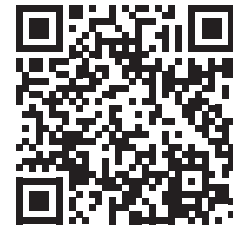


## Carbon Complete-Set



200 g/m<sup>2</sup> carbon fiber fabric  
with epoxy resin 4307 + hardener 313  
Working time (at 20°C) approx. 40 min  
Curing time (at 20°C) approx. 24–36 hours



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Carbon-Sets

With a little craftsmanship, surface finishing isn't that difficult. The parts should be processed under optimal conditions, meaning the material and room temperature should be around 20°C. The work area should be dust-free.

### Useful accessories:

- Acetone
- Acrylic Clear Coat HS Ultra Plus
- Sandpaper
- Scissors
- Digital scale

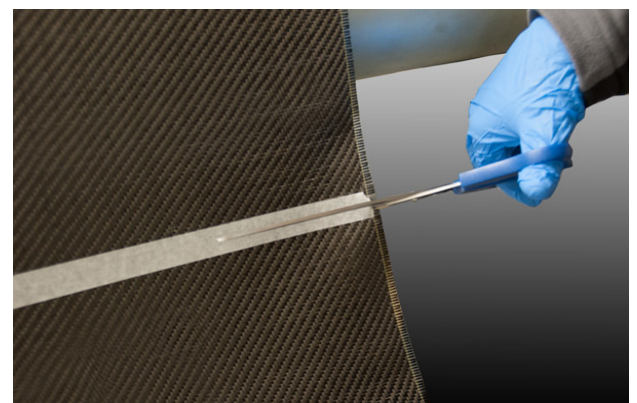


Do you already have this?  
If not, it's also available in our store:

### Preparation

First, gather all your materials and cut the carbon fiber to size. To do this, place the carbon fiber on the part you want to cover, cut it out leaving enough excess (3 to 5 cm), and set it aside. Alternatively, you can use a template.

**Tip:** Apply masking tape or painter's tape to the planned cut line, then cut through the center of the tape to prevent the carbon fiber from fraying.



## Surface Pretreatment

Plastic parts, fiberglass-reinforced plastic (FRP), metals, and wood should be clean, dry, and free of grease.

Remove dirt, solvents, and grease from the parts to be coated.

Then sand the surfaces with grit sizes ranging from 40 to 180. Cleaning and sanding improve the wettability of the parts, significantly increasing the adhesion and service life of the bonded joint. After sanding, remove the sanding dust from the surface with a vacuum cleaner or compressed air and clean it with acetone.

**Always let parts treated with acetone air dry for 2–3 hours.**

**Tip:** When working with trim parts (e.g., dashboard trim panels), keep in mind that you may need to remove some material first so that the parts can be reinstalled with a precise fit later on. Colored parts should be painted black or finished with two coats of carbon fiber beforehand, otherwise the color may show through the fabric later on.

### TEST THE ADHESION ON PLASTIC PARTS.

To avoid adhesion problems, especially on thermoplastics or plastics, you must/should conduct a test beforehand. You can also apply a primer (adhesion promoter) or an epoxy-resin-compatible paint. If you are unsure about unpainted plastic parts, consult a trusted paint shop. They can provide you with information and, if necessary, assist with tempering and painting the parts.

Industrial molded parts may also contain residues of release agents; to remove these, temper (heat-treat) the parts for 1–2 hours at 60°C beforehand.

Visible components exposed to temperatures above 45°C—such as automotive parts, which can heat up to 75°C in the summer—may experience discoloration and deformation.

## Resin Application and Laminating

The 200 g/m<sup>2</sup> carbon fiber has a resin consumption of approximately 240 g/m<sup>2</sup>. Calculate the surface area of the cut piece of carbon fiber and then the amount of resin required.

Example: A cut piece of carbon fiber has an area of 40 cm x 50 cm = 0.2 m<sup>2</sup>,  
240 g of resin x 0.2 m<sup>2</sup> of carbon fiber = 48 g of resin, plus 10 g for losses (brushes, etc.), so you will need approximately 60 g of resin.

Epox 4307 + Hardener 313: Resin-to-hardener mixing ratio 100/50, i.e., 40 g of resin + 20 g of hardener.

**It is essential to adhere strictly to the mixing ratio, which can only be achieved by weighing the ingredients precisely using a digital scale. When mixing, you can only achieve a homogeneous mixture by transferring the mixture (pouring the resin/hardener mixture into the second mixing cup) and stirring slowly and thoroughly (Important: scrape down the sides of the mixing cup).**

Apply a thin layer of the mixed resin to your component using a brush, and then carefully place the cut-to-size carbon fiber on top.

Next, saturate the fabric by applying an even layer of resin. Dab from the center toward the edges to remove any remaining air trapped in the laminate. Work carefully so as not to displace the fabric.

Now wait until the resin has set before applying another layer of resin. If the surface happens to cure faster than expected, wait 24 hours and sand it again (320-grit). Be careful not to sand down to the fabric; instead, sand only the surface layer of resin. After each sanding, remove the sanding dust from the surface with a vacuum cleaner or compressed air, and apply another layer of resin.

Trim off any excess carbon fiber with scissors, a blade, or a suitable tool, and carefully sand down the edges. After sanding, remove the sanding dust again with a vacuum cleaner or compressed air, and apply another layer of resin. Openings or screw holes that, due to their design, cannot be covered with carbon fiber should be cleaned and sanded with a blade or suitable tool before applying the clear coat.

**Tempering:** We recommend performing a heat treatment consisting of 1 hour at room temperature, 5 hours at 50°C, and 5 hours at 70°C.

## Clear Coat

Once the laminate has fully cured, sand the surface with 400-, 600-, and, if necessary, 800-grit sandpaper.

We recommend applying at least two coats of our HS Acrylic Clear Coat/Hardener Ultra Plus. This VOC-compliant clear coat is particularly user-friendly, easy to apply, and stands out for its low consumption.

The first coat can be applied with a brush; to do this, mix the HS Acrylic Clear Coat with the HS Acrylic Hardener in a 2:1 ratio and stir both components thoroughly. Example: Mix 30 g of clear coat with 15 g of hardener. Apply the mixed clear coat and let the parts air dry for 8–10 hours. For oven drying, set the object temperature to 60–65°C for 20–40 minutes. Once the clear coat has cured, sand the surface with 800-grit sandpaper. If minor imperfections remain, you can apply another coat of clear coat with a brush.

If possible, the final coat of clear coat should be applied by spraying, using a spray nozzle between 1.2 and 1.4 mm and a spray pressure of 3.5–4 bar.

## Occupational Safety

Think about your health. You should wear the protective gloves included in the set whenever you're working. We also recommend wearing a respirator and safety goggles.

This information is based on our current knowledge and experience. However, we provide it without any obligation. It is intended to inform you about our products and their possible applications and is therefore not intended to guarantee specific product properties or their suitability for a particular purpose, nor does it constitute complete instructions for use. We reserve the right to make changes in line with technical progress and operational developments. The use and processing of our products in accordance with our instructions take place outside our control and are the sole responsibility of the user. The user remains responsible for verifying the suitability and possible applications for the intended purpose. We welcome suggestions for improvement and reports of errors.

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