

permaban *Wave*[®]

Frequently asked questions about our triple sine wave plate joint.



Why is the arris shaped in a sine wave?

The sine wave shape eliminates impact from vehicle wheels crossing the joint. Impact damage is a huge problem particularly in hard-working warehouse floors. It leaves building owners and operators with costly bills for premature floor and vehicle damage. Impact occurs when vehicles cross a straight joint at 90 degrees, and the wheels drop momentarily into the parallel gap between the two straight edges (creating a clattering sound). This cannot happen when the joint arris is shaped, like Wave, because there is nowhere for the wheels to drop. No impact means no damage to the vehicle and joint.

Why are the edges of the plate shaped too, but differently?

Plate joints often come with straight edges, even if the central arris is shaped. However, this introduces another problem: two additional straight joints, which potentially doubles the original problem! These straight joints will be subject to impact and will need to be monitored and maintained throughout the life of the floor. However, with Wave the edges are shaped to prevent this happening. The sine wave is a different shape to ensure that there is no risk of creating parallel edges which might result in impact.



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What's the purpose of the plate?

The plate firstly makes the joint much easier to finish – the curves mean it can be trowelled-in easily by hand. It also covers the structure of the joint beneath, which allows us to build strength and rigidity into the joint while keeping a smooth and attractive design on top. The plate also allows small variances in the floor level between the two sides to be accommodated.

Permaban Signature also prevents impact – which joint should I choose?

Permaban Signature has been a hugely successful product for the last six years, with thousands of metres installed worldwide. However, we know that Signature takes time to finish well on site; so Wave has been created to provide a no-impact joint that contractors will find easy to install and finish. This means that in most situations it is an ideal choice for both clients and installers.

Signature remains the best choice for applications where plates or strips might suffer operational damage – for example in waste management applications, where vehicles have continuous tracks or front buckets with prongs.

How easy is it to set the level accurately?

Because Wave is narrower than other plate joints, it is much easier to set the level accurately. On a wide plate, small variances in the level are amplified across the plate. With a narrow plate, it's easier to get it right quickly.

How does an installer ensure good concrete distribution beneath the plate?

Some plate joints can suffer from poor concrete compaction, because with wide top plates it's impossible to see underneath to check the concrete is correctly placed. Because Wave's top plate is narrow and shaped, it's much easier to get concrete fully under the plate, and to see underneath at the point where the plate curves. So, with Wave good concrete placement and compaction is assured, which means a more stable and durable joint installation. As with other joints, we recommend using a vibrating poker along the edge of the joint.

How easy is it to finish?

The curves mean that it's easy to finish the joint well with a trowel. The second side of the joint can be poured the next day and finished with a power trowel.

What sizes are available?

Wave incorporates an extension plate, which means one product covers a variety of sizes. This plate can be easily adjusted on site to the appropriate height. This means a single batch of product can be ordered, even if the job site has more than one slab depth. Also, any excess product can be saved and used on the next job, making it an economical choice. The extension plate accommodates slab depths from 150-200mm (fixed height joints are available to special order).

Can Wave be used in jointless and post-tensioned floors?

Wave is perfect for jointless floors. Post-tensioned floors need to be assessed on a case-by-case basis.

Is Wave available in stainless steel?

Wave is supplied in galvanised steel as standard - both the top plate and the body of the joint are galvanised. Wave can also be manufactured with a mild steel or Grade 304 stainless top plate to special order.

Can Wave be used on external slabs, or as an expansion joint?

Wave is supplied as a closed joint, with no pre-set joint gap, so has not been designed to be used as an expansion joint. Wave is supplied in galvanised finished as standard, so it can be used externally or in places likely to be exposed to water or the elements. The same is true where Wave is supplied with a stainless steel top plate.

What accessories are available?

A range of Ts, 4-ways and corners are being developed.

Can I grind across a Wave joint?

It may be possible to spot grind but wholesale grinding is not recommended.

Does Wave need a joint sealant?

It is rare that sealants would be required with Wave. Joint sealants are used to support the arris, prevent debris from entering, and to protect against high heels, etc, dropping into the gap – these are unlikely to be issues in the places where Wave is usually installed. The structure of the joint means that it's unlikely any debris would fall very far into the joint, so it can be easily cleaned.

How does Wave perform at intersections with saw cut joints?

Wave has been designed with continuous concrete ties, set down from the surface of the floor. This means it is firmly anchored into the slab along its full length, and there will be no flying ends or risk of unanchored sections becoming loose. Saw cuts should be run through the joint to allow the saw cuts to open without restriction.

Any other questions?

Call our technical team on +44 (0) 1752 895288