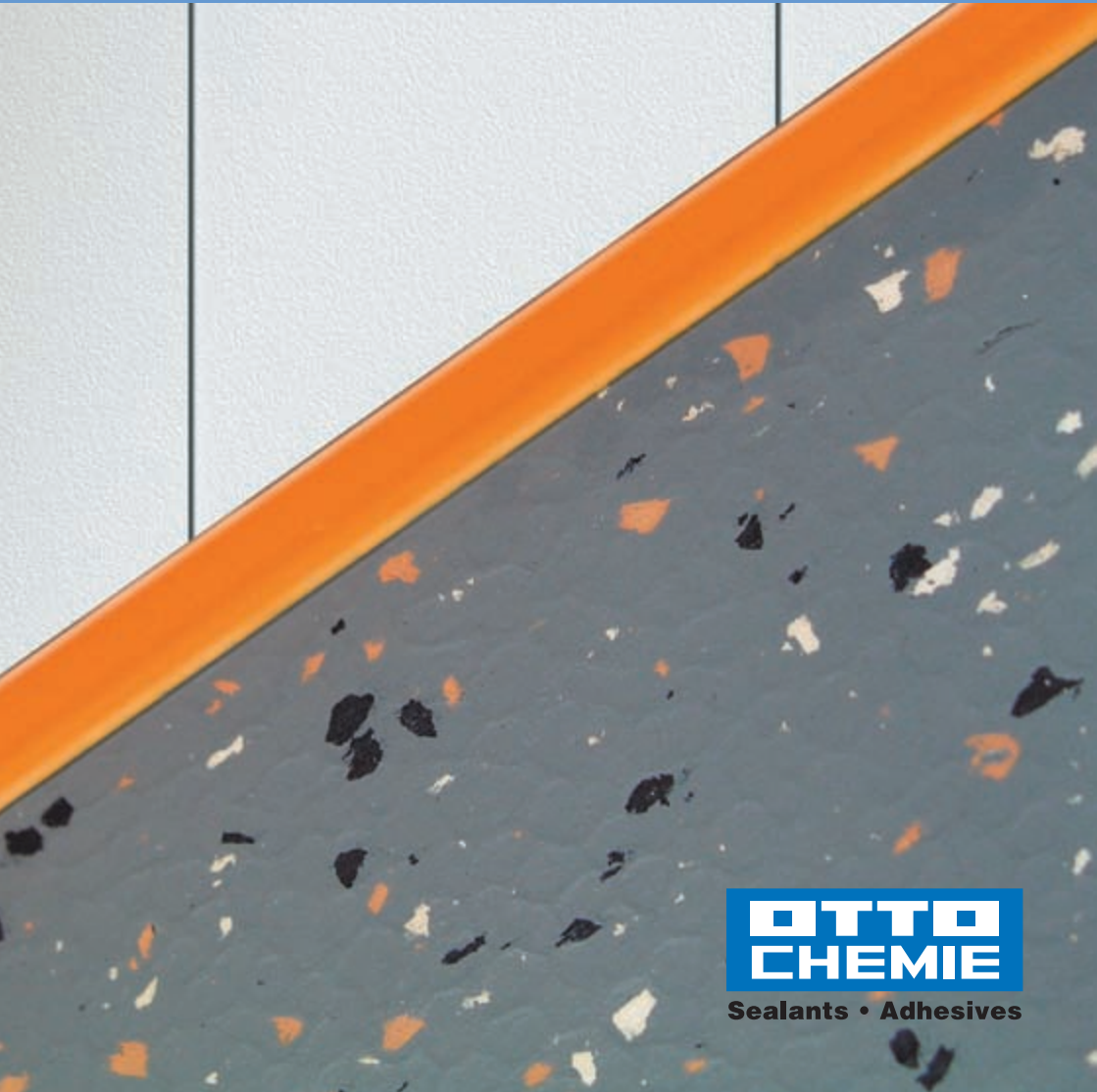


# How to perfectly seal floor coverings





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## **Preface**

Only very few people usually walk on natural forest or meadow floors these days. Most of us are used to substrates such as tar, asphalt or stone outside, and PVC, carpet or concrete inside buildings. This applies both to private areas as well as to commercial-use buildings.

