

SCHROTH RACING PROFI SEAT KIT

QUICK CURE

USER GUIDE, SAFETY & INSTALLATION INSTRUCTIONS

Please ensure that you read and follow all the warnings, instructions and stages in this Manual.

EA 13.7
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If you have any questions after reading this manual, please contact:

germany@eu.schroth.com

www.schroth.com/profiseat



DANGER

During processing:
Avoid contact during pregnancy / lactation.
Use protective eye wear and gloves. In case
of inadequate ventilation, wear respiratory protection.

For additional information see safety data sheet



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WARNINGS & INFORMATION BOXES

DANGER

DANGER indicates a hazardous situation which, if not avoided, will result in death or serious injury.

WARNING

WARNING indicates a hazardous situation which, if not avoided, could result in death or serious injury.

CAUTION

CAUTION indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

NOTICE

NOTICE is used to address practices not related to physical injury.

SAFETY INSTRUCTIONS

SAFETY INSTRUCTIONS signs indicate specific safety-related instructions or procedures. They contain important hints to help you make & install, use and maintain your SCHROTH Racing Profi Seat insert properly and effectively.

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PREPARATION & TIMING & TEMPERATURE

Welcome to your SCHROTH Racing Profi seat kit
Safety Data Sheets are included and are additional
available upon request.

Please eMail: germany@eu.schroth.com

PREPARATION & TIME

Before making your seat please ensure the following:

Time Required - a minimum of 2 hours will be required from start to finish to achieve a satisfactory result. If you (and the driver) do not have this amount of time available it is not recommended to begin this project.

SAFETY INSTRUCTIONS

On receiving & opening your kit please check contents are correct and free from damage. Protect the Quick Cure Resin against humidity. Do not store at temperatures below 5°C. 15°C to 25°C is the most favourable storage temperature.

SAFETY INSTRUCTIONS

Cover all sharp edges and objects within the car and seating area. Tape over or cover ALL sharp edges where necessary. This will ensure the bag material does not get punctured or damaged during the fitting process.

Remove all racing belts from the desired seating position.

Make sure the pedals & steering wheel are adjusted for the driver.

Make sure the driver has his/her regular race suit, FHR device, boots & racing helmet for the seat fitting.

Useful materials to have on-hand are tape measure, marker pen and stopwatch.

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WORK AREA & TEMPERATURE

A working area with sufficient room to move around the car along with laying out the Profi seat bag is required. Use **ONLY OUTDOORS** or in a **WELL-VENTILATED AREA**. It is recommended to use a combination filter A-P2 or a self-contained breathing apparatus. Our unique resin is **NOT** temperature sensitive, so the insert can be made at temperatures greater than 5°C. The recommended ambient temperature range is 15°C to 25°C.

DRY FIT - NO RESIN, NO Water

It is vital that a DRY FIT is performed before any of the Resin & Water is used. This will get the driver used to how the seat should feel, and will also enable you to determine the correct placement and volume of beads.

Lay the bag out on a flat smooth surface, and spread the beads evenly over the whole area of the bag. Stretch the bag lightly by pulling at the corners to ensure there are no creases.

Before applying a vacuum to the Profi seat, make sure the foam filter insert and the red O-ring are attached to the valve.

With a vacuum source (optional foot pump or vacuum not included) and hose attached to the valve, (To open the valve hold the black tap and press the button at the back of the tap) apply a vacuum until the bag starts to take on an "orange-peel" effect, and the bag is fairly rigid. This will ensure the bag will hold its shape when it is fitted into the cockpit.

CAUTION

Never use your mouth to add or remove air from the seating kit. Bag contains small parts that could be swallowed.

Risk of choking or suffocation when parts are inhaled/swallowed.

SAFETY INSTRUCTIONS

During the Dry Fit and Final Fitting, pedals and steering wheel should be set in the driver's preferred position. Headrest, where applicable needs to be fitted and driver needs to be wearing their helmet, FHR device, racing overalls and boots.

