

ORAFOL has created an approval process to customise instructions for each individual customer's specific application(s). Based upon the specific background fabric(s) and sealing equipment, we can help you define an appropriate application system. Following evaluation, the customer will receive an approval certificate specific to each background fabric. Please contact ORAFOL for further information on this.

General Information

ORALITE® GP 851 reflective garment tape is a tough, flexible, weather resistant tape. The tape is designed to be heat applied to suitable background fabrics for use on EN ISO 20471:2013 High Visibility Garments. ORALITE® GP 851 should be applied using the recommendations below. However, converters are also advised to determine which configuration best suits their substrate based on their individual equipment. These conditions will vary depending on the type of equipment, age, model etc. and should be evaluated accordingly, to select the best processing conditions. It is strongly recommended to test ORALITE® GP 851 on the actual substrate before commencing production.

The below guidelines are for continuous heat press lamination and are recommendations only.

Preparation

It is important to ensure the equipment being used can apply uniform heat and pressure during the lamination process. Ensure that the temperatures in each zone of the press are uniform across the width of the press. A handheld infrared thermometer is recommended during set-up to compare settings with actual conditions in the heat press. A tachometer is also recommended for setting the correct belt speed. As there can be great variability in the fabrics produced, variability in chemical treatments used on fabrics and variability in the fusing methods and equipment, it is important that these parameters are evaluated for each application, and it remains the responsibility of the user to test the specific fabric to be sure that the adhesion of ORALITE® GP 851 is satisfactory.

1. Pre-heat the press to the settings in Table 1 depending on substrate type. The temperature settings in Table 1 are equipment set points. Best performance is achieved by controlling tape exit temperatures (typically 10° C below the equipment temperature).

Fabric Substrate	Temperature	Time	Pressure
PTFE coated	160 - 170° C	17 sec	1 Bar
Lightweight PET	145° C	17 sec	1 Bar
PU coated	170° C	17 sec	1 Bar

Table 1: Operating Settings for a Continuous Heat Press

These are recommendations for selected fabrics. Other fabrics are possible and need to be evaluated.

2. It is necessary to determine if the chosen substrate will shrink at the above temperatures. To do this place a sample of the fabric on a flat table and mark a 100 mm x 100 mm square on the fabric using a permanent marker/pen. Pass the sample through the press. Allow to cool and measure the % reduction in size. If the reduction is greater than 3 % in either direction then the substrate will need to be pre-shrunk in advance of applying the reflective tape.

3. For best performance tape corners should be configured on the garment to allow them to be sealed into a seam. If the ends of the tape must be exposed they should be rounded with a minimum radius of 15 mm. Please contact ORAFOL's Technical Centre for further information on this.

Lamination

4. ORALITE® GP 851 is provided with a clear protective liner on its reflective side. Tapes can be applied with this liner on or off, however, should the liner be removed different settings (e.g. less heat) will be required for lamination. It is recommended to leave the liner on to maximise tape performance and avoid conveyance issues in belt and tape non-uniformities. A polyester liner may be used to cover printed tapes (which do not have this liner) during lamination.

5. Place the tape with the adhesive side facing the substrate. Do not stretch the tape as it is being applied. For best results ensure that the temperature and pressure are uniform across the width and throughout the length of the press (figure 1).

6. Allow the protective liner to cool to room temperature before stripping the liner. To remove, lift the protective liner at one edge and separate from the reflective surface by gently pulling back onto itself (figure 2).

Additional Information

1. All candidate fabrics should be tested for adhesion and washability. Chemical fabric treatments, such as water repellent and waterproof finishes, may contain silicone paraffin, fluorocarbon resin, or other material that may strongly influence the level of adhesion to the fabric and the lamination conditions. Since each lot of fabric has variation in construction and the amount of finishes applied, ORAFOL makes no warranty that the end product will be suitable for its projected use, or that the subsequent lots will perform in an identical manner. Allow 24 hours for curing after fusing before conducting any tests.

2. Other lamination methods can be used, in each instance the proper temperature, time and pressure settings must be tested for each fabric to ensure adequate adhesion. Do not HF weld through this tape.

Recommended Care:



Figure 1:

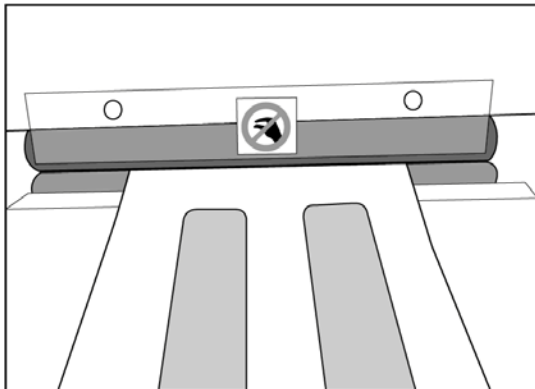
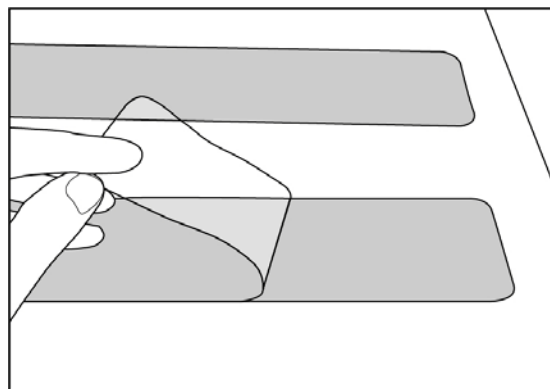


Figure 2:



IMPORTANT NOTICE

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