Case Study

VoltBlock DEM-2M Dielectric Geomembrane

The latest extension to the Docklands Light Railway now links Canary Wharf to the City Airport, and forms part of the vital regeneration work taking place in London’s East End in preparation for the 2012 Olympics. The London City Airport station is the hub of the post millennium DLR development, where to deal with the high number of expected passengers.

The viaduct splits in two allowing the station to rise up between the tracks and provide a single 8m central platform. Problem: There was a requirement to ensure that no stray current from the tracks on either side of the central platform found its way to the platform surface and affected passengers waiting on the platform. The Engineer specified a minimum dielectric value of 1000Ω/m² @ 10,000V. There are very few materials robust enough for site use that provide that degree of protection. Solution: Geosynthetics where able to offer ex-stock our DEM-2M Dielectric Geomembrane. With a dielectric property of 20.1kV/mm giving a total of 40,200V, it was able to provide the high degree of protection required and tough enough to handle the punishment of site installation without compromising the integrity of the membrane. The large roll size of 5.9m x 100m was welcome on site due to the reduction in laps and labour. The station is now up and running, and a vital infrastructure link for Transport for London.

**Technical Details:**
- Roll Size: 5.9m x 100m
- Dielectric Value: 20.1kV/mm total: 40.200kV
- Carbon Black Content: 2.0%
- Tensile Strength: 57N/mm
- Tear Resistance: 249N
- Puncture Resistance: 640N
- Density: 0.94g/cm³

DEM-2M has also been supplied to the Stratford DLR station project for exactly the same purpose. The contractor Hochtief (UK) Construction Limited sourced the product as the most cost effective and proven option that was immediately available.

The benefits of using Voltblock in this case were:
- It was able to provide the high degree of protection required
- The large roll size reduced the amount of laps and labour.
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Details of all the electrical properties including; dielectric strength, dielectric constant, dissipation factors and volume resistivity are available request.

DEM-2M Technical Details:

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If you require any further information or a copy of the Engineering Properties technical document please contact our technical department on 01455 617139

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