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Fit the bag into the cockpit or seat shell and press the bag firmly into position; by slowly releasing the vacuum it may help to achieve this fit. Ideally, the bag should be placed with the black valve/tap at the top; allowing for easier access to adjust the vacuum. For the vacuum to function optimally, the tap should be placed in an area where beads will be present so the bag does not get pulled into the tap under suction.

Seat the driver in the car, being careful to disturb the bag as little as possible. The driver will now have to achieve the desired position by moving and/or displacing the beads within the bag. To aid in this process, it may help by releasing the valve allowing more air into the bag.

At this stage, if the driver is finding it difficult to achieve the desired position, it may be because the bead volume in the bag is too high, and therefore must be decreased.

To decrease the volume of beads, the bag will have to be removed from the cockpit, and then remove the black tap (valve). Once the black tap is removed you can slowly remove some of the beads. Keep track of how many litres of beads you have removed; you will need to know this later when mixing in the resin.

WARNING

Risk of serious personal injury or death.

The driver's helmet must be under the roll hoop / cage as defined in the sporting and/or Championship Regulations. Refer to the current Regulations for the minimum height of this clearance. Failure to seat the driver under the roll hoop may result in serious personal injury or death.

Taking considerable time at this stage is necessary, ONLY by altering the amount, and position the beads around the bag, drivers will then be able to achieve the optimum seating position.

WARNING

Risk of serious personal injury or death.

The steering wheel must be able to move freely lock to lock. Care must be taken to make sure the drivers legs do not inhibit or foul the steering wheel operation. Also the driver's hips and shoulders must be level and central. Failure to check steering wheel clearance or seat driver level or central may result in an inability to properly steer the vehicle.

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Remember, by slightly adjusting the amount of vacuum, you will be able to "firm-up" or "soften" the bag in position, and allow the driver to forcibly move around, so to position the beads into the areas where support is required. Equally, it might prove helpful for drivers to have outside assistance so to shape the bag around areas where extra lateral support may be required.

Once the driver has achieved the desired seating position, apply vacuum to the bag to maintain the shape and form of the seat insert. Then the driver must (carefully) extract themselves from the cockpit. At this stage it will be advantageous using a permanent marker pen to measure and mark on the bag the various thicknesses of the beads in key areas such as back, lumbar, and legs. Also marking specific support areas in relation to the driver and cockpit environment, as this will aid when after having applied the resin, the initial bag layout can be replicated.

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QUICK CURE RESIN

We have developed this quick cure resin so you can make an insert at any temperature greater than 5°C. Recommended processing temperature 15°C to 25°C. Our quick cure resin also cures very fast, regardless of the ambient temperature. Water is the “activator” which is simpler and more user friendly than other resins. To slightly speed up the activation process of the Quick Cure Resin use preheated water (30°C to 40°C).

Please see Table 2 for working times.

MIXING RESINS

Well done - now you have completed the Dry Fit, you now know how many beads you need to make the seat and you know how the seat will be fitted. You are now ready to mix in the resin and water.

Table 1: Ratio Table Bead / Resin & Water

Bead Volume (litre)	Resin Volume (litre / kg)	Water Volume (ml)
25	0.6 / 0.8	100
30	0.7 / 0.9	100
40	0.9 / 1.0	150
50	1.2 / 1.5	200
70	1.7 / 1.9	300

NOTICE

Do not dispose of excess resin in waterways.

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⚠ CAUTION

Wear protective eye wear, gloves and respiratory protection when handling, preparing & mixing the resin and water. Ensure adequate ventilation. Wear **protection class A-P2** respiratory protection or a self-contained breathing apparatus.

Do not drink or ingest the resin.

Do not use an open flame near the resin or near the seat while curing. Avoid sparks. Failure to use protective equipment may result in eye injuries, irritation and other personal injuries.

