease the substrate area where the TPEM will recover onto with isopropyl alcohol or isopropanol (IPA) impregnated tissue wipe.

This part of the preparation is very important in ensuring a strong bond

Always ensure that the air vent on the rear of the hot air gun is open and that it is dust free. Always allow the hot air gun to stabilize at the required temperature and setting for two minutes before commencing calibration and installation. Setting of the gun should be carried out on a regular basis using the following temperatures. Frequency will depend on usage. It is recommended that the heat gun is set daily using a Calibrated thermocouple 25 mm from the end of the reflector within the temperature range stated opposite. Please refer to the Manufacturers guide for Hot Air Gun Calibration and maintenance.

Where preheating of the substrate is judged to be necessary for large and high heat sink materials, care must be taken to ensure the substrate is not damaged. Tyco Electronics cannot be held responsible for damage caused during the preheating of substrates.

Installation

The TPEM recommended recovery temperature range using a CV1981 Heat gun and PR26 reflector are +150°C to +200°C. On the application of heat above 80°C the adhesive will start to melt and flow. Above 120°C the profile will change from a "V" to a "U" section to grip the substrate profile.

The end of the TPEM strip should be heated until the adhesive is tacky and then applied to the substrate with a gloved hand. With the end thus anchored, see Figure 1, the spine of the TPEM can be heated and fed onto the edge of the substrate at a rate of approximately 20cm/minute.

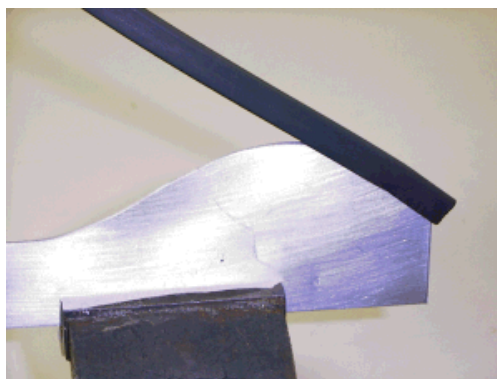


Figure 1

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Keep the TPEM reasonably taught and performing the operation continuously.
See Figures 2 and 3.



Figure 2

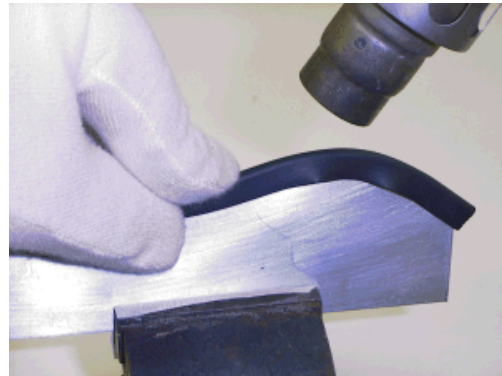


Figure 3

The edges can then be heated and pressed into place using a gloved hand or suitable flat surface, applying gentle pressure to ensure proper adhesion. See Figure 4. Look for evidence that adhesive is present, any excess adhesive may be removed with a suitable solvent.



Figure 4

The TPEM can be cut to length once the spine has been firmly settled and aligned on the substrate. See Fig 5.

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Figure 5

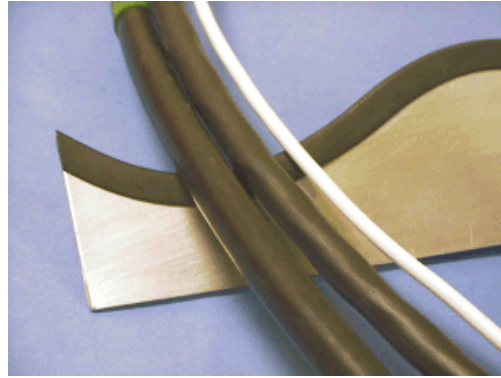


Figure 6

The installed TPEM gives protection to other products which might otherwise be damaged by sharp edges. See Fig 6.

Avoid overheating the product after shrinkage has occurred. Stop heating immediately if the product blisters, chars or shows other signs of degradation. Avoid inhaling fumes which may be released and ventilate the area thoroughly before resuming work.

Installations should be allowed to cool naturally to room temperature prior to handling.

6 Inspection Requirements

There should be no separation between the TPEM and the substrate at the adhesive bond line. The TPEM must be free from fingerprints and scorch marks.

7 Visual Standards

None

Rev No	CR No	Date	Raised	Approved
1	INITIAL	02/06/11	Paul Newman	Neil Dorricott

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