

FITTING INSTRUCTIONS

INTERNAL TPMS SENSORS

TIH-2 TIL-2



Wheely-Safe use 3M VHB tape to bond the sensor to the internal well of wheel rim.

Step 1: Surface Preparation

Cleaning the substrate surface helps any adhesive or tape achieve a better bond

Getting the surface right up front can save time and trouble later. Cleaning helps form a better bond, and some contaminants require more attention than others. Priming will improve the ability of the adhesive to stick to the substrate.

Use a disposable towel or cloth (light colors preferred to show contaminant removal) with a solvent.

Solvent

- Dust, dirt, fingerprints: isopropyl alcohol solution (70% IPA/30% water)
- Oily substances: acetone

Cleaning

- Quick pre-clean of tough spots if necessary
- Wet cloth to remove most contaminants
- Final wipe with dry cloth

Suggested Products

- Isopropyl Alcohol (IPA) 70% - if stronger than 70%, dilute with water
- Kimberly-Clark Professional™ WypAll® X60 Cloths or similar
- Kimberly-Clark Professional™ KIMTECH® WETTASK® System 06001 or similar



Step 2: Priming

A primer creates a new surface for the adhesive to bond to and can improve initial and ultimate adhesion to many materials such as plastics, paints and other Low Surface Energy substrates.

1. Clean before priming (see above)
2. Apply primer
 - a. Primer on a disposable towel, followed by a dry towel
 - b. Dauber bottle followed by a dry towel
 - c. Foam brush
3. Let dry before taping (approx. 1 minute)

Primer Suitability by Surface

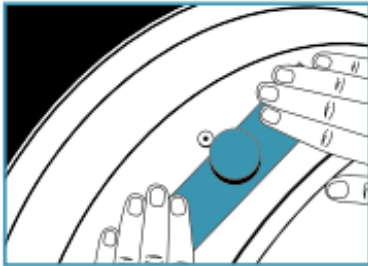
3M Primer	Common Surfaces	Recommended Application Method
3M™ Adhesion Promoter 111	Metal and painted surfaces	Tissue or disposable towel, dauber bottle

Suggested Products:

- Adhesion Promoter - 3M™ Adhesion Promoter 111 (AP111)

Step 3: Sensor Application

Remove the backing tape taking care to not contaminate the adhesive surface.



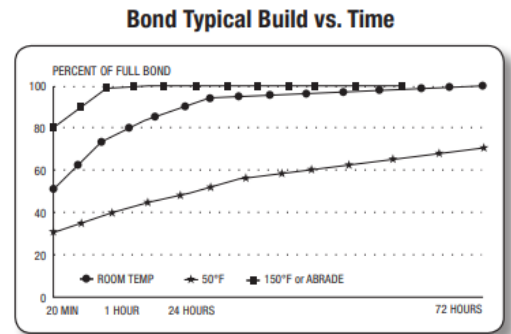
The sensor must be applied directly in the centre line of the wheel adjacent to the valve. This allows easy identification of its position on the wheel rim when using Wheely-Safe checking tools.

Start at one end of the sensor and lay it down to prevent air entrapment, applying constant pressure as you go. Apply a roll down force of at least 15 PSI with a dense J-roller (eg. Gundlach V300-SB pressure roller or similar laminate roller) over the entire area to ensure good contact between the tape and the substrate surface.



Bond Time:

After application, the bond strength will increase as the adhesive flows onto the surface (also referred to as “wet out”). At room temperature approximately 50% of ultimate bond strength will be achieved after 20 minutes, 90% after 24 hours and 100% after 72 hours. This flow is faster at higher temperatures and slower at lower temperatures.



Ultimate bond strength can be achieved more quickly (and in some cases bond strength can be increased) by exposure of the bond to elevated temperatures (e.g. 150°F [66°C] for 1 hour). This can provide better adhesive wet out onto the substrates. Abrasion of the surfaces or the use of primers/ adhesion promoters can also have the effect of increasing bond strength and achieving ultimate bond strength more quickly.

Resources

All information regarding 3M VHB tapes sourced from 3M publications and current as of August 2023.

www.3m.com/3M/en_US/vhb-tapes-us/resources/applying-3m-vhb-tapes/

Other useful 3M resources:

- “Surface Preparation for 3M VHB Tape Applications“
- “How to apply 3M™ VHB Tapes“

