

Project Case Study: Primark Distribution Centre, Naas

Working against the clock, specialist flooring contractor KonFloor completed the new 16,000m² warehouse for Primark on time – thanks to Permaban's AlphaJoint 4010.

Primark's new warehouse at Tougher's Business Park was created as an extension to its existing operations at Naas, near Dublin, Ireland. The retailer, named the winner of the European Supply Chain Excellence Awards for 2010, naturally insisted on the highest standards for construction, to ensure its warehouse would deliver the durability and flexibility it required. Lapses in the construction timeline could not be allowed, and penalties would be incurred for late completion of the building.

Special considerations for the floor

The building was being constructed on a brown-field site with some unusual characteristics, which meant that certain special measures had to be taken to preserve the building's integrity. The entire structure was built on 2100 precast piles, driven 8m into the ground.

As a result the construction of the concrete slab needed careful consideration. Firstly, a DuPont™ Tyvek® breather membrane was used beneath the concrete for extra protection against air and water ingress. Then three layers of heavy A393 mesh were incorporated (as can be seen in the picture below right).

Furthermore, the floor had to be finished to FM2 (Special) standards, to accommodate the extensive racking in the building – which meant particular care had to be taken during the pour to ensure certain tolerances for flatness and levelness were achieved.

The importance of the construction joints

Due to the size of the building a scheme of work was created to divide the pour into nine bays. Armoured joints would be used as day joints, to create a boundary for the pour. The joints would open once the slab had cured, and would then protect the joint arrises from damage caused by the wheels of materials handling vehicle once the building was in service.

Extensive research went into the choice of the correct joint detail – and although this took some time it was imperative to get this right, to prevent potential costly problems with the floor once the building was brought into use.

Calling on Permaban's technical team for guidance, and working in conjunction with the engineer, the decision was made to install Permaban's AlphaJoint 4010. Proven in hundreds of buildings worldwide, AlphaJoint 4010 is a versatile armoured joint which protects construction joint arrises by using robust parallel steel strips.

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Project Key Facts

Project type	Distribution centre
Location	Naas, Co Kildare, Ireland
Products	AlphaJoint 4010, with preinstalled T-tape (930 metres) TD8 dowels Bespoke 4-way joints with T-tape

Client	Primark
Engineer	DBFL, Dublin
Main contractor	Bennetts Construction
Flooring contractor	KonFloor



AlphaJoint 4010 (pictured right) features shear studs and a rigid divider plate with additional concrete ties, for exceptional strength and rigidity - and with integrated TD8 plate dowels, efficient load transfer across the slab is assured.

Special features

An important time-saving aspect of AlphaJoint 4010 on this project was the pre-installed "T-tape" – a compressed foam, factory-fitted between the two sides of the joint, which would expand to fill the gap once the joint had opened. Adding this non-standard feature to the product meant that the joint did not need to be sealed after it had opened.

Permaban also created special 4-way intersections for the project with T-tape pre-installed (see right).



Saving time on site

Permaban was able to manufacture and despatch the special products within a few days, to help KonFloor meet the pressing schedule. Aided by the fact that AlphaJoint 4010 is so swift and straightforward to install, KonFloor was able to make up time on site. With increased manpower, the floor was completed in a mere 8 days. As a result the project was able to avoid incurring late completion penalties, the building being completed as planned in August 2011.

“Permaban’s technical help made all the difference on this job. They brought the right knowledge and experience and supported the engineers and our team on-site throughout. And the turnaround time on the products was just what we needed.”

Kevin O'Reilly, Director, KonFloor

