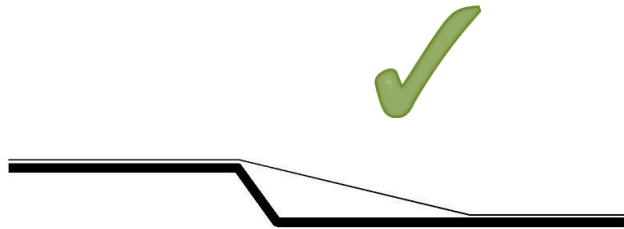


Application method for applying 3M™ Controltac™ IJ180cv3 wrapping film into a single step shallow recess

*Please note that the depth of the recess is not the only factor to consider, the angle or profile of the recess can also determine how difficult it will be for the film to stay applied in the recessed areas. **If you are unsure of the suitability of 3M IJ180-10cv3 for these areas then we recommend that 3M™ Controltac™ IJ380** film be used as this film has been developed specifically for long term use in deep recessed areas



A) 3M IJ180-10cv3 is suitable for this application.



B) 3M IJ180-10cv3 is not suitable for U shaped recesses, or complex curves. 3M IJ380-10 is the only vinyl suitable for these applications. (3M IJ380-10 application bulletin also available)

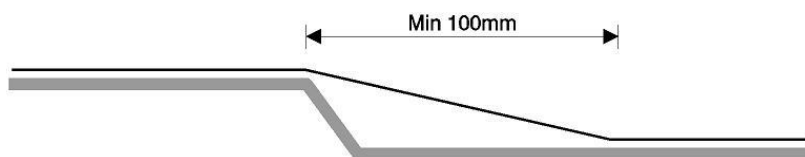
Cleaning the vehicle

Excess dirt should be removed with water & detergent and then all areas of the vehicle to be wrapped/have graphics applied must be thoroughly cleaned with **3M™ Surface Preparation System**. This cleaner must be used in two stages: 1) Apply using a clean, lint free cloth. 2) Remove (as this will not flash off) with a fresh lint free cloth.

****Please ensure the vehicle AND the ambient temperature you are wrapping in, are between 19-22 Degrees Celsius. Above and below these temperatures, films become much harder to work with, and at a low temperature could inhibit the adhesives final bond to the vehicle, causing failure****

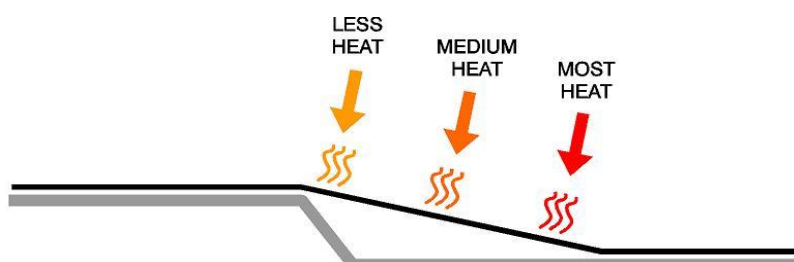
Application

Step 1



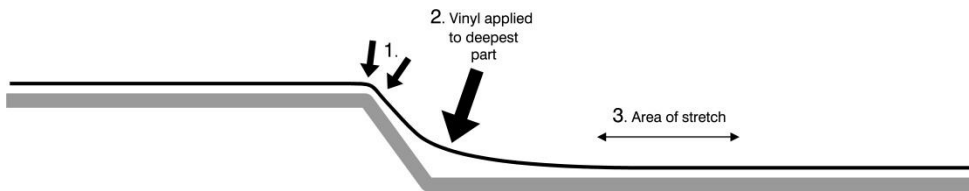
For application of film into single step shallow recesses 3M IJ180 should be bridged as normal, leaving a minimum of 100mm of film bridged, this may increase depending on depth of recess.

Step 2



Heat the vinyl to soften and re-tension the film over the bridged area, ensuring heat is then concentrated to the vinyl opposite the recess (this ensures the stretch comes from this area not the recessed area)

Step 3



Vinyl is to be applied to the deepest part first with stretch coming from the flat, non-recessed area. Any trapped air on flat areas can be worked out progressively with the aid of Comply™ air release technology.

Post Heating

Post heating is one of the most crucial factors to a successful vehicle wrap, unfortunately it is often overlooked, leading to material failures.

All areas that have been heated and stretched into a recess, **no matter how shallow, require post heating.** The post heating process erases any memory that the vinyl once held, thus preventing it from returning to its original form and potentially popping out of a recess.

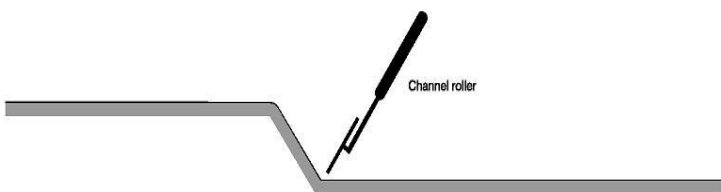
Process:

- Gently heat all recessed areas to approximately 35-40°C to identify any trapped air. If any air is still evident in the recessed areas then it will expand and be exposed at this lower heat, enabling it to be removed prior to final post heating.
- Then, using a heat gun and an infra-red digital thermometer, heat all recessed areas to a minimum of 100°C. This ensures that the films 'memory' is removed and also allows the adhesive to 'flow' therefore reaching maximum adhesive bond in these critical areas.

Please note* When post heating always ensure that you remove the heat gun from the area when taking a thermometer reading to ensure you receive an accurate surface temperature reading, and not a reading from the hot air released from the gun.

Post heating should occur after every single panel application, not at completion of the vehicle.

Step 4



Once the vinyl is in place and still warm (35-40°C), the small channel roller must be used in the recess. This is to ensure maximum bond in the recess. The channel roller applies a large amount of pressure to a small surface area, which is a lot more effective than your finger or the thin edge of a squeegee.

A video showing all these steps for the above application methods, along with the methods required for all other 3M™ wrapping films can also be downloaded by visiting:

<http://youtu.be/7BUugKSVOWk>