



# A steel fibre reinforced concrete slab on piles for Decathlon, Madrid

## Project overview >

Decathlon, the French sporting goods retailer continues to progress with its expansion policy and adds another logistics centre to the brand's impressive list of service facilities. The 30,500m<sup>2</sup> Decathlon facility was built in what is now considered to be one of Madrid's most advantageous industrial areas. Since it opened in 2015, Los Gavilanes logistic park has become a major centre for e-commerce businesses in Spain. Built to meet Decathlon's operational needs, the new facility connects with the road network that links Madrid with the rest of Spain. Los Gavilanes, has a total area of more than 2 million m<sup>2</sup>. Decathlon was one of the first companies to take advantage of this opportunity.

**Project:** Decathlon Getafe (Madrid)

**Location:** Polígono Industrial Los Gavilanes, Getafe (Madrid)

**Propiedad:** AXA

**Contractor:** OCA Construcciones y Proyectos S.A.

**Flooring Contractor:** Solei Building S.L.

**Surface:** 30,500m<sup>2</sup>

**Slab thickness:** 30cm

**Concrete class:** C30

**Dosage:** 40kg/m<sup>3</sup>

**Fibre type:** HE+ 1/60

**Central pile grid:** 4m x 4m

**Edge pile grid:** 4m x 2m; Prefabricated piles of 30cm and pile heads of 60cm x 60cm

“Our engineers provide the advice and technical support that you need, from the first stages of design to the implementation and realisation of your completed project. The right advice, the right system, the right solution.”

Aitor Osa Horcajo,  
ArcelorMittal Fibres

## The challenge >

Due to the low load bearing capacity of the soil and the generally adverse soil conditions at the construction site, the ArcelorMittal Fibres team proposed a steel fibre reinforced slab on piles solution. Compared to traditional reinforcement methods, the steel fibre reinforced slab on piles solution reduced the construction time considerably, savings on labour costs were also experienced.

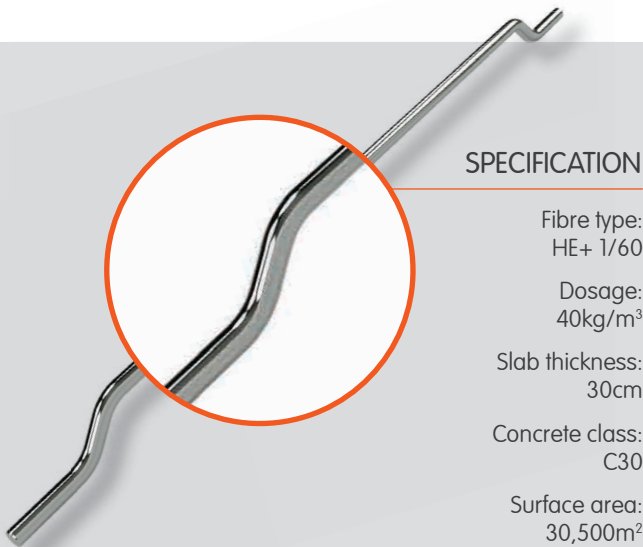


## The solution >

The function and performance requirements of different buildings vary considerably. It is therefore important to design for the specific requirement and location. Decathlon's facility demanded a floor that would meet the exceptionally high demands of a large online retail distributor. State of the art logistics equipment, variable static and dynamic loads, and a 'around the clock' use of the floor meant that our engineering team had to undertake a detailed study of all the parameters affecting the design of the structure. The team specified a solution that has met the demands of the facility and implemented the solution to the highest possible standards.

## The result >

The ArcelorMittal Fibres team consulted on a 30,500m<sup>2</sup>, 30cm deep slab on a 4m x 4m central pile grid with a 4m x 2m edge pile grid. The TAB®Structural system, reinforced with HE+ 1/60 fibres was implemented. Compared to the construction of traditional reinforced concrete slabs on piles, TAB®Structural proved to be a simple, efficient and very fast way to build. Using TAB®Structural, the construction process was simplified greatly due to the elimination of traditional rebar reinforcement. This not only saved time and cost, but it made the construction process safer for workers, delivering exceptionally high load bearing capacity, minimal shrinkage and excellent durability. High static and dynamic load bearing performance was achieved as well as resistance to high impact forces.



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