

DHL, a global leader in contract logistics, constructed this 500,000 square foot state-of-the-art, high-bay distribution center with highly mechanized equipment to serve the Mid-Atlantic area of the US.

The challenge

With the high cost of rebar and long lead times for rebar in 2021, the contractor needed a cost-effective solution for the building's floor slabs to support heavy rack loading throughout the facility. The floor slab solution also had to provide superior crack control and load capacity over the life of the building. DHL was also keen to implement construction methods that would support its innovative green logistics solutions to make supply chains more sustainable.

The solution

Bekaert was able to provide significant cost and schedule savings to the contractor by replacing traditional reinforcement with Dramix[®] steel fiber reinforced slab solutions (24 lb/yard³ of Dramix 4D 65/60BG). The Dramix[®] solution also provided the owner, DHL, with a high-performing floor for years to come with the load capacity flexibility for future loading scenarios. Furthermore, the use of Dramix[®] fully supports DHL in its ambitions to reduce the carbon footprint of its operations. This is because Dramix[®] makes it possible to reduce the thickness of the concrete floor and thus the quantities of cement, aggregates and water used, as well as the amount of steel needed. All these significantly reduce CO2 emissions.

DHL

STAFFORD COUNTY, VIRGINIA, USA

PROJECT SPECIFICATIONS

Project type: Warehouse/distribution center

Application: Saw-cut floor

PARTNERS

- Owner: DHL
- General contractor: ARCO
- Engineer: McNealy Engineering
- Concrete contractor: Procon



Location: Stafford County, Virginia, USA