



# CARLIER PLASTIQUES & COMPOSITES

## **Recommendations for the use of composite material panels**



CARLIER PLASTIQUES & COMPOSITES  
[carlier-plastiques.com](http://carlier-plastiques.com)

15, Chaussée Brunehaut, 62470 CALONNE-RICOUART

Tél: +33 (0)3 21 65 54 54

Email: [adv@carlier-plastiques.com](mailto:adv@carlier-plastiques.com)

# Introduction

**This leaflet is meant to help the manufacturers in the  
repairing of commercial vehicle bodies.**



# Summary

- 1 Procedure for small damage blemishes



- 2 Procedure for repairing major blemishes



- 3 Procedure for repairing anti-slip floor



- 4 Repairing procedure for panel edge delamination



- 5 Procedure for repairing a heated floor

# 1 Repairing procedure for small blemishes

*(Scratches, small cracks in the gelcoat, small impacts...)*

## Required materials :

- Thickened and pre-accelerated gelcoat
- Polyester film
- Solvent
- Catalyst (protect eyes and use gloves when handling)
- Wax



## The repair :

1. Wax and shine the surface to be repaired (the wax helps to stop any surplus gelcoat sticking on the surface around the area of the repair).



2. Rub down the area around the surface of the fault, ensuring that the edges are smooth and the whole area is dust free.



3. Prepare the gelcoat: one button of gelcoat and 4 or 5 drops of catalyst and mix carefully.



4. Apply the mixed gelcoat on the damaged area, and lay polyester film over the area, then level the film and gelcoat out with a flat scraper.



5. After the gelcoat is hardened, take the polyester film off, clean with a solvent and wipe off the excess of gelcoat.



## 2 Repairing procedure for major blemishes

*(Cracks until the core material, deep impacts..)*

### Required materials :

- Portable sander
- Hot air gun
- 300g/m<sup>2</sup> roving and 450g/m<sup>2</sup> matt fabric
- Polyester resin
- Polyester putty (for bodywork)
- Roller and/or brush
- Identical equipment for minor repairs. .



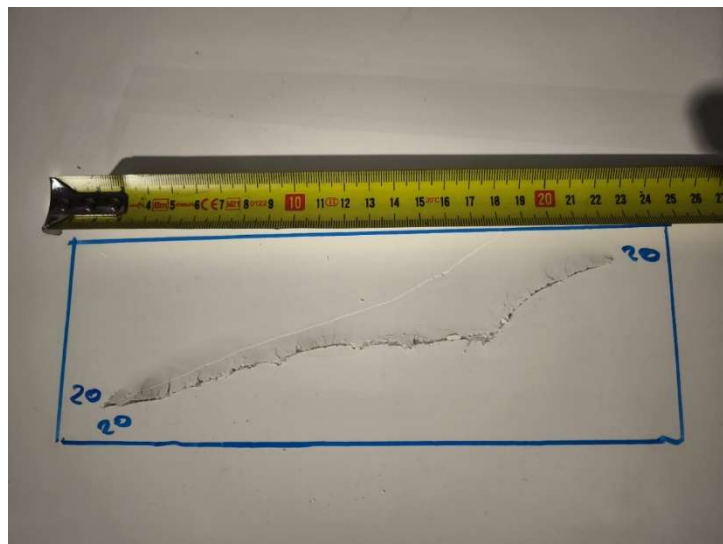


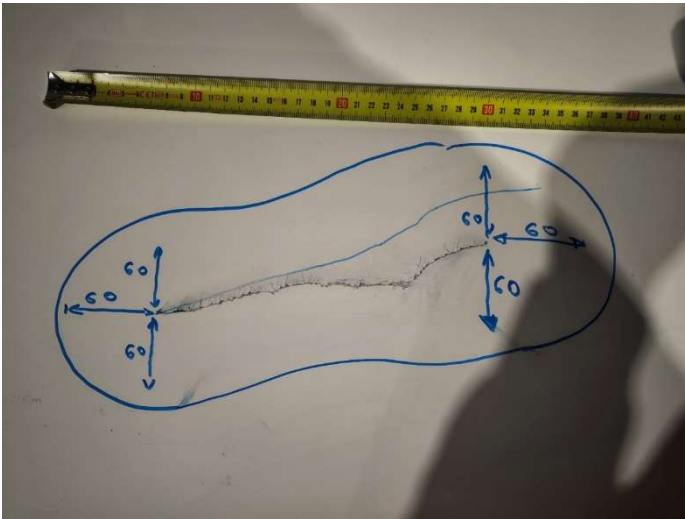
### Define the repair zone :

In this photo, the area is too small and too close to each end of the crack.  
The rectangle repair will be too visible after repair.



