



APPLICATION INSTRUCTIONS

SOUDATIGHT SP

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Soudatight SP a high-quality water-based polymer paste which, after drying, forms a seamless, airtight and vapour retardant elastic membrane.



1. PURPOSE

The purpose of this document is to establish typical guidelines for the application of Soudatight SP. The techniques involved may require modifications to adjust to jobsite conditions. Always consult the Technical Data Sheet and the Safety Data Sheet for the latest information prior to application. Consult your local Soudal Sales Representative or Soudal Technical Services for specific design requirements.

2. APPLICATION AREA

For airtight and vapour retardant finishing of:

- Wall-floor connections
- Wall-ceiling connections
- Wall-wall connections
- Surfaces (no roof applications)
- Timber frame constructions
- Window connections:
 - inside inner leaf (reveal area)
 - outside inner leaf (prior to application of the facade insulation)

3. TOOLS AND MATERIALS

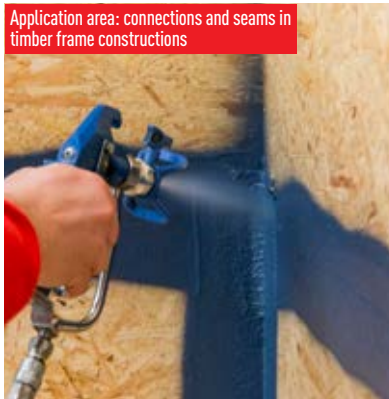
- Soudatight SP – 11 kg or 16 kg bucket
- Airless sprayer:
 - TexSpray Mark ProContractor series
- Sprayer accessories:
 - Gun, filter (30 mesh), hoses, spray tips 217, 519
- Soudatight LQ – 4,5 kg bucket & flat paint brush (=additionally) (cfr. application instructions Soudatight LQ)
- Masking tape
- Soudal Surface Cleaner
- Hand brush / vacuum cleaner
- Cutter knife
- Trowel
- Soudal Flexifoam, Soudal Soudatextile, mortar (for gap-filling)
- Wet film thickness gauge
- Surface temperature meter
- Handheld paddle mixer or stirrer
- Access to water and empty buckets (for cleaning)
- Personal protective equipment:
 - Safety glasses, gloves, respiratory protection*, safety shoes, helmet, protective clothing

*When spraying in poorly ventilated areas

Application area: floor-to-wall connections



Application area: connections and seams in timber frame constructions



Application area: window connections



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4. SUBSTRATE PREPARATION

Substrates should be clean and free of grease. Slightly moist or slightly dusty substrates are no problem. A primer is not required.

- 4.1 Remove standing water, loose particles, grease and dust from the substrates using a vacuum cleaner, hand brush or compressed air.
- 4.2 Close or fill all seams, gaps or holes between 2 and 5 mm using Soudatight LQ.



- 4.3 Close or fill all seams, gaps or holes > 5mm.
 - Closing by using Soudatextile (a non-woven fleece) in combination with Soudatight SP.
 - Filling by using Flexifoam (a non-shrink flexible PU-foam) or a non-shrink gap filling mortar.
- 4.4 Check the ambient and substrate temperature using a surface temperature meter, both must fall within the limits of the application temperature specified in the Technical Data Sheet.

Soudatight SP has a good adhesion to most common porous substrates in new construction and renovation works, as well as the materials used by window manufacturers such as PVC, aluminium and wood. It has also a good adhesion to the SWS window tapes (remove liner if present) and is compatible with most EPDM and bitumen. It is not suitable for glass, PE, PP and PTFE. However, a preliminary adhesion test on every substrate is always recommended. Note that the drying time may increase onto non-porous substrates.



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5. OPERATION OF THE AIRLESS SPRAYER

The instructions below are only recommendations based on our own experience with the airless sprayer prescribed by us. Always consult the sprayer manufacturer's manual for the most accurate information about operating the sprayer.

5.1 Start-up the sprayer

- Thoroughly rinse the sprayer with water before use.
- Check the filter and clean if necessary.
- Place the fluid intake into the bucket Soudatight SP and place the drain tube into a waste bucket.
- Be sure the prime valve is in the 'PRIME' position and turn the on/off switch 'ON'.
- Increase the pressure control until the motor starts and pump the rinse water into an empty bucket. Allow Soudatight SP to circulate through the sprayer until product flows smoothly out the drain tube and turn the on/off switch 'OFF'.
- Hold the gun into an empty waste bucket, disengage the trigger lock, pull and hold the gun trigger.
- Turn the prime valve to the 'SPRAY' position and turn the on/off switch to 'ON'.



- Let the pump run until you see undiluted product come out of the gun. Then, turn the on/off switch to 'OFF' and release the gun trigger.
- Move the gun to the bucket Soudatight SP, pull the gun trigger, turn the on/off switch to 'ON' and let the pump run for about 20 seconds.
- Release the trigger and allow the sprayer to build pressure.
- Engage the trigger lock, screw the tip guard + spray tip onto the gun and tighten.
- Adjust the pressure of the pump according to the application and the spray tip:
 - Detailed applications (e.g. window connections) with spray tip 217 at 80 – 120 bar
 - Surface applications with spray tip 521 at 120-170 bar
- Set the pressure so that a uniform, streak-free spray pattern is created: no heavy edges (tails) or overspray.

5.2 Cleaning the sprayer

- Remove the spray tip and tip guard from the gun.
- Take the fluid intake and drain tube out of the bucket of Soudatight and wipe off any excess product on the outside.
- Place the fluid intake into a bucket of water and place the drain tube into a waste bucket.
- Turn the prime valve to 'SPRAY' with the gun pointed into the Soudatight SP bucket, pull the trigger and then turn the on/off switch to 'ON' in order to recover as much good product as possible.
- Increase the pressure, when the Soudatight SP flow ends and water appears from the gun, turn the on/off switch to 'OFF' and release the trigger.



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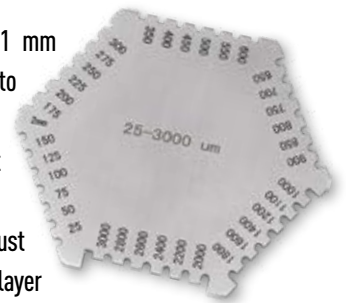
- Move the gun to the waste bucket, pull the trigger and then turn the on/off switch to 'ON'.
- Continue flushing until clear water appears. Turn the on/off switch to 'OFF' and release the trigger.
- Turn the prime valve to the 'PRIME' position and turn the on/off switch to 'ON'.
- Allow water to circulate until the water coming out of the drain tube is clear, then turn the on/off switch to 'OFF'.
- Turn the prime valve to the 'SPRAY' position and turn the on/off switch to 'ON'.
- Trigger the gun into the waste bucket to purge the hose. Flush the system with at least 4 buckets of water and turn the on/off switch to 'OFF'.
- Disconnect the power cord, remove filters from sprayer (and gun).
- Check and clean filters, spray tips and tip guard.

6. APPLICATION PROCEDURE

- 6.1 It is strongly recommended that Soudatight SP is at room temperature before use, otherwise its processing properties may be adversely affected.
- 6.2 Stir Soudatight SP well before use, using a handheld paddle mixer at low speed. Do not dilute with water or solvents.
- 6.3 Soudatight SP is applied directly from the packaging onto the surface using airless or air-assisted spray equipment. The choice of sprayer, pressure, gun and spray tip depends on the application.



- 6.4 Start-up the sprayer (see chapter 5.1) and set the pressure of the pump according to the application and the spray tip:
 - Detailed applications (window connections) with spray tip 217 at 80 – 120 bar
 - Surface applications with spray tip 519 at 100-150 bar
- 6.5 Spray at a distance of approx. 20 cm from the substrate at a 90° angle to minimize overspray.
- 6.6 Apply the airtightness paste undiluted and evenly in several layers (at least 2) on the substrate to a layer thickness of minimum 1 mm and maximum 3 mm. For the best possible coverage, the second coat is applied under a different angle.
 - For window connections this means one coat under a left angle and the second coat under a right angle.
 - For surface applications this means one coat horizontally and the second coat vertically (so crosswise).Spraying in several layers can be done without a drying break up to 1 mm. From a layer thickness of 1 mm and more it is recommended to apply the following layer only after skin formation occurs at the first layer.
- 6.7 The application thickness must be measured wet for each layer and at various points using a wet film thickness gauge.



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- 6.8** For window applications, ensure that the airtightness paste forms a seamless membrane of at least 3 mm overlap on the window frame, over the flexible foam to ± 5 cm on the reveal area of the structural work. The use of masking tape (on the window frame) is recommended. This should, however, be removed shortly after the application of Soudatight SP, before drying.



- 6.9** For wall-to-floor connections, apply the airtightness paste sufficiently high (above the water barrier) to guarantee an overlap with the plaster.
- 6.10** For other connections, ensure that Soudatight SP forms a seamless membrane over the joint with a minimum width of 3 cm on both sides of the joint. Also check chapter 7: Specific connections.
- 6.11** Soudatight SP Black will change colour, from dark blue to black, during the drying process. When black the product is dry and ready for further finishing. Soudatight SP White shows no significant colour change during the drying process, therefore take sufficient drying time (> 48 h) into account depending on environmental factors (such as temperature, moisture and type of substrates).
- 6.12** After drying, Soudatight SP can be plastered, painted and taped directly. The finishing must be done within the time limit specified in the Technical Data Sheet due to its limited UV-resistance.

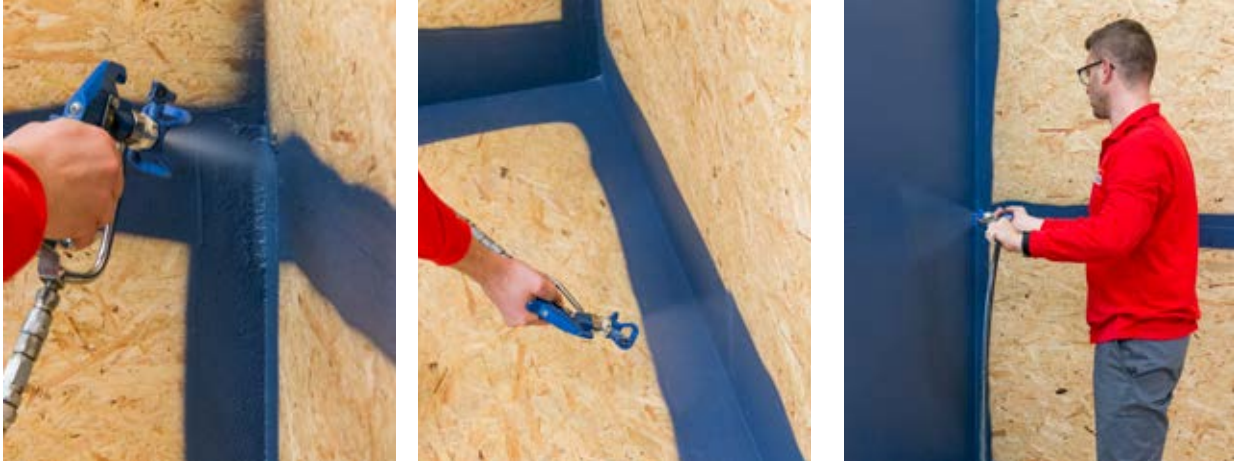
- 6.13** Before completely dried, Soudatight SP can be removed from substrates and tools with water. Once dried, Soudatight SP must be removed mechanically, this is why the airless sprayer should be thoroughly cleaned with water immediately after spraying.
- 6.14** Check chapter 5.2 Cleaning the sprayer.



7. SPECIFIC CONNECTIONS

- 7.1** Connection with (finished) membranes or films, e.g. vapour retarder film:
- Check whether the edges of the membrane are firmly fixed. If this is not the case, this must be done thoroughly by means of an adhesive, tape or mechanical fastening. (Please consult the application instructions of the membrane manufacturer).
 - If Soudatight SP adheres well to the membrane (or mounting tape), it can be applied directly. Ensure an overlap of at least 5 cm.
 - If Soudatight SP does not adhere well to the membrane (or mounting tape), a suitable self-adhesive tape should be placed on the edge of the membrane/film. Soudatight SP is then applied on top of the tape.
- 7.2** Connection with engineered wooden boards or wooden beams:
- Check for seams, gaps or holes in the connection area with the engineered wooden boards or beams. If there are any, act according to chapter 4.

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■ If no or little movement is expected, e.g. between 2 wooden boards, Soudatight SP can be applied directly to the wooden boards.

■ If the connection is made between concrete or masonry structures and timber frame structures that are subject to shrinkage/expansion or other movements, a stress-relief loop has to be made using Soudatextile (in conjunction with Soudatight SP) or a suitable (self-adhesive) tape. Soudatight SP is then applied on top of this tape.

7.3 Dilatation or expansion joints:

■ A dilatation or expansion joint should be sealed with a suitable sealant.

Consult the Soudal Website or your local Soudal Sales Representative for further information.

■ If Soudatight SP is to be applied over the dilatation or expansion joint, a stress-relief loop has to be made using Soudatextile (in conjunction with Soudatight SP) or a suitable (self-adhesive) tape. Soudatight SP is then applied on top of this tape.

8. RESTRICTIONS

8.1 Soudatight SP is not suitable for dilatation or expansion joints, unless in combination with Soudatextile.

8.2 Do not use in applications where continuous water immersion is possible.

8.3 Soudatight SP should not be diluted.

8.4 Avoid contact with any type of liquid during the drying process.

8.5 Close the lid of the bucket immediately after use (also during breaks).

8.6 After curing and trimming of Flexifoam, Soudatight SP can immediately be applied, whereas for other PU foams it's necessary to wait 24 to 48 h after trimming before applying Soudatight SP.

8.7 Limited UV-resistant (cfr. Technical Data Sheet).

9. LIABILITY

These application instructions replace all previous versions. The directives contained in this document are the result of our experiments and our experience and have been submitted in good faith. Because of the diversity of the materials and substrates and the great number of possible applications which are out of our control, we cannot accept any responsibility for the results obtained. Since the design of a construction detail, the quality of the substrate and processing conditions are beyond our control, no liability under this publication is accepted. In every case it is recommended to carry out preliminary experiments. Soudal reserves the right to modify products without prior notice.



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SODAL

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SODAL NV
EVERDONGENLAAN 18-20
B-2300 TURNHOUT
TEL.: +32 (0)14 42 42 31
FAX: +32 (0)14 42 65 14
EMAIL: SALES@SODAL.COM
WWW.SODAL.COM