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How to Mount the All-In-One seal with Double-Sided Tape

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1 When to Use Double-Sided Tape

Mounting by means of double-sided tape instead of by means of screws and washers may be relevant:

- If screw holes are undesirable e.g. if the seal is to be mounted on a very fine wooden door.
- If it is impossible to secure the seal by means of screws e.g. if the seal is to be mounted on a glass door.
- If you are about to rodent proof a motorized door, and the there is a risk that screws will damage the electronic safety mechanism of the door when they are driven in.

2 Tools and Materials

You will need these tools and materials:

- 1) A roll of the rodent resistant All-In-One seal.
- 2) A roll of a suitable double-sided tape (see section 5)
- 3) Tin snips or scissors.
- 4) An effective degreasing agent.
- 5) A cloth.
- 6) A sharp-pointed needle.
- 7) A J-roller.



3 How to Mount the All-In-One Seal with Double-Sided Tape

In the following it is assumed that you use a VHB LSE tape from 3M or another double-sided tape with similar characteristics.

The All-In-One seal shall be mounted in much the same way as when you mount it by means of screws and washers. On www.rodexit.com you can download PDF mounting guides and watch instructional videos that show how to do that.

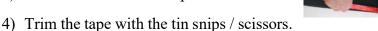
The screwing shall be replaced by the below steps. The steps should be taken at temperatures in the range of 50-100 degrees F (10-38 degrees C) – preferably at room temperature or higher.

1) Make sure that the surfaces of the seal and the building part are clean and dry. Use the degreasing agent and the cloth for removing all grease.





- 2) Take care not to touch the cleaned surfaces with greasy fingers.
- 3) Roll the double-sided tape onto the seal.





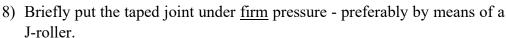
5) With the needle loosen around 2 in (5 cm) of the protective foil at the end of the seal you want to secure first.

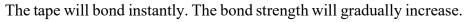


6) Secure the unfoiled end to the building part by pressing it hard against the building part.

Make sure that the loosened end of the protective foil is free, so you can get hold of it.

- 7) With the All-In-One seal in place:
 - a) gradually pull off the protective foil
 - b) while gradually pressing the seal with the unfoiled tape firmly against the building part.









9) Wait at least 24 hours before subjecting the All-In-One seal to substantial loads or shocks.



4 Tips & Tricks

4.1 What Double-Sided Tapes are Suitable?

The ideal double-sided tape should:

- 1. Provide a strong bond that is permanent or at least long-lasting.
- 2. Adhere well to all relevant materials including polymers with so-called low surface energy such as rubbers and plastics.
- 3. Be UV-resistant, water resistant, and suitable for outdoor use.
- 4. Bond well at high as well as low temperatures.





- 5. Have a high initial tack.
- 6. Be somehow removable if removal subsequently is called for.

Very few double-sided tapes live up to all these requirements. The double-sided VHB LSE tapes from 3M do.

4.2 3M's VHB LSE Tapes

The double-sided VHB LSE tapes from 3M come in 3 different thicknesses:

VHB LSE double sided tape	Thickness
060WF	0.025 in (0.6 mm)
110WF	0.045 in (1.1 mm)
160WF	0.062 in (1.6 mm)

The thicker the tape is, the better it is to absorb shock.

The tapes come in different widths. The most common ones are 0.5 in (13 mm), 3/4 in (19 mm), and 1 in (25 mm). The strength of the bond logically increases with the width.

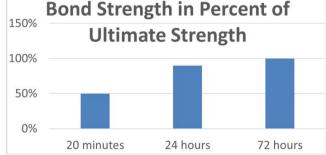
The 1 in (25 mm) wide VHB LSE 160WF is worth considering for most purposes.

The suitability of the tapes for specific projects should in accordance with 3M's datasheet be evaluated in each case.

It is essential for obtaining proper bond strength that the taped joint briefly is put under firm pressure e.g. by means of a J-roller.

The VHB LES tapes should be applied at temperatures in the range of 50-100 degrees F (10-38 degrees C).

The bond strength will gradually increase after application. At room temperature, approximately 50% of the ultimate strength will be achieved after 20 minutes, 90% after 24 hours, and 100% after 72 hours:



At temperatures <u>below room temperature</u> the initial strength will be lower, and it will take longer to obtain maximum strength. The opposite will be the case at higher temperatures. When applied at 50 degrees F (10 degrees C) the initial tack will be 30 % of the maximum strength, and it will take 48 hours to obtain 50 %.

According to a 30-hour long test performed by RodeXit the 160WF tape is capable of bonding well to the All-In-One seal at temperatures as low as minus 40 degrees F (-40 degrees C). In accordance with the 3M datasheet testing on application-specific substrates is however recommended to confirm adhesion at temperatures below 50 degrees F (10 degrees C).

4.3 Low Temperatures and Exterior Swing Doors

If a double-sided tape is subjected to low temperatures, the strength of the bond will tend to decrease

somewhat as the temperature decreases. Because of that, mounting on the interior side of an exterior swing door may in cold climates be preferable to mounting on the exterior side.

4.4 Proofing Vertically Opening Sectional Doors

There is limited space behind the side seals of a vertically opening sectional door. When proofing such a door it may therefore be a good idea not to apply the double-sided tape to the uttermost 2 in (5 cm) ends of the seal as that will take up more space than necessary.

4.5 How to Get a Wider All-In-One Seal

You can tape 2 or more pieces of All-in-One together and thereby get a wider All-In-One seal. It is essential that you briefly put the taped joint under firm pressure - preferably by means of a J-roller. Beware that the added width will add to the flexibility and that this may - depending on the circumstances - make it possible for strong rodents to under-crawl the seal.

4.6 Monitoring and Maintenance

All rodent proofing seals should at regular intervals be monitored for maintenance needs. Fix or replace any seals that e.g. due to severe rodent attacks have been seriously compromised.



