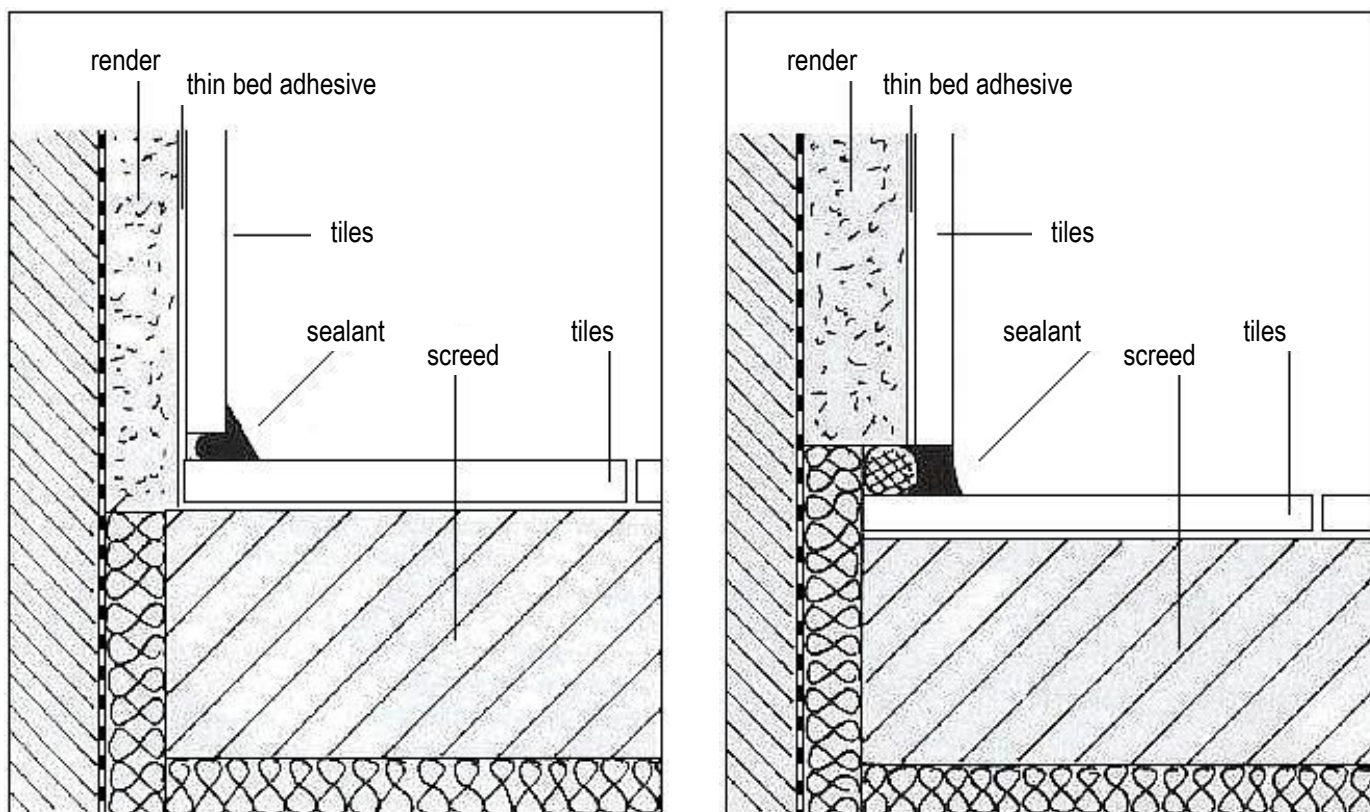


The need to employ round foam profiles as a beading material in the sealing of expansion joints arises automatically if the joints are properly executed.

When executing the joints, care needs to be taken in ensuring that the joints are of sufficiently generous dimensions to avoid triangular chamfers. Where such triangular chamfers occur, the sealant is severely limited in its movements due to the triangular profile as the movement almost always terminates in the triangular tip of the joint.

In stark contrast in a wider joint of rectangular execution the sealant can move freely, thereby distributing correction movements more or less evenly throughout the joint area without any limitation. A precondition of this is the insertion of beading material in the joint. The purpose of this material is to limit the rear of the area of the joint which is filled with sealant and to prevent the sealant coming into contact with the back of the joint and adhering to it. If this was not done, the sealant would be severely restricted in its capacity for movement, as in the case of the triangular chamfer and cracking at the joint edges would then ensue.

The comparison of these types of seal in the drawings should make this clear.



**connection joint too narrow,
resulting in triangular chamfer**

connection joint properly executed

A distinction is drawn between open-cell and closed-cell round foam profiles. Open-cell round foam profiles such as PUR and HS are easier to process as they can take greater compression. Therefore the open-cell round profiles have, in relation to joint dimensions, a wider range of application than closed-cell round profiles such as PE:

	PUR / HS	PE
Diameters	Suitable for beading on joint widths of	
6 mm	-	5 mm approx.
8 mm	-	6 – 7 mm
10 mm	5 – 9 mm	8 – 9 mm
13 mm	-	10 – 12 mm
15 mm	10 – 14 mm	12 – 14 mm

It can be seen that for beading of joints of widths of 5 – 14 mm, in the case of the open-cell profile PUR and HS, only two different diameters are needed, whereas for beading of the same joints with closed-cell material PE five different diameters are needed.

However, closed-cell round profiles have the advantage that they assimilate nearly no water and are not water-absorbent. If, therefore, a joint was to lose its sealing properties, then, if the joint had been filled with closed-cell material, only the sealant at the damaged spot would need to be removed, the joint to be dried and subsequently resealed without replacing the beading material.

With open-cell material the beading material in the damp area would also have to be replaced.

This advantage is really only of a theoretical nature, however, since in the case of a damaged joint where damp has penetrated, increasingly extensive repair work is normally needed because the surrounding construction materials, e.g. at the joint edges also absorb moisture.

This is why closed-cell beading material is only recommended on joints according to DIN 18 540, i.e. in the execution of external wall joints that are to be sealed with joint sealants. This standard only applies for external wall joints between components made from concrete cast on site and/or pre-cast dense concrete parts and from unrendered masonry and/or natural stone.

In other areas, e.g. in plumbing or window construction the use of open-cell beading material is fully permitted and is in fact state of the art.

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These product details replace all previous versions and are valid until a new version is issued, or until Dec. 31, 2024. Please request the latest version after Jan. 01, 2025.

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