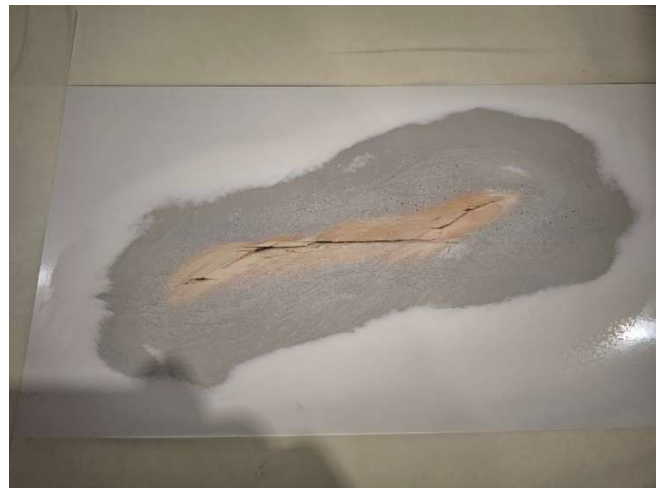
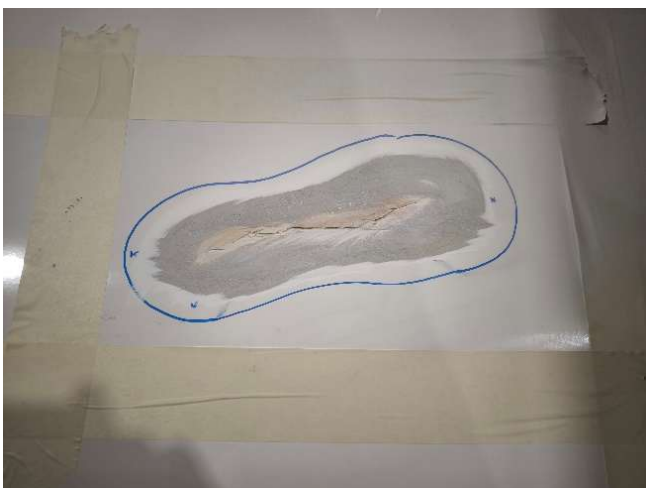
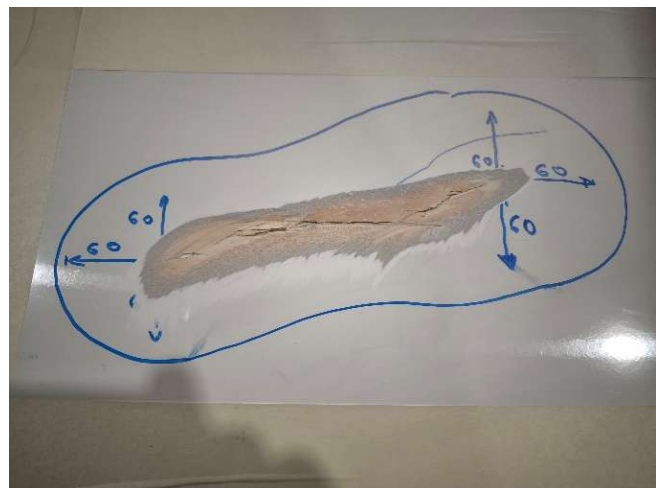
Here, the random repair will be less visible, covering the ends of the crack and extending to more than 60 mm.





Prepare the surface by sanding the area with a 36-grit abrasive disc and removing any damaged wood.

Prepare a slope of 20 to 30 mm to the center of the repair.





### Preparing the reinforcements :

Here, cutting out a rectangular reinforcement will make the repair more visible



The reinforcements must be prepared and cut to the shape prepared during the sanding phase. **Here, a 300g mat**



To further soften the edge of the matt reinforcement cut with scissors  
Thin it by pulling slightly on the edges to obtain a rougher contour. To obtain this :



Once you have prepared a 300g small mat, a 300g roving, a 300g large mat and a finishing veil, you can start to work on the finish. The deepest hole should be filled with polyester putty.