The buildings' structure and floors, however, do need to be protected from water, from mechanical influences or chemical stress. Special hygiene demands are also made of floors, such as in dairies, abattoirs or commercial kitchens. The joints in these high-stress areas need very special attention, as the sealing of the structures against harmful effects is of the utmost importance.

## Chemical stress for floors and walls

In areas requiring high hygiene standards, such as in dairies, abattoirs, commercial kitchens or food and drinks factories, cleaning of the entire area is done with highly effective cleaning chemicals and high-pressure cleaners.

Not only the floor and wall covering, but also the grouting must withstand these stresses.

**OTTOSEAL® S34** is very chemical-resistant and is suitable for mechanical cleaning with high-pressure water. When working with high-pressure cleaners we recommend maintaining at least a 50 cm distance between the spray nozzle and the sealant. Joints with high chemical stress are service joints according to DIN 52460.

<b>OTTOSEAL® S34 is resistant to the following chemicals:</b>	
- Acetone	temporarily resistant (72 hours)
- Ammonia (25%)	resistant
- Petrol	not resistant
- Drilling fluid Mobilmet 151 pure	temporarily resistant (72 hours)
- Drilling fluid Mobilmet 151 : Water	
1 : 3	resistant
1 : 5	resistant
- Brake fluid DOT 4	temporarily resistant (72 hours)
- Diesel fuel	not resistant
- Dioctylphtalat DOP	resistant
- Acetic acid (10%)	resistant
- Acetic acid (25%)	resistant
- Ethylalcohol	resistant
- Ethylene glycole	resistant
- Formalin (10%)	resistant
- Gear oil EP SAE 80W	temporarily resistant (72 hours)
- Cold degreasing agent ARAL	not resistant
- Cooler Antifreeze ARAL pure	resistant
- Cooler Antifreeze ARAL : Water	
1 : 2 (-20°C)	resistant
1 : 1,5 (-27°C)	resistant
1 : 1 (-40°C)	resistant
- Sea water	resistant
- Methanol	resistant
- Lactic acid (10%)	resistant
- Motor oil ARAL SAE 15W-40	temporarily resistant (72 hours)
- Sodium chloride (fat solution)	resistant
- Caustic soda solution (10%)	resistant
- Caustic soda solution (20%)	resistant
- Caustic soda solution (50%)	resistant
- Nitrodilution	not resistant
- Hydrochloric acid (10%)	temporarily resistant (72 hours)
- Citric acid (50%)	resistant

### Mechanically stressed joints

In storage and production halls, courtyards and parking decks, in underground garages or repair shops – anywhere that forklifts or trucks drive on floors, the joints are exposed to especially high stress.

To accommodate the resulting movements, the joints between the components must have a minimum width of 10 mm. The thickness of the sealant should be limited by back-filling the joints to a maximum of 15 mm. Joints over 15 mm width that are walked and driven on should be covered with protective plates or T-sections and thus protected against mechanical damage to the sealant.

Joint spacing	Joint <b>width</b> in <b>interiors</b>	Joint <b>depth</b> in <b>interiors</b>
2,0 m	10-12 mm	10 mm
4,0 m	10-12 mm	10 mm
6,0 m	14-16 mm	12 mm

Joint spacing	Joint <b>width</b> in <b>exteriors</b>	Joint <b>depth</b> in <b>exteriors</b>
2,0 m	10-12 mm	10 mm
3,0 m	14-16 mm	12 mm
4,0 m	18-20 mm	15 mm

**OTTOSEAL® S34** is especially suitable for busy areas due to its resistance to mechanical cleaning with high-pressure water and through its high notch and tear resistance.