Table 2: Working Times

Working Time	20 minutes from mixing the water with the beads and resin
Curing Time	working time plus min. 30 minutes = min. 50 minutes: The seat insert will be cured and ready to cut/trim at 50 minutes from mixing the beads and water

PLEASE NOTE: It is advisable to use a stopwatch and to stop the driver moving after 20 minutes so to avoid any cracks in the seat insert as it cures completely. The vacuum must be kept constant during the entire manufacturing process.

SAFETY INSTRUCTIONS

Adjust the resin and water volumes using the Table 1: Bead/Resin & Water Ratio Table & measuring container supplied. Care must be taken to have the correct amount of each component as this will affect the finished seat.

STEP 1: First pour in the correct amount of **RESIN ONLY** into the bag. Without the water the resin is inert and this will allow you to mix the resin thoroughly getting good coverage over the beads. Remove the black tap from the bag. Using the supplied funnel, pour the resin into the bag. Wear all of the protective equipment listed above throughout the process.

Careful: DO NOT over stress the bag in this area and hold the opening in a central position just above the beads. Insert the funnel and pour the resin straight onto the beads, try to avoid letting it running down the inside of the bag walls. Re-fit the black tap once all the resin is added, and start blending the resin with the beads.

Important: Take around 5 minutes to combine the resin only **[NO WATER]** completely with the beads. Use a “kneading” action to mix and move the mixture around the bag.

STEP 2: Now start the stopwatch. You have **20 minutes** working time before the mix is almost cured and additional changes are not possible.

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STEP 3: Pour the water into the bag and mix with the resin coated beads after removing the black tap from the bag. You will feel the beads change to a “looser feel”. Don’t spend too long, just quickly mix the water (max. 1-2 Min.). Re-fit the black tap. The tap base is firmly glued to the bag. When removing and attaching the tap, please do not apply too much force to the adhesive connection.

Move the beads back into position as per the DRY FIT. Use measurements and pen markings to assist you in getting the insert into the same shape as the DRY FIT. Then apply strong vacuum.

CAUTION

Never use your mouth to add or remove air from the seating kit. Bag contains small parts that could be swallowed. The Quick Cure Resin is harmful if inhaled and may cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause damage to organs through prolonged or repeated inhalative exposure

Risk of suffocation when parts are inhaled/swallowed.

For additional information see safety data sheet of the Quick Cure Resin.

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FINAL FITTING

CAUTION

During the final fitting stage, pedals and steering wheel should be set in the driver's preferred position. Headrest, where applicable needs to be fitted and driver needs to be wearing their helmet, FHR device, racing overalls and boots.

Care must be taken to remove creases and folds from the casting bag otherwise this will leave cracks and fissures in the finished seat. When applying the final vacuum, vacuum the seat so it holds the desired shape and form, but not too much vacuum that the seat shrinks or deforms.

The final fitting is a repeat of the dry fit see page 3-5, except that the beads are now mixed with the resin & water so to produce a solid end product.

Using the pen markings made on the bag and measurements during the dry fit stage, spread the beads around so to replicate the various thicknesses of beads required in each location marked.

Take care adjusting the vacuum at this stage, as the mix behaves differently than under dry fit vacuum conditions.

WARNING

The steering wheel must be able to move freely lock to lock. Care must be taken to make sure the drivers legs do not inhibit or foul the steering wheel operation. Also the driver's hips and shoulders must be level and central.

Failure to check steering wheel clearance or seat driver level or central may result in an inability to properly steer the vehicle.

In order to achieve the optimum final position for the driver, all participants involved must work together to aid in this process. Remembering that there is **ONLY 20 minutes** working time at this stage. The driver must (with aid if required) shift the beads around by forcibly moving around in the seat, to displace the beads to the areas required.

The unique properties of the bag are designed for this purpose, and the bag is extremely robust and „stretchy“, but please do not over stress the bag.

It is vital that in order to produce a quality finished product, that as many creases as possible are removed from the surface in contact with the driver.

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A crease or fold in the bag may cause a fissure or deep crack which will weaken the seat once hardened. "Pulling-out" firmly on the bag material where creases or folds have developed will allow the bead mix to form together. Careful kneading and moving of the beads at the same time will also aid in this process.

Only when the driver is completely satisfied with the seat position and profile, should you apply vacuum to the bag to maintain the shape and form of the seat insert, with the driver maintaining his/her desired position.

Once all the air has been removed from the bag – the driver needs to stay in position until the 20 minutes working time is finished. You will need to re-apply vacuum during this process to keep the required shape as due to the unique resin mix a certain amount of "gassing" occurs.

You need to hold the vacuum during this process to get the shape you want. As a certain degree of "outgassing" takes place due to the unique resin mixture, a constant vacuum is very important.

Keep track of the time and always remind the driver of the time he/she has been working with the resin filled seat. Remember you have 20 minutes from when you mixed the resin and water until the seat begins to harden and set.

Important Note: The mix will nearly cure at the same rate whatever the temperature. Therefore care must be taken to adhere to mix ratios and stopwatch times on page 7.

NOTICE

Leave the bag + driver in place for at least the minimum 20 minute curing period.

SEAT FINISHING

The bead & resins mix will set sufficiently for the seat to be handled after 45 minutes, from mixing in the water before the seat is trimmed to its final profile

At least 50 minutes [continue to pull a vacuum if the outgassing is still taking place] mixing the poly-plastic beads and the resin with the water, the mixture is sufficiently hardened to give the seat shell its final profile.

Once the seat is cured, please remove carefully. Give some thought beforehand to the best way of removing the cured seat.

⚠ CAUTION

⚠ WAIVER

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When handling knives of any sort extra care must be taken. Protective gloves and eye wear must be worn when trimming your finished seat. When using a hot knife a mask (respiratory protection) is also required.

SAFETY INSTRUCTIONS

When trimming and finishing the seat the driver should be present for feedback. Before covering the seat we recommend the driver tests the seat on track. Adjustments and additional trimming may be required after testing on track.

Cut away any excess parts of the bag, and begin trimming away excess material to allow clearance, and easy future fitment/extraction of the seat itself. We recommend using a hot knife and sanding block for a perfect trim. **Use of mask (respiratory protection) and eye protection is required.**

Allowances should be considered for the straps of the Racing (crotch/lap/shoulder) belts, as well as items such as a FHR device and headrest, when trimming the seat.

⚠️ WARNING

Risk of serious injury or death due to fire.

When covering your seat, consult your Championship Regulations first. We always recommend a fire retardant covering. Failure to cover your seat with the correct covering may lead to serious personal injury or death.

The final product can then be covered in a variety of options. It is recommended to COVER THE FINISHED PROFI SEAT WITH A FIRE RETARDANT COVERING. Use only a solvent-free adhesive to attach the cover.

Professional finishing is available on request. We can supply prices on request, just contact us at germany@eu.schroth.com and we will be happy to send you our price list for covering your SCHROTH Racing Profi seat.

Well done, you have now read the detailed & important user guide and you are now ready to make your SCHROTH Profi seat.

If after reading this detailed guide you are still unsure, please feel free to contact us:

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Also regional representatives and further importers are listed by countries.

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Annex:

- Safety data sheet: Quick Cure Resin (Stobicoll C 225 VP 2 Isocyanat)

Disposal considerations:

- Do not empty into drains.
- Only dispose cured resin in suitable waste disposal container. Do not dispose uncured resin.
- Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

For additional information see safety data sheet

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SCHROTH Safety Products GmbH

Confirmation of Conformity

We hereby confirm that the SCHROTH Profi Seat Kit has been successfully tested by the SFI designated independent third-party laboratory and fulfills the requirements of SFI 45.2 for Impact Padding

Flammability:

The after-flame time shall be ten seconds or less. Additionally, no melting or dipping may occur. The material is self-extinguishing.

Test Date: January 13th, 2021 (ACT Lab LLC)

SCHROTH Profi Seat Kit

(race seat not part of kit)



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