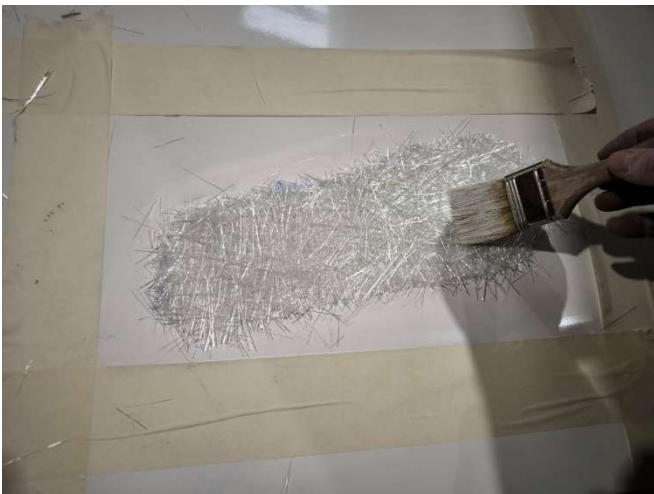
Start laminating, laying the first 300g mat.



300g roving follow-up



Then the second 300g mat, bigger and bigger



Finish with 30g tissue







Once the panel has regained its original characteristics, you can sand it, apply a primer and finish off with a touch-up paint job.





# 3 Procedure for repairing anti-slip floors

Required materials :

- Polyester mastic
- Catalyst (do not forget to protect your eyes, and wear gloves)
- Wedge
- 1 weight
- Flat scraper
- Acetone



## **Repairs :**

1. Dust without scratching



## 2. Position the mould



## 3. Mark the moulds position over the area to be repaired



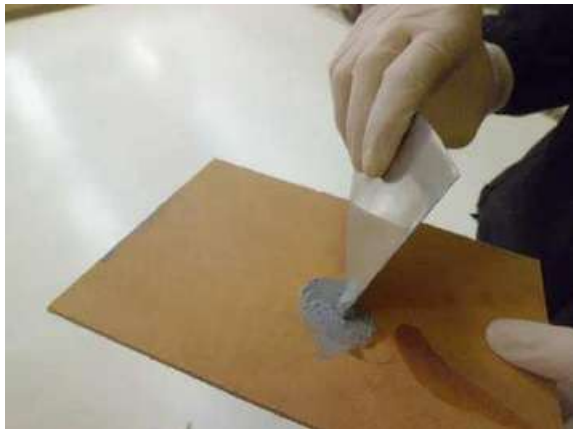
## 4. Prepare the required amount of mastic



5. Add one « drop » of catalyst (approximately 2%)



6. Mix well



7. Put the required quantity for the reparation, without exaggeration



8. Renew the operation according to the number of repairs to be made



9. Position the mould using the markers you have made



10. Place a piece of material (Wood/Heavy duty polystyrene/foam)



11. Plus 1 weight of approximately 1 to 2 kg



12. After good polymerization (after several hours), remove carefully the mold



13. You can scrape off excess with flat scraper and some acetone if necessary





# 4 Procedure for repairing panel edge delamination

## Demonstration on a panel with a detached corner



Required materials :

- Fiberglass
- Accelerated polyester resin
- Peroxide (catalyst)
- Spatula
- Clamp
- 2 rests of panels or any boards



1. Pour the fiberglass pieces into the accelerator polyester resin

*(Caution: the quantity of resin to be used depends on the repairs to be carried out. If you have several, don't use up all the resin at once, as it has a limited lifespan).*



2. Mix to obtain a homogeneous mixture



3. Pour in the peroxide (between 1.5% and 2% maximum) in the resin + fiberglass mixture and mix



To obtain this result :



Use a spatula, protect the floor from any excess resin fall.

4. Put the mixture to the delaminated parts with the spatula. Well soak the delaminated area with resin.



5. Once the mixture has been applied, take 2 pieces of panels or boards and place them above and below the panel to protect it from the clamps.



6. Put on a first clamp and do not remove the excess resin as shown in the photo below





Put a second clamp in order to have 2 on the edges of the panel, tighten.



7. Remove the excess of resin from the panel core with the spatula



Once the resin has hardened (After about 1 hour), remove the clamps.



## 8. Conclusion : Before/After the repair



## 5 Procedure for repairing a heated floor

It is possible to repair an underfloor heating system. To do this, please contact your sales representative or the after-sales service. We will then contact the supplier of the underfloor heating.

### **Caution :**

*Beware by the handling of dangerous materials such as solvents. Please respect the safety recommendations of the manufacturer of these products.*



*We are certified ISO 9001*