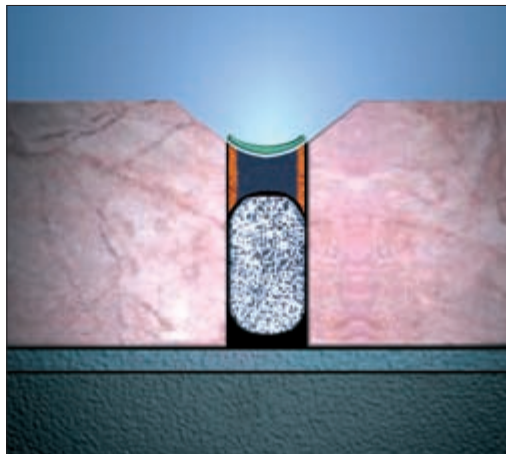


Image: Busy joint

## 2-component seal of mechanically stressed floor joints

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The 2-component **OTTOCOLL® S610** system, used with a compressed air gun made from side-by-side cartridges, is great for extremely fast sealing of highly mechanically stressed floor joints.



## Joints with tar, asphalt etc.

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Jointing with such difficult substrates requires detailed clarification of all parameters. This is why we ask you to contact our application technology department in the event of such challenges in order to clarify the conditions and feasibility. We recommend **OTTOSEAL® S54** for the jointing of mastic asphalt screed.

## PVC, rubber and linoleum floors in public areas

PVC and rubber floors are often used in public areas. In addition to their easy-cleaning properties, the cost benefits as opposed to stone floors are also a decision-making factor; and last but not least, the wide range of colours is a reason for choosing such surfaces.

With **OTTOSEAL® S 51**, we offer a silicone in 36 colours that meets fire safety requirements with 'flame resistant' testing and monitoring under DIN 4102-B1 and for which there is a 'general buildings testing certificate' (no. P-HFM B6103).

When jointing linoleum floor coverings, the smoothing tool should only be wet with a little soapy solution or used dry. Soapy solution residues must be removed before the surface

dries to avoid staining. During the application and curing of **OTTOSEAL® S 51**, please ensure good ventilation. After it is completely cured, **OTTOSEAL® S 51** is odourless and non-toxic. Amine-crosslinking sealants can lead to the yellowing of certain alkyd paints and various plastics etc., which is why we always recommend test patches.



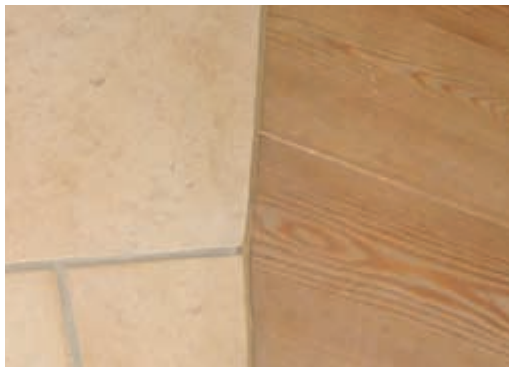
## Jointing laminates, cork and parquet flooring

Particularly in private areas, wooden and laminate floors are very popular alternatives to carpets or stone and tile floors. The expansion and connection joints, such as those between floors and baseboards or between flooring and door thresholds, must be sealed after laying in order to protect the floor from water ingress, which can potentially occur during cleaning.

For oiled surfaces as well as parquet containing oil, compatibility problems can occur with the sealant. We therefore ask you to carry out patch tests. **OTTOSEAL® Parkett** is ready-to-use. The sealant mass should be stripped within 5 minutes. The curing time is approx. 2-14 days depending on joint thickness.

**OTTOSEAL® Parkett** can be sanded and painted after curing. The sealant changes colour during curing/drying. The final colour is achieved after complete curing.

Please note: For floating installations, please ensure that the expansion joints remain free. Always follow the manufacturer's instructions.



