



Exceed™

## Afriq Water creates sturdy drip irrigation pipes while increasing production output and improving pressure resistance using Exceed™ high performance polymers



Cost optimization



Durability



Process efficiency

Data and results presented here in apply specifically to the noted application under this case study. Your results may differ depending on factors such as operating conditions, equipment and materials used.

### Challenge

Drip irrigation pipe is an application that is exposed to the elements for an extended time under fluctuating pressures. The mechanically demanding installation and use conditions, warrant high mechanical performance for a long ultimate lifespan once deployed. The challenge was to increase production output to reduce costs, while creating a long-lasting solution when compared to the performance of the incumbent.

### Solution

Afriq Water, located in Krugersdorp, South Africa strives to make irrigation more accessible across the African continent. Their processing to create long lasting drip irrigation pipe features a mono layer pipe extrusion with drip emitter element being fed and sealed into the pipe. Mechanical enhancements observed, include increased pressure resistance of up to 30% and increased ultimate stretch performance when using Exceed™ m 3518 metallocene polyethylene.



Trials were conducted in South Africa and virtually supported by ExxonMobil. The responsive technical support was highly appreciated and the agile way of operating via the branded distribution network. "We appreciated quick material allocation for trialing, prompt technical meetings, and iterative, collaborative follow-ups during development." said Afriq Water Group CEO - Wynand Ueckermann.

"Exceed m 3518 helped us to increase the output and improve the mechanical properties on the tubes." said Warehouse Manager - Karl Ueckermann.



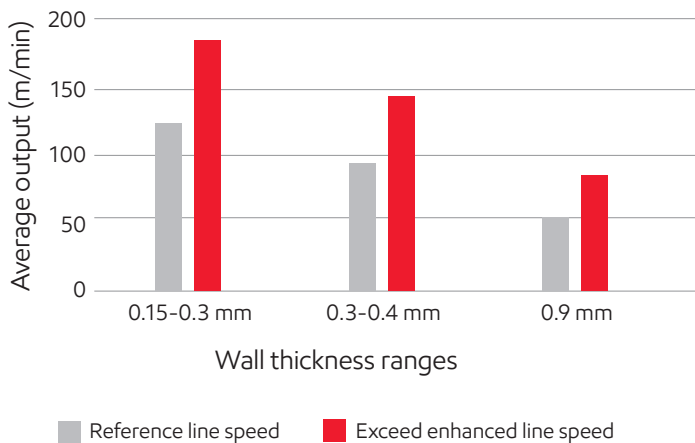
## Results

Using Exceed™ m 3518 metallocene polyethylene resulted in production benefits including **increased outputs of up to 60%** achieved on specific product lines at reduced extrusion pressures. Afriq Water benefits from high output production, delivering increased meters produced in a production period. The resulting production runs are not limited by extrusion pressures and insufficient melt strengths and facilitates fast and homogeneous sealing of drippers to the pipe body.

This delivers increased profitability and energy saving for the customer. Exceed also decreased wastage and has increased the overall quality of reworked material. A faster onset of sealing between the pipe and drip emitter also allowed ease of emitter incorporation which resulted in a more constant drip emitter spacing.

Ample mechanical enhancements include **increased pressure resistance of up to 30%**, increased product lifespan and increased ultimate stretch performance.

### Output benefits of ExxonMobil Signature Polymers



Increased outputs of up to

**60%**

Increased pressure resistance of up to

**30%**

**ExxonMobil**  
*Signature Polymers*

**Bring your impossible**

ExxonMobil Signature Polymers was born from the belief that people fuel progress. From automotive and construction to packaging, agriculture, industrial, and beyond, we leverage the scale and reach of ExxonMobil to deliver the insights and innovations that empower our diverse, global partners to take their businesses to new heights. We continuously work to provide the listen-first, service-driven, game-changing collaboration that unlocks opportunities for our partners and advances their business goals.



© 2025 ExxonMobil. ExxonMobil, the ExxonMobil logo, the interlocking "X" device and other product or service names used herein are trademarks of ExxonMobil, unless indicated otherwise. This document may not be distributed, displayed, copied or altered without ExxonMobil's prior written authorization. To the extent ExxonMobil authorizes distributing, displaying and/or copying of this document, the user may do so only if the document is unaltered and complete, including all of its headers, footers, disclaimers and other information. You may not copy this document to or reproduce it in whole or in part on a website. ExxonMobil does not guarantee the typical (or other) values. Any data included herein is based upon analysis of representative samples and not the actual product shipped. The information in this document relates only to the named product or materials when not in combination with any other product or materials. We based the information on data believed to be reliable on the date compiled, but we do not represent, warrant, or otherwise guarantee, expressly or impliedly, the merchantability, fitness for a particular purpose, freedom from patent infringement, suitability, accuracy, reliability, or completeness of this information or the products, materials or processes described. The user is solely responsible for all determinations regarding any use of material or product and any process in its territories of interest. We expressly disclaim liability for any loss, damage or injury directly or indirectly suffered or incurred as a result of or related to anyone using or relying on any of the information in this document. This document is not an endorsement of any non-ExxonMobil product or process, and we expressly disclaim any contrary implication. The terms "we," "our," "ExxonMobil Product Solutions" and "ExxonMobil" are each used for convenience, and may include any one or more of ExxonMobil Product Solutions Company, Exxon Mobil Corporation, or any affiliate either directly or indirectly stewarded.

## What's new: ExxonMobil Signature Polymers

All our polymers are now positioned under a single portfolio brand: Signature Polymers. The aim is to simplify our product architecture and naming to improve portfolio navigation for you. We would like to stress that our commitment to high quality products remains the same. The composition of the products are unchanged, it is only the names that updated. We will be making these modifications over the next few months, through mid 2025, so you will see both old and new grade names highlighted during that time. Here's a quick overview of brands and grade names that have been changed in this document:

### Legacy commercial name

Exceed™ 3518

### New commercial name

Exceed™ m 3518

Want to see what's changed in our portfolio? Go to [exxonmobilchemical.com/sptransform](https://exxonmobilchemical.com/sptransform)