



美商3M公司臺灣子公司
臺灣明尼蘇達礦業製造股份有限公司

INNOVATION CENTER

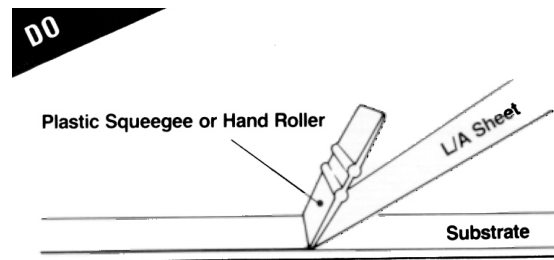
地址:桃園縣楊梅鎮中山南路800巷66號 電話:(03)478-3600 傳真:(03)475-0924

To : Valued Customer
From : Ricky Lee 李瑞淇, TS, 分機: 167, email address: rickylee@mmm.com
Date : 04/07/2008
Subject : 膠帶之貼合作業程序
Standard operational procedure for tape application

3M 建議膠帶貼合方式

▪ 膠帶使用操作程序

1. 欲達最佳黏著，黏著表面必需清潔與乾燥。一般建議以布沾取1：1比例之IPA(Isopropyl Alcohol異丙醇)與水的混合溶液進行表面擦拭清潔後，待表面完全乾燥。(注意：使用IPA前，請先參照此溶劑之建議注意事項)。
2. 將膠帶貼合於黏著表面，以滾筒或其他方式(刮板)平均施以約15psi(1.05公斤/cm²)之壓力，使其有效貼合。
3. 遵循膠帶由點至線至面接觸貼合表面之貼合方式。以人工貼合者，使用一塑膠刮板或滾筒，以堅實且均勻之壓力貼合，應確保壓力已施於膠面時，才使膠與被貼物接觸，以避免空氣包覆其中.)
4. 將膠帶離型紙撕除(若於前一步驟，確保膠與被貼物之間無空氣存在，然後將欲貼著之材質貼上，同樣施以15psi之壓力，使其有效貼合，若欲去除氣泡，建議加大壓力，以物品所承受之限度為上限。建議之操作條件為15psi, 15秒鐘。
5. 建議理想的施工溫度介於15°C至38°C之間，勿低於10°C。
6. 欲使膠帶保存至使用時仍具有穩定的品質，建議之儲存環境為21°C和50%相對濕度。
7. 建議使用無基材之膠帶時，加工裁切之形狀邊緣不宜與膠帶再接觸，以避免有黏結之狀況。



▪ **3M Tapes Operation Process**

- (a) *To bond optimum adhesion, the bonding surface must be clean, dry and well unified. Typical surface cleaning solvents are isopropyl alcohol/water mixture*



美商3M公司臺灣子公司
臺灣明尼蘇達礦業製造股份有限公司

INNOVATION CENTER

地址:桃園縣楊梅鎮中山南路800巷66號 電話:(03)478-3600 傳真:(03)475-0924

- (rubbing alcohol) or heptane. **Note** : Be sure to follow solvent manufacturers' precautions and directions for use when using solvents. (ref Fig.1)
- (b) Use roller or scraper to press tape laminated on the dry substrate surface with 15 psi pressure, and let it be well bonded.
 - (c) For hand lamination, use a plastic squeegee, with firm, uniform pressure and keeping the adhesive off the substrate until pressure contact is made to prevent entrapment of air.
 - (d) Remove the liner and then laminate the applied material on the tape, and apply 15 psi pressure on the material to be well bonding. If making sure removing airtrap, add more pressure can be done, under not destroying the adherent. The recommended parameters are 15psi pressure for 15 seconds.
 - (e) After application, the bond strength will increase as the adhesive flows onto the surface. At room temperature approximately 50% of the ultimate strength will be achieved after 20 minutes, 90% after 24 hours and 100% 72 hours. In some cases bond strength can be increased and ultimate bond strength can be achieved more quickly by exposure of the bond to elevated temperature (e.g. 150F (66 °C) for 1 hour). This provides better adhesive wetout onto the substrate. (ref Fig.2)
 - (f) Suggest operation temperature is between 15 °C and 38 °C, and not under 10 °C.
 - (g) For serving high quality tapes, the storage condition is recommended 21 °C and 50% related humidity.
 - (h) In ATT, it is necessary to avoid the shaped tape contacted with each other in their profiles of the adhesives.