**OTTOSEAL® Parkett****LEED®****The silicone-free joint plastic parquet joint compound for wooden laminate and cork floors****Characteristics:**

- 1-component acrylate joint compound
- Silicone-free
- Fast-drying
- Grindable and paintable after curing
- Protects against water entering into the surface, e.g. when cleaning
- Store and transport frost-free

**Fields of application:**

- Joint compound for parquet, laminate floors, wooden floor boards and cork floors
- Joint compound for floor and skirting boards, door sills and other structural components
- Joint compound for repair joints on wood

**Standards and tests:**

- "Highly recommendable non-hazardous building product" according to building material list (TOXPROOF) of the TÜV Rheinland, Germany
- Suitable for applications according to IVD instruction sheet no. 8 (IVD = German industry association sealants)
- Conform to LEED® IEQ-credits 4.1 (Indoor Environmental Quality) adhesives and sealants
- Fulfills DGNB-characteristics 06 (DGNB e.V. = German Organisation for sustainable building)
- French VOC-emission class A+
- Certified according to GOS

**OTTOSEAL® S 34****LEED®****The floor joint silicone****Characteristics:**

- Neutral-curing 1-component silicone sealant
- Very high mechanical strength, resistance to notches, tension and tearing
- Excellent chemical resistance
- Extraordinary long-term temperature resistance up to +265 °C
- Excellent weathering, ageing and UV-resistance
- Non-corrosive
- For areas, which are loaded by traffic, e.g. fork-lift truck traffic (considering IVD instruction sheet no. 1) (IVD = German industry association sealants)
- Resistant to stream-jet cleaning

**Fields of application:**

- Sealing of chemically heavily loaded floor and connecting joints, e.g. in dairies, abattoirs, beverage and food production plants, canteen kitchens, etc.
- Sealing of floor joints subject to high mechanical stress, e.g. in storage and production halls, yard areas, parking decks, underground car parks, workshops, car washes etc.

**Standards and tests:**

- Suitable for applications according to IVD instruction sheet no. 1+19-1+21 (IVD = German industry association sealants)
- Conform to LEED® IEQ-credits 4.1 (Indoor Environmental Quality) adhesives and sealants
- Fulfills DGNB-characteristics 06 (DGNB e.V. = German Organisation for sustainable building)
- French VOC-emission class A+
- Certified according to GOS



**OTTOSEAL® S51****LEED®****The silicone for PVC, rubber and linoleum floors****Characteristics:**

- 1-component silicone sealant based on a modified amine system
- Excellent weathering, ageing and UV-resistance
- Colour-matched with PVC, rubber and linoleum floor coverings
- Flame resistant

**Fields of application:**

- Joints in rubber floor
- Joints in linoleum floors
- Joints in PVC floors
- Equalizing sealing of similar and dissimilar working materials such as glass, stainless steel, aluminium and some plastics

**Standards and tests:**

- Tested and monitored according to DIN 4102-B1 - flame resistant between solid mineral constructional elements (Institute for Wood Research, Technical University Munich, Germany)
- General building inspection certificate
- Tested according to DIN EN ISO 4589-2:1999 Plastics - Definition of the fire-behaviour due to the oxygen index (Bodycote Warringtonfire)
- Tested for applications in the cleanroom sector by the Institute for Hygiene Gelsenkirchen, Germany
- Conform to LEED® IEQ-credits 4.1 (Indoor Environmental Quality) adhesives and sealants
- Fulfills DGNB-characteristics 06 (DGNB e.V. = German Organisation for sustainable building)
- French VOC-emission class A+
- Certified according to GOS

**OTTOSEAL® S54****LEED®****The special silicone B1****Characteristics:**

- 1-component silicone sealant based on a modified amine system
- Flame resistant
- Excellent weathering, ageing and UV-resistance

**Fields of application:**

- Joints in melted asphalt screeds
- Bonding of EPDM and APTK profiles
- Bonding of jointing tapes based on polysulphide
- Equalizing sealing of similar and dissimilar working materials such as glass, stainless steel, aluminium and some plastics
- Sealing of joints on difficult adhesive substrates, e.g. asphalt, tar etc. Please contact our technical service department for details

**Standards and tests:**

- Tested and monitored according to DIN 4102-B1 - flame resistant between solid mineral constructional elements (Institute for Wood Research, Technical University Munich, Germany)
- General building inspection certificate (abP) with the number P-HFM 024202
- Tested according to DIN EN ISO 4589-2:1999 Plastics - Definition of the fire-behaviour due to the oxygen index (Bodycote warringtonfire)
- Conform to LEED® IEQ-credits 4.1 (Indoor Environmental Quality) adhesives and sealants
- Fulfills DGNB-characteristics 06 (DGNB e.V. = German Organisation for sustainable building)
- French VOC-emission class A+
- Certified according to GOS

