

Dura-Line Partners with KPN, Allinq and Netceed to Deliver a Sustainable Conduit Solution with Uncompromising Quality

CHALLENGE:

Fibre network operators are increasingly aiming to become more sustainable and reduce their CO₂ emissions. Netherlands-based network operator KPN, already advancing sustainability goals among telecom operators, challenged Dura-Line to develop a high-quality recycled conduit product in support of KPN's goal of becoming close to 100% circular by 2025.

SOLUTION:

After three months of research and development, Dura-Line produced MicroDucts and FuturePath® ECO, which use up to 100% reground materials from Dura-Line's standard manufacturing process. Using this excess material allows Dura-Line to deliver high-quality conduit as well as meet various sustainability goals, such as Zero Waste to Landfill.

RESULTS:

After a successful field trial, KPN, Allinq and Netceed were impressed with Dura-Line's results: a high quality, high-performing product range that delivers significant reductions in value chain CO₂ emissions versus regular MicroDucts. Thanks to close collaboration between Dura-Line, customer, and installer, MicroDucts and FuturePath® ECO were swiftly approved for installation in KPN's nationwide network, with the first successful deployment taking place in The Netherlands in 2023.



CHALLENGE

UNDER THE EUROPEAN GREEN DEAL'S overarching aim of climate neutrality for all European companies by 2050, sustainability has become a prerequisite for modern optical fibre networks. Scope 3 greenhouse gas emissions, which occur in the value chain, typically account for more than 70% of a telecom operator's carbon footprint¹; for these scope 3 emissions, purchased goods and services, such as MicroDucts, are a key driver.

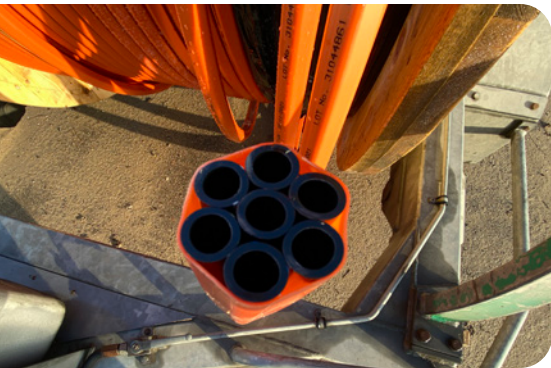
Netherlands-based network operator KPN identified a need for Dura-Line to develop a more sustainable conduit without compromising technical performance as KPN works to lower its greenhouse gas emissions and transition to nearly 100% circular by 2025. Existing products made of lower-quality recycled materials often fail the necessary quality controls and technical standards. The challenge for Dura-Line was to deliver the best of both worlds: a more sustainable conduit that meets the required standard of quality.

¹Source: Achieving Net Zero in the Telecoms Industry: Tackling Supply Chain Emissions

SOLUTION

Dura-Line developed MicroDucts ECO using up to 100% reground High-Density Polyethylene (HDPE) from Dura-Line's own manufacturing process. MicroDucts ECO are then bundled to create FuturePath® ECO with protective jackets and identification stripes.

In just three months, Dura-Line's R&D team produced the first prototypes through a comprehensive quality testing process. After several rounds of testing, the product line had passed all standard quality tests for regular HDPE MicroDucts. These results include the products having the same expected operational lifetime as regular MicroDuct products.



"Quality is a key pillar for Dura-Line," says Dorota Kowzan, Circular Economy and Resin Approval Europe Manager.

"We focus on cleanliness in manufacturing, rigor with which Dura-Line selects its raw materials, and in-depth quality control to ensure Dura-Line's high standards are maintained."



FuturePath® ECO has also been tested and proven in the field. Dura-Line's team facilitated a successful field trial conducted by Allinq, turnkey contractor specialized in the design, construction and maintenance of fiber optic networks and Netceed, system integrator of end2end fiber optic solutions, which confirmed equivalent performance to regular MicroDuct products, including during duct laying and cable jetting.

Finally, Dura-Line conducted life cycle assessments (LCA) to identify the environmental footprint of the ECO product line with the support of a third-party evaluator. The assessment results demonstrated that MicroDucts and FuturePath® ECO deliver a significant reduction in carbon emissions versus equivalent regular HDPE products and minimise plastic waste in support of the Zero Waste to Landfill goal.

With tests results confirming the quality, performance and considerable CO2 emissions reduction of its new sustainable product line, Dura-Line was ready to launch the products.

RESULTS

KPN, Allinq, and Netceed were impressed by Dura-Line's sustainable solution. It allowed KPN to reduce their scope 3 emissions without compromising the technical performance.

"We are very proud of this collaboration with Dura-Line involving MicroDucts and FuturePath® ECO," Lars Willemsen, Head of the Netherlands at Netceed, says.

"By adding this Direct Buried Ecoduct to our Microfocus product portfolio, we are taking an important step towards a sustainable future. With this innovative solution, we are setting a new standard within the European Telecom market."

MicroDucts and FuturePath® ECO have since been approved for installation and have already been deployed successfully in live networks in The Netherlands. This successful collaboration enabled all parties to support circularity and meet their sustainability commitment to deliver carbon emissions reductions in the telecoms industry.