

PLANET BOUNCE Internal Power Floated Floor Slab

Corby, Northamptonshire, United Kingdom

Planet Bounce is an indoor Leisure Venue. ADFIL were asked to provide a Synthetic Macro Fibre solution for an Internal Power Floated Floor Slab for this facility. The Landlord required the floor slab to be of sufficient specification for future industrial use incase the steel framed building changed tenancy in the future. ADFIL liaised with the Client and Contractor to ensure the solution was fit for purpose and also gave site support during installation.



Project owner
Planet Bounce

Product
DURUS S400

Function
Polypropylene macro fibres were used to replace conventional steel fabric for ease of installation and reduce construction time, whilst still permitting future industrial use.

Contractor
JWF Commercial Solutions

Volume
360m³ C32/40 Concrete
1500kg DURUS S400

Challenge

This project required an original specification for a ground bearing power floated internal reinforced concrete floor to be redesigned to incorporate polypropylene macro fibres for ease of installation and reduced construction time.

The specification of the floor slab needed to be suitable for industrial use incase the tenancy of the facility changed in the future, resulting in heavier loadings.

Solution

- ADFIL were provided with design loadings and specification information from the Client to allow a Professionally Indemnified Synthetic Macro Fibre Solution to be calculated. This was then accepted by the Client and approved by the Consulting Structural Engineer.
- The capacity of the internal floor to be suitable for industrial use was maintained by the appropriate dosage of macro synthetic fibres.
- Technical support was given to the Readymix Supplier to ensure the concrete was of the correct specification with consistent fibre distribution.



A laser screed could be used continuously without the need for breaks in installation to fix conventional steel mesh reinforcement.



Large areas of pavement could be poured and power floated. Saw cut contraction joints were then made the following day.

Installation benefits

- The use of DURUS S400 polypropylene macro fibres, eliminated the need for handling, cutting and fixing steel mesh . This reduced construction time and made installation considerably easier .
- No pump was required for placement as the reinforcement is contained within the delivered concrete, allowing mixer trucks to pour directly into formwork.
- A laser screed could be used without breaks in installation to fix steel mesh.
- An excellent Power float finish was achieved.
- Saw cut contraction joints were made the day after placement and finishing.

Result

- A very high quality internal power floated floor was achieved without the need for fixing steel mesh or dosing steel fibres.
- Future Industrial use has been accommodated if the facility has a change of use in the future , meeting the Landlord's requirements.
- Construction time was reduced considerably by eliminating the need for steel mesh placement and fixing.
- A concrete pump and associated site management were not required, bringing a significant commercial benefit as well as eliminating health & safety hazards.

Products used DURUS S400



A high quality power float finish was achieved using DURUS S400 Synthetic Macro Fibres.