## OTTOCOLL® S 610

### The 2-component special silicone sealant



#### Characteristics:

- Neutral, condensation-curing 2-component silicone adhesive and sealant based on alcoxy
- Excellent weathering, ageing and UV-resistance
- High resistance to notches, tension and tearing
- Excellent adhesion on many substrates, partly in combination with primer
- Non-corrosive
- High expansion-tension value guarantees high stability bonding
- Reduced cycle times - due to the fast curing bonded parts can be further processed extremely soon
- Fast curing even in thick layers
- Low odour

#### Fields of application:

- Elastic bonding and sealing of various materials, e. g. glass, wood, metal and plastics
- Elastic bonding of mirrors on ceramic, glass, plastic, stainless steel, aluminium, wood, concrete etc.
- Also suitable as adhesive for acrylic glass mirrors (e. g. Plexiglas®)
- Not suitable for the structural bonding of structural glazing units

#### Standards and tests:

- Suitable for applications according to IVD instruction sheet no. 30 (IVD = German industry association sealants)
- French VOC-emission class A+
- Certified according to GOS

## Compressed Air Gun P 490 DP

### Compressed-air gun for 2-component products

#### Characteristics:

- Compressed air gun for the use of side-by-side cartridges 490 ml.



## Compressed Air Gun P 495 DP

### Compressed-air gun for 2-component products

#### Characteristics:

- Compressed air gun for the use of side-by-side cartridges 490 ml. Special pistol for increased product discharge





### OTTOCORD PE-B2 back up foam rod

**Properties:** Extruded back-filling poly-urethane (PE) material. For interior and exterior applications. With closed cells according to DIN 18540. Water repellent. Colour: anthracite.  
Corresponds to building material class B2 (normal flammability).

**Applications:** For pre-filling and pre-plugging interior and exterior joints. For tenders in compliance with DIN 18540.



### OTTO Cleaner

**Properties:** Very good cleansing and degreasing effect. No airing necessary. Dries fast and free of residue.

**Applications:** Cleaning glass, metals and some plastics, such as PVC and polyester.

**Standards and tests:**  
Certified according to GOS



### OTTO Primer

**Properties:** Primer specially made to be used with OTTO sealants.

**Applications:** Improving the adhesive properties of OTTO silicone sealants to the relevant substrates.

**Standards and tests:**  
Certified according to GOS



### OTTO Fugenboy

Smoothing tool made of superior plastics for professional joint design.  
Set of three, small:  
5 mm, 8 mm, round.  
Set of three, big:  
11 mm, 14 mm and 17 mm.



### OTTO Smoothing agent

**Properties:** Gentle to skin thanks to dermatologically-tested active substances. Dilutable with water. Maintains the shine of the sealants's surface.

**Applications:** For smoothing the surfaces of silicone, polyurethane and MS hybrid polymer sealants.

**Note:** For marble and other natural stones, please use the OTTO marble-silicone-smoothing agent.



### Hand-operated Gun H37



Durable hand-operated gun made of highly impact-resistant plastic, very light-weighted, with smooth plunger and positioning sleeve for 290/300/310 ml cartridges. Automatic pressure relief.

### OTTO Anti-Mildew Spray

**Properties:** Removes mould, fungus, algae and moss reliably and permanently. Glazings, paints, varnishes, masonry, plastics and wallpapers are not affected. It has a disinfectant effect and eliminates odours.

**Applications:** Special spray against mildew, fungus, moss and algae growth. Apply to joints between tiles, elastic joints and walls in living rooms, kitchens, bathrooms and cellars.



