

1. General information on handling rubber seal profiles:

- If seals reveal partly detached protective film on delivery, they must not be bonded.
- Store seals at 5 °C to 40 °C.
- If, during the handling, the protective film has come off before bonding, it can still be bonded.
- Bonding at room and object temperature $25^{\circ} \pm 5^{\circ} \text{C}$. Temperatures between 40 and 50 °C significantly increase initial adhesion.
- Seals, which are subjected to temperatures above 80 °C after bonding, will be very difficult to remove.
- Maximum storage time for replacement: 2 years (expiry date must be indicated on the packaging)

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2. Damage pattern and repair

2.1 Partially detached bond (rubber-adhesive tape or adhesive tape-paint)

- Up to 120 mm for reworking without auxiliary materials
- Up to 200 mm reworked with pressing-on tools on straight surfaces

a) Cleaning

damaged areas:

- Degrease adhesive area coated side with cleaning agent (cleaning agent R2, see BMW Parts Department) and clear off other residuals. Never use paint thinner!
- This will usually partially destroy intact edge adhesive areas.
- When removing, it is important to wipe off the adhesive area of the adhesive tape with a lint-free disposable cloth. (e.g. Kimtex blue, see BMW Parts Department)
- Carefully wipe off the adhesive areas.

Note:

Use necessary cotton- or fluff-free paper towel once only.

When using solvent: Observe the air drying time of > 1 minute.

Do not touch the adhesive area after cleaning.

b) Applying adhesive:

- Apply the adhesive evenly and very thinly to the gasket and then to the painted area.
- Observe the air drying time of 2-3 minutes.

Note:

Use the rubber profile adhesive (Terokal 2444 and thinner R)

Maximum mixture ratio:

Adhesive: Thinner = 3 : 1

Important:

Avoid contact with skin!

Do not apply adhesive to visible painted surfaces.

c) Pressing on rubber seal:

- Press down gasket using contact pressure (forced pressure not necessary) for at least 1 minute.

Important:

Load can only be applied to the bond after a period of 2 minutes. This waiting time is absolutely essential.

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2.2 Larger defects (mechanical damage and larger separations of seal)

- Complete replacement of rubber seal necessary

a) Peeling off damaged rubber seal:

- Beginning at the stop, the gasket with the adhesive tape is slowly separated from the paint.

The gasket is slowly pulled off at an angle of approx. 20° while applying constant force.

Pay attention to the constriction of the adhesive tape.

Note:

Make sure the connection between adhesive tape and gasket is retained.

When the adhesive tape separates from the gasket, the adhesive tape remaining on the paint must be fully separated at one location by approx. 10 mm until it is easy to grip.

Pull off the adhesive tape by pulling strongly at an angle of approx. 20°.

When existing gaskets are being peeled off with a hot air blower: Do not damage paintwork.

Do not detach rubber-adhesive tape connection if at all possible.

b) Cleaning bonding surface:

- Soak and wipe away adhesive tape left overs with a single-use towel fully soaked in adhesive cleaner (see BMW Parts Department).

Wear protective gloves.

- Before performing a new bond, degrease and clear away other residuals from the entire adhesive area with cleaning agent (cleaning agent R2; see BMW Parts Department). Never use paint thinner!
- Carefully wipe off the adhesive area.

Note:

Use necessary cotton- or fluff-free paper towel once only.

When using solvent: Observe the air drying time of > 2 minutes.

Do not touch the adhesive area after cleaning.

c) Prepare gasket:

d) Detaching protective film from bonding surface:

- Pull off the protective film off of the new gasket by approx. 15 cm using the tab.

Important:

Once the protective film has been removed, do not under any circumstances touch the exposed bonding surface.

e) Applying rubber seal:

- Attach gasket on roof aperture edge beginning at rear centre. Use upper lip as reference edge.

Press on the gasket by hand while pulling off the liner at the same time.

Compress the gasket the corners; never stretch it. (critical area)

Note:

If positioned incorrectly, the gasket can still be pulled off, repositioned and pressed on again.

Always ensure that you do not touch the bonding surface with your fingers or contaminate it in any way.

f) Establishing sealing

joint:

- Where the beginning and end meet, a mark is created from pressing the loose end onto the beginning of the gasket.

Cut off the gasket vertically along the marked line (use sharp knife or special scissors) and press in place.

- Visually check the pre-bonded gasket.

Note:

Small areas of gasket can remain stuck to adhesive tape of loose end.

g) Pressing on gasket:

- Press on the gasket with the hand roller
- Adhesive tape width up to 5 mm Contact pressure approx. 5 N
- Adhesive tape width up to 10 mm Contact pressure approx. 10 N

**Slide/tilt sunroof
gasket only:**

- Press gasket down firmly with a hand roller. Contact pressure ≥ 70 N.

Note:

Firm thumb pressure has approx. 30 N/cm^2

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3. Checking rubber seal

- Check the bonded gaskets for correct positioning and perfect adhesion. The bonding can be checked by pressing back the sealing lip.
- The force required to peel off the gasket immediately after bonding must be greater than 10 N/cm.