Metres per 300/310 ml cartridge								
		Joint width [mm]						
		5	7	10	12	15	20	25
Joint depth [mm]	5	12	8	6				
	7		6	4	3			
	10			3	2,5	2,0	1,5	
	12				2,1	1,7	1,2	1,0
	15					1,3	1,0	0,8

Metres per 400 ml aluminium foil bag								
		Joint width [mm]						
		5	7	10	12	15	20	25
Joint depth [mm]	5	15	10	8				
	7		8	5	4			
	10			4	3	2,6	2,0	
	12				2,7	2,2	1,6	1,3
	15					1,7	1,3	1,0

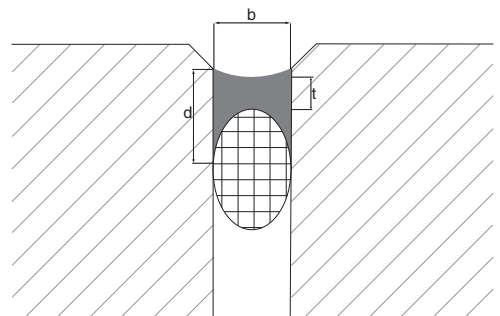
Metres per 580 ml aluminium foil bag								
		Joint width [mm]						
		5	7	10	12	15	20	25
Joint depth [mm]	5	23	15	11				
	7		11	7	6			
	10			6	5	4	3	
	12				4	3	2,4	2,0
	15					2,5	1,9	1,4

**Note:** These values are approximate and serve as a rough guide for right-angled joints. The depth of the joints is measured to the rear of the profile.

**General valid** joint dimension

Joint width b in relation of joint depth t [mm]					
b	10-15	15-20	20-25	25-30	30-35
t	8±2	10±2	12±2	15±3	15±3

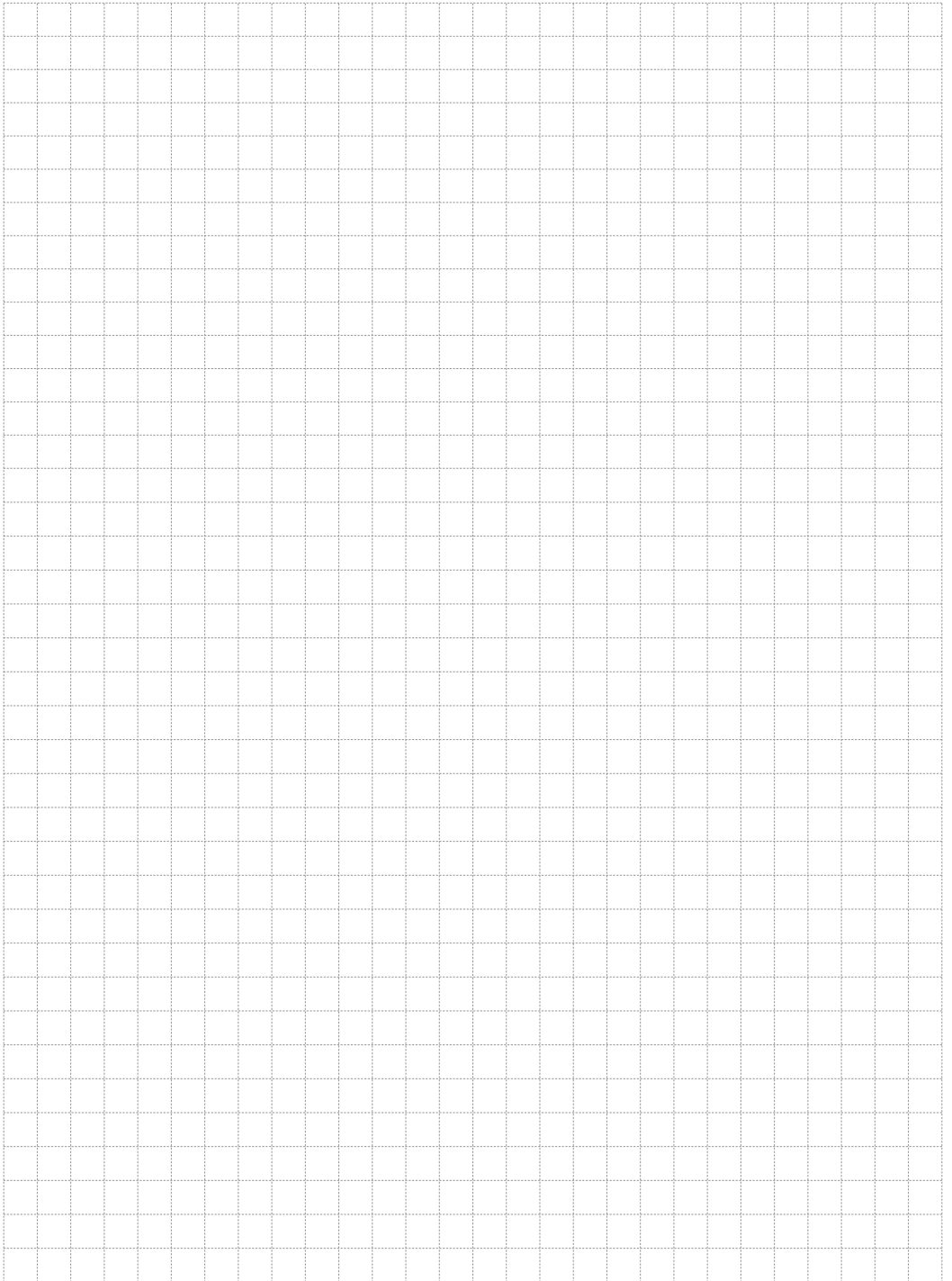
Source: Industrieverband Dichtstoffe e.V. / HS PR.  
 Additional information to the IVD's information leaflets under [www.ivd-ev.de](http://www.ivd-ev.de)

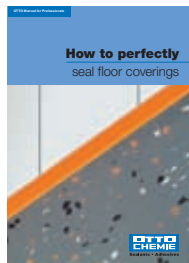


The rule of thumb for calculating the joint dimension is as follows:

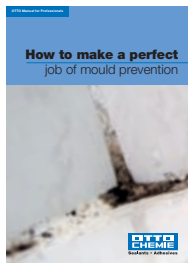
**Sealant depth (t) = 0,5 x joint width (b).**

The thickness of the sealant (d) equals 2/3 of the joint width (b).

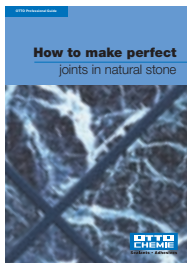




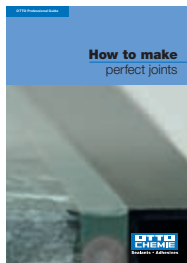
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Part n° 9999557



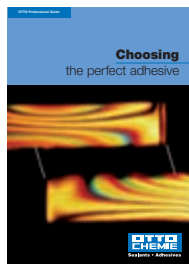
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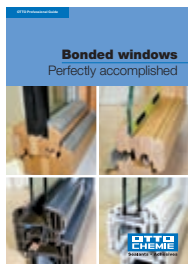
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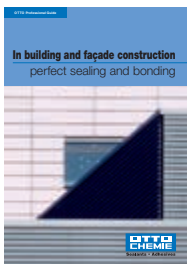
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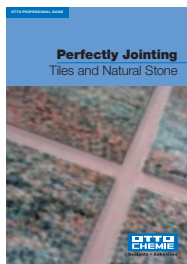
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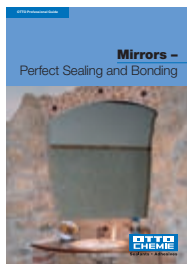
Part n° 9999574



Part n° 9999801



Part n° 9999711



Part n° 9999596

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Your specialised dealer:

In order to ensure a quick and correct handling of your orders we would like to ask you to send them by fax or e-mail. Thank you in advance for your cooperation.

#### **Notes:**

The information in the present document corresponds to the status quo on going to print, refer to the index. With a new edition this edition becomes invalid. Due to the many possible influences during and after application, the customer always has to carry out trials first. Please observe the respective technical data sheet! This information is available on the Internet at [www.otto-chemie.com](http://www.otto-chemie.com). Errors and typographical errors are